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VT-ERIC SET

Microfiche Collection of VT-Number-Only Documents Reported In

Abstracts of Research Materials in

Vocational and Technical Education (ARM)

Vol. 6, No. 4, 1973

Compiled by

The Center for Vocational and Technical Education

The Center for Vocational and Technical Education
The Ohio State University
1960 Kenny Road, Columbus, Ohio 43210

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VT 021 575

INTRODUCTION

This collection of microfiche consists of the documents which are announced with VT number only in Abstracts of Research Materials in Vocational and Technical Education (ARM), Vol. 6, No. 4, 1973. The VT-number-only documents from this volume and issue of ARM are grouped in VT-number sequence and filmed continuously as a microfiche set (VT-ERIC SET).

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VT 016 601
JONES, HILDA B.
DIVERSIFIED SATELLITE OCCUPATIONS PROGRAM AND CAREER DEVELOPMENT. INTERIM REPORT--VOLUME I AND VOLUME II (APPENDIX B).

GRANITE SCHOOL DISTRICT, SALT LAKE CITY, UTAH.
BUREAU OF ADULT, VOCATIONAL, AND TECHNICAL EDUCATION (DHEW/OE), WASHINGTON, D.C.
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IDENTIFIERS - *UTAH; CAREER AWARENESS

ABSTRACT - THIS EXPERIMENTAL PROGRAM HAD A 3-FOLD OBJECTIVE: (1) PREVENTING DROPOUTS, (2) PROVIDING CAREER EDUCATION TO DROPOUTS OR DROPOUT-PRONE STUDENTS, AND (3) WORKING FOR IMPROVEMENTS IN ATTITUDES TOWARD SCHOOL AND VOCATIONAL EDUCATION. ON THE ELEMENTARY LEVEL, BESIDES GENERAL CAREER ORIENTATION BY ALL CLASSROOM TEACHERS, A PILOT PROGRAM FOR 6TH GRADE BOYS IDENTIFIED AS POTENTIAL DROPOUTS HAS REDUCED THEIR ABSENCES BY 80 PERCENT. OCCUPATIONAL ORIENTATION PROGRAMS IN THE JUNIOR HIGH SCHOOLS ATTEMPTED TO FIND PART-TIME JOB EXPERIENCES FOR POOR RISK STUDENTS. ALTHOUGH NOT ENTIRELY SUCCESSFUL, THE PROGRAM GENERATED HIGH STUDENT INTEREST. SENIOR HIGH STUDENTS IN AREA VOCATIONAL CENTERS PARTICIPATED IN A WORK-STUDY PROGRAM. SOME OF THE STUDENTS SERVED AS TEACHERS' AIDES IN THE ELEMENTARY SCHOOLS AS A "PRE-JOB" PLACEMENT ON AN APPRENTICE BASIS. FIELD TRIPS, HANDS-ON EXPERIENCE, AND TEACHER INSERVICE WERE INTEGRAL PARTS OF ALL THREE LEVELS OF THE PROGRAM. APPENDIXES TO THIS REPORT INCLUDE PSYCHOMETRIC ASSESSMENT PROCEDURES AND EVALUATION FOR THE PROGRAM, A REPORT OF A PRACTICUM IN INSTRUCTIONAL AND CURRICULUM IMPROVEMENT, VOCATIONAL GUIDANCE MATERIALS, AND A SAMPLE OF WEEKLY PLACEMENTS. (KH)

VOLUME I

INTERIM REPORT

Project No. VO 61056
Contract Number OEG-0-70-5176 (361)

Diversified Satellite Occupations Program
and
Career Development

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

Dr. Hilda B. Jones
Granite School District
340 East 3545 South
Salt Lake City, Utah 84115

June 15, 1972

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Interim Report

Project No. VO 61056
Contract Number OEG-0-70-5176 (361)

Diversified Satellite Occupations Program and Career Development

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

The project reported herein was performed pursuant to a contract with the Bureau of Adult, Vocational, and Technical Education, Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

Hilda B. Jones
Granite School District
340 East 3545 South
Salt Lake City, Utah 84115

June 15, 1972

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PERSONNEL

CAREER DEVELOPMENT AND DSOP

Pupil Services is now in the Instructional Division, headed by Dr. Ted T. Peterson.

Dr. Hilda B. Jones, Director of Pupil Services and Special Education, is Project Director for the DSOP and Career Development Program. Assisting in its administration are Janice C. Romney, Coordinator, District Counselors, and E. Robert Pattillo, District Counselor.

P. E. Rusk is the psychologist and is responsible for the testing and measurement procedures for the programs. Mrs. Joan Nelson is serving as counselor, doing back-up work for Mr. Rusk, cum folders, graduation, and credit requirements.

Junior High Program

DSOP and Career Development

Central Jr. High	David Nicol, Teacher
Brockbank Jr. High	Carol Jaglinski, Teacher
Kearns Jr. High	Margaret Copley, Teacher

Senior High Program

DSOP and Career Development

Eastern Area Vocational Center	Tim Collins, Teacher Chan Brewer, Teacher Becky Clark, Teacher
Central Area Vocational Center	Gary Stutz, Teacher Julie Peterson, Teacher
Western Area Vocational Center	Keith Gubler, Teacher Carmen Snyder, Teacher David Thompson, Teacher

Elementary Program

Redwood Elementary	Curtis Smith, Teacher

SUMMARY

In October of 1971, Dr. T. H. Bell, former Acting Commissioner of the Office of Education, became the Superintendent of Granite District. In a realignment of assignments, Dr. Hilda B. Jones became Director of Pupil Services and Special Education replacing Dr. John Reed Call, the former Assistant Superintendent--Pupil Services and Project Director of the DSOP/Career Development. Thus Dr. Jones became Project Director and Janice G. Romney, Coordinator of the Project.

In this summary of the interim report for the period of June 30, 1971, through June 15, 1972, we wish to re-emphasize the target area of our DSOP/Career Development Program.

The exemplary projects in vocational education have tremendous scope and promise. Our sector of this program deals exclusively with the students who cannot be reached in the on-going school setting[1]--due to non-attendance and because of truancy--enjoy little success in career education or vocational education classes. These are the students who, by the 6th grade in elementary, are dropout prone with concomitant behavioral problems in school. They have low self-concept, inconsistent family patterns, great sensitivity, high anxiety and an inability to control the demands of today in order to plan for tomorrow. A meaningful number are caught in the conflicts of the minorities: bi-linguality and poverty. At the point they are placed in the centers, they have no plans for today, let alone any interest in a job, career, or schooling.

The DSOP/Career Development Program--jointly financed through Federal and State programs--is the first viable alternative we have had for daytime schooling, career information and education for these students. In dealing with this unique population, it should be regarded as a valuable component of the exemplary projects.[2] A warning needs be voiced that comparison with an in-school career education program is inaccurate. A more meaningful comparison can be drawn with students who drop out and who do not enter the DSOP/CDP. Then, there is virtually "nothing" insofar as career education, behavior modification, and attainment of skills.

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[1]Mau Keung Ho, "The Counselor's Role in a Children's Institution, The School Counselor, XIX, 5 (May, 1972).

[2]Henrietta Tolson, "Counseling the 'Disadvantaged'," Personnel and Guidance Journal, L, 9 (May, 1972).

Elementary

On the elementary level, we submitted an addendum, which was accepted with recommendations, to institute a pilot program at the Redwood School for 6th grade boys who were identified by the principal, teachers, and social worker as being dropout prone. This pilot program was not approved until mid-April, but was immediately put into effect at that time and shows real promise. The boys' absences have dropped from 5 days absent to 1 for a three-week period. The focus of interest has been toward four major units of career education: archeology, machines, electricity, and map study.[3]

Junior High

The junior high program, located in Central, Kearns, and Brookbank Jr. Highs progressed in a much steadier pattern due to improved teacher staffing and acceptance by the school staffs of this self-contained program. We have worked to overcome the dual authority problem--that of having more freedom in the DSOP self-contained unit as compared with the more traditional authoritarian approach in the other classes. Job opportunities are non-existent for poor risk students at this age--newspaper delivery being the most promising, so our task has been to make them better risks through achievement of the program objectives. Hands-on experiences in career orientation have been assisting in this process. Of interest is that 80 percent of these students participated in promotion exercises this year.

Senior High

In the three senior high centers: WAVC (Western Area Vocational Center), EAVC (Eastern Area Vocational Center), and CAVC (Central Area Vocational Center)--the format of 4/7's of a day in school and 3/7's of a day in a career experience is continuing. EAVC and CAVC moved out of their building used last year and after weeks of petitions before the Zoning Commission they were finally located. There were the usual "moving-in" problems which delayed the start of school, but the work the students did for "their" center had a strongly positive effect.

We placed a number of these students as teachers' aides in the elementary schools in the District. We regarded this as a "pre-job" placement--almost on an apprentice basis. With a motivated, cooperative training teacher,

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[3]George E. Leonard, "Career Guidance in the Elementary School," Elementary School Guidance and Counseling, VI, 3 (May, 1972).

and with careful follow-up from the Centers, the placements were successful. Where these two components were non-existent, the same self-defeating behavior patterns re-asserted themselves: non-attendance, inconsistency, and higher anxieties.[4]

The staffs on all three levels had much career education material available and used it for group counseling and individual guidance.

On the material side, faster processing of requisitions made planning easier. The purchase of small refrigerators for the junior high component helped to solve the pressing oral needs of these "school phobic students." They will thus be able to meet this demand in acceptable and nutritional ways rather than the smoking on the school grounds, never-ending coke routine.

Carpeting was installed by Granite District in all the junior high rooms--the sound problem was solved and a great deal of status was gained by the DSOP students.

Two of our students in the Junior High program were accepted for BEAR (Better Effort and Responsibility) awards at Central. Art Price was nominated and won the "Most Improved 9th Grade Student award. Lona Vang and Eldon Beardall were nominated.

Last year 9 of our students graduated from high school. This year 27 were graduated. Job placements were made "outside" the district for 15 percent of the students.

We have made real gains in attracting non-whites into our program. (See Comparison of Enrollments, body of this report). We have three bi-lingual teachers: Curtis Smith, Redwood; Margaret Copley, Kearns Jr., and Carol Jaglinski, Brockbank Junior.

Our attendance has continued to hold steady supporting the premise that ADA could probably finance the major portion of the program through subsequent years. (See Table 1, page 4.)

Improvement was made in Reading Skills in the centers. (See Appendix C.)

There were three counter-productive forces at work during the year:

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[4]Elaine Montgomer Kane, "Case Study: Diversified Satellite Occupations Program--Career Development," unpublished Master's thesis, University of Utah, June, 1972.

1. The regretable and unavoidable delay in getting the building ready for EAVC and CAVC.

2. Our financial inability to continue hourly pay for students working in the District caused frustration.

Table 1

Year End Statistical Brief

	Last Day Membership	Average Daily Attendance	% of Attendance
WAVC	36	26	72
CAVC	30	27	90
EAVC	54	46	85
Totals	120	99	82

3. The excessive testing program set up by the State as the third party evaluator was counter-productive and modifications have been made for the next school year. (See Appendix B, Vol. II.)

Appraisal of Psychological Evaluation of Participating Students

The 1971-72 academic year in the CDP/DSOP programs brought significant and comprehensive changes in evaluation and assessment; the major changes included a lengthening of total time spent toward testing and assessment of individual students with various instruments, many of which were designed by the Utah State Department of Education (Division of Research and Innovation). This comprehensive testing program, as established by the State Department of Education, required considerably more time to administer and to implement than in the previous scholastic year. Any advantages to this enlarged program of evaluation appears to have been offset by several factors: (1) The fact that most of the non-standardized evaluative procedure results devised by the Utah State Department of Education were not reported back to the Granite School District programs for interpretation to students and CDP/DSOP teachers; and (2) The length and diversity of the total number of instruments employed were reported by the CDP/DSOP teachers as being unduly complicated, time-consuming, and often interruptive to the development of optimal rapport with students.

Since one of the most paramount considerations in any testing and evaluation program must involve the feedback to those who have taken tests, it must be stated that indeed the complicated evaluation procedures used during this past year have been counterproductive to establishing positive relationships between teachers and students; furthermore, little feedback, at this time, has been received from the State Board of Education relative to the results of instruments required by them to be administered in Granite School District.

With these factors in mind, the proposal for the forthcoming 1972-73 scholastic year will incorporate a revised psychodiagnostic evaluation program considerably more parsimoneous and less time consuming. And, a primary consideration that is to be incorporated into the forthcoming evaluation design is a provision for prompt, candid, and meaningful reporting and interpretation of results back to both teachers and students.

In planning for the 1972-73 scholastic year's program for testing and evaluation, decisions on which diagnostic instruments to employ were made on pragmatic bases relative to teacher-student needs and uses. Teachers of the programs concerned reported that both The IPAT Anxiety Scale, "Self-Analysis Form" and The Demos "D" Dropout Scale provided the most significant and meaningful information relative to students. While academic achievement and proficiency were considered by teachers as a very important variable in the measurement of pupil progress in the program, it was also concomitantly noted that this type of proficiency testing often increased tension levels between teachers and students. Albeit, it is recognized as quite important to measure academic accomplishment and proficiency at given periods of time during the course of the treatment program; therefore, The Wide Range Achievement Test will continue to be used in the coming 1972-73 school year. Teachers were in unanimous opinion that a longer more comprehensive achievement battery would not yield sufficiently different data on individual students proficiencies in academic and basic skill areas to warrant their incorporation into the testing program.

In qualitative analyses of all IPAT Anxiety Scale scores, in combination with Demos "D" Dropout Scale findings (as well as numerous individual evaluations of students in the programs and special testing of certain students for modified-corrective academic approaches), it can be said that most all the students participating in the CDP/DSOP programs showed important disturbances in apperception integrity and of personality ego systems necessary to make a more progressive adjustment educationally, socially, and vocationally. From an academic standpoint, it may be purported that most CDP/DSOP students, as is typical of adolescence in general, found it extremely difficult to

modify their own unconscious concepts of parental figures necessary for them if many of the subsequent and consecutive steps in the development of an adult axiology are to be achieved. This is certainly not a sole drive for independence as it may be sometimes called, but it involves an extensive alteration of the frames of guidance and behavior that have been structural elements through the child's personality development up to adolescence. Prior to the adolescent period, the young child's very security is predicated on the omnipotence and the all-knowingness of parental figures. Such powers have been his strengths, his reliable guides and his protection in respect to his own impulses and actions of others. It has been noticed in the CDP/DSOP students that for many it was difficult to modify these concepts, or rather more difficult for them to find other reliable sources to take their place; thus many of the major tasks confronting the pupils in our program was of "impersonalizing" controls over his own behavior. Related to this we have also observed from the protocols of the students involved in this program that the majority of students have found it very difficult to channel their anxiety into socially acceptable and personally satisfying modes of expression . . . ways that are in harmony with the mores and standards of society in general.

Patterns of scores from all protocols indicate that students within the DSOP and CDP programs feel tremendous pressures from all social dimensions demanding that an identification with the sex role for which he or she was biologically determined be made. Handicaps in attainment of this particular adolescent task results in tremendous free-floating anxiety with increases in cases where there are still unresolved conflicts present, in ergic tension.

A fourth task of these students who entered our program involved permanent decisions and choices that must be made by them as to educational and vocational futures. Projective tests and approaches used individually with students referred for psychological work-up would indicate that even in the narrow sense of picking a course of study or of the selection of a future particular job, these decisions in themselves frequently involve serious inner conflicts which reflect that the final conscious choices ultimately arrived at are probably determined again with attendant serious conflicts by profound unconscious needs that insist upon expression in the individual's life work. Furthermore these would seem to be compounded in their effect by the multitudinous pressures and varying value ratings in respect to occupations that arise in different groups (ethnic, family, school, community, peer, etc.), with whom the given student is in daily contact. Hence, the successful solution of this educational-vocational task selection should be a major accomplishment of the CDP/DSOP student and is comparable to the task previously mentioned . . . the assumption of roles consistent with his or her sex.

As in the 1970-71 school year, the most common pattern of individual emotional difficulty that was referred to the Psychological Division involved characterologic difficulties, whether it be part of an emerging syndrome of an actual character disorder or of a more transient nature. Characteristics that were common to these particular individuals included poor and weak self-critical capacity, impoverished impulsivity, an inability to bind tension in realistic ways that is progressive to personality development rather than regressive, poor control of incoming stimuli, uncontrolled acting-out of hostility, inability to pursue goals in any meaningful or sustained way, poor relationships with adults, impoverished or nonexistent relationship with peers (distorted and sometimes alienated toward them and characterized by jealousy and frequent scapegoating), primitive social techniques including automatic denial and transparently insincere and very clumsy efforts toward ingratiation, actual flight from the physical environment, and direct unrelenting oppositionalism. In those cases where very high free-floating anxiety levels were observed in respect only to attendance at school rather than to any other variable, the dynamic factors involved some form of separation anxiety or displaced hostile-aggressive oppositionalism to authority figures in general. From a therapeutic standpoint, the regimen has been to direct the prompt return of the student to the CDP/DSOP unit followed by the insistence that the student maintain his attendance on a consistent basis thereafter. This type of reaction pattern is more popularly known as the "school phobic reaction."

Individual psychological counseling and therapy sessions served conjunctively to the psychodiagnostic evaluation of individual students referred for study. Because of the demanding nature of the State's testing schedule, the therapeutic measures employed in individual cases were necessarily more limited during the past year. The principal emphasis was on intervention; focus was upon the adolescent's needs, strivings, and growth tendencies in his social and cultural background. Since many of the adolescent's behavior problems and neurotic difficulties arise from emotional handicaps sustained through earlier relationship experiences that were not conducive to healthy emotional growth, considerable time was spent individually, therefore, to acquire an understanding of the forces that had been operating in the early life of the student. Referral of cases requiring intensive psychotherapy and social casework were referred to various private or community sources subsequent to parent case conferences at the completion of each individual psychodiagnostic evaluation. Again, limitations on time prevented prolonged psychodiagnostic evaluation and therapy in all but a few cases.

In the forthcoming 1972-73 school year, it is hoped that more time will be made available for individual psychodiagnostic evaluation as well as increased time for counseling/therapy to individual students.

Conclusions

Our conclusions and recommendations are contained in Body of the Report.

BODY OF THE REPORT

Problem

A large number of students who leave our high schools do not have the skills necessary for them to obtain even an entry job in the increasingly technical business and industrial world. Without some interest in and knowledge of an occupation, these young people become aimless seekers of unskilled jobs, social problems or recipients of public welfare. Recent research and national studies (Grant Venn's Man, Education and Work: National Committee for NASSP; and others cited elsewhere in this proposal) indicate that the abilities of all children to succeed in an occupation must be and can be developed in our technological society. Other research evidence indicates that some of these occupational abilities and backgrounds related to success are not being developed in today's schools. Programs must be implemented that will help those who have already dropped out of school without the necessary occupational skills as well as stop the dropout flow of those who are still in school. Youth must be assisted in avoiding a pattern of occupational aimlessness or incompetence.

The problem being addressed in this proposal deals primarily, but not exclusively, with the part of the total that relates directly to secondary programs which are designed and intended to enhance the abilities of youth as they prepare for gainful employment. For the most part, the young people for whom these activities are intended are those identified as being dropout prone and not those who are enrolled in present vocational courses or those who are college-bound.

In some instances the lack of adequate vocational guidance programs in the secondary schools has contributed to the complexities of the problem. In others the lack of appropriate vocationally oriented programs has been the contributor. In still others, the environmental influences of family, social conditions, economic conditions and "school" conditions have compounded the problems.

It is also vital that an adequate "occupational outlook" program be provided in earlier years of schooling. It is important that each elementary age child receive an orientation and develop an understanding as to how adults achieve productive stations in society. The research concurrent with Title VIII of the Elementary and Secondary

Education Act of 1965 confirms this contention,

> . . . that children begin to drop out of school long before they reach the secondary level of education. Attention should be paid to the earlier levels of education, for the roots of the problem are often found at these educational levels.[5]

Underlying all these factors in the Granite School District is the District's position as a relatively poor district financially, when Granite is compared with neighboring districts in Utah as well as across the nation. Granite School District is suburban to Salt Lake City and is Utah's largest with a student population of more than 63,000 children. This comprises approximately one-fifth of the state's school age population. The Granite School District is taxing at its legal limit and has the highest school tax rate of all Utah's forty school districts. The neighboring district to the north generates $14,354 per distribution unit when considering funding at all levels--local, state, and federal. The neighboring district to the west receives $12,346 per distribution unit when considering these same sources of revenue. The comparable figure in Granite School District is but $11,320. Considering these revenues on a per child basis, the Granite School District is able to provide a program for its children based on $499 per child whereas the Utah average is $534 per child. The figures for the two neighboring districts are $611 and $528, respectively. The NEA estimate of average expenditure per child nationwide for 1968-69 was approximately $680.[6] This restricted financial status of the Granite School District has been a limiting factor in preventing more vigorous programs in vocational guidance, occupational instruction, and job placement for the young people of the district.

The net result of the above, regardless of the reason, has been the creation of large numbers of potential dropouts from school or actual dropouts whether they be classified as physical, wherein the person actually discontinues school, or as mental or educational, wherein the body may remain in school while the mental processes of the individual cease to function at a productive level.

A quick but erroneous inference might be drawn from the introduction, i.e., that the program of activities being proposed herein will do all things for all people. On the contrary, as will be seen when considering the objectives and the specific activities, a designated select portion of the present student enrollments in the schools of

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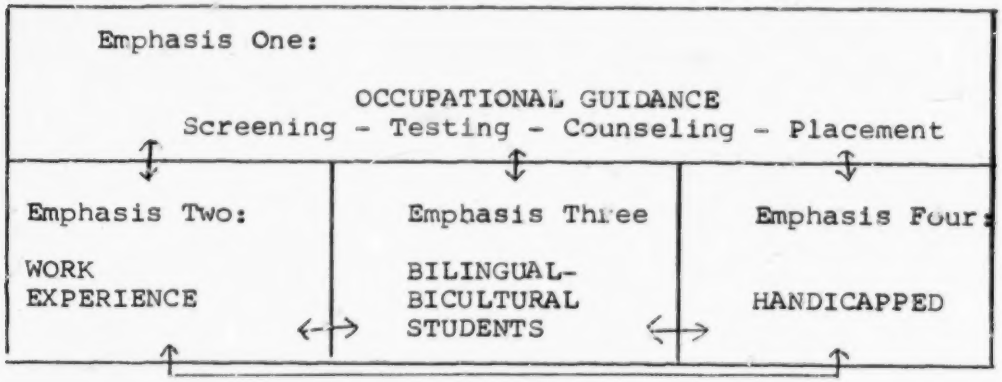
[5] Dropout Prevention Program, Title VIII ESEA of 1965, p. 1.

[6] Utah State Board of Education statistics.

the Granite District comprise the population intended to be aided by this program.

The program of activities being proposed herein is entitled the Diversified-Satellite Occupations Program. The program is multifaceted. At the same time the components are interrelated. In the narrative these components are referred to as "Emphasis One," etc. The manner of interrelatedness is depicted in the following model.[7]



Emphasis One: Occupational Guidance

One emphasis of the proposed program relates to building a closer working relationship between the school district and the State Department of Employment Security, while at the same time enhancing and broadening occupational aspirations and opportunities for youth through upgrading existing vocational guidance activities. Special emphasis is on programs designed to aid those students who might be categorized as being likely to be dropouts for any number of possible reasons.

Emphasis Two: Work Experience

Another emphasis relates to the actual combination of school and direct occupational endeavors during the time that the person is completing his schooling. Cooperative work-study-experience programs have been successful and much research indicates the potential for diffusion of such activities. In addition, Granite School District has engaged in "pilot" efforts in this regard and the results of these efforts support the claim for extending the program beyond its present limits.

Emphasis Three: Bilingual-Bicultural Students

For some students the problems associated with bilingual-bicultural situations in the home compound the total problem. Specifically, bilingual-bicultural problems

arising from Spanish-Mexican-American homes constitute a third emphasis for the proposed program of activities.

Emphasis Four: Handicapped

A fourth emphasis relates to the present programs for handicapped students. Not enough is able to be done for these youth within the confines of the present resources.

At the present time more than 15 percent of the enrollment of the Granite School District falls into one or more categories of handicapping conditions. Five specific groups are identified: mentally, physically, and emotionally handicapped, learning disabilities and speech, hearing and visual impairments.

Only a portion of the students needing special instruction are being served at the present time. The learning disabilities area is composed of the largest number of students in need of occupational instruction. Knott sights the importance of vocational training in this area:

> The probability of difficulty in vocational selection, job finding and job holding, will be significant for a sizeable portion of minimal brain damaged children who reach adolescence or young adulthood with persistent problems in reading and arithmetic. Many of these children will constitute the "dropouts" from high schools. Their final adjustment to adult life will in large measure hinge upon their ability to earn a living.[7]

Vocational instruction for the "learning disabilities" group of children is almost nonexistant at this time. Even in the Granite School District, as mentioned under the pilot program referred to in emphasis two above, only a very small fraction of the youth of the District needing this kind of assistance are accommodated.

It is for those students that are handicapped and still not receiving appropriate vocational training for which this emphasis of the total Diversified-Satellite Occupations Program is designed.

It is thus being proposed that because of the interdependencies and interactions of constraining conditions that a multifaceted approach is in order.

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[7]Leslie W. Knott, Learning Disabilities, Introduction to Education and Medical Management, ed. Lester Tarnopol, (Charles C. Thomas, Publisher).

II. STATEMENT OF OBJECTIVES

We will adhere to our original proposal in reducing dropout through increased exposure to Career Education and growth in personal self-concept. Programs will operate at these levels:

Elementary--Pilot group at Redwood School

Jr. High--Brockbank - Central - Kearns Jr.

Centers for Senior High students.

A. The following general objectives will be measured by tests described in Appendix B. (Testing: 1 through 4)

1. Improved attitudes toward school.
2. Lessening of anxiety.
3. Raising the achievement level.
4. More positive attitude toward vocational choices, and school in general.
5. Improved attendance.
6. More closures; i.e., placement in job, re-enrollment in schools, combination of school/center and work.
7. We will continue to provide bilingual staff members to meet the indicated need and to maintain and increase the percentage of non-white students in our program.

B. Specific objectives for the 1972-73 school year encompass the recommendations made by the Federal and State Evaluation Teams.

Student self-concept will be a concern at all levels as indicated in general objectives. However, subject context will be centered on career guidance.

1. Curriculum will be strengthened with major emphasis on career guidance and occupational skills.

   a. Elementary Level:

      Career education curriculum units with stated objectives to be used by elementary teacher in pilot school (Redwood), with emphasis on field studies to support skill studies and with interchange of ideas, resources, materials with other teachers and grade level.

   b. Junior High:

      Emphasis will be placed on increased awareness of careers through subject matter, as well as direct observation of various occupations in the community.

   c. Senior High:

      1. Specific instructions in job skills

      2. Library of resources for pre-vocational and vocational information.

ADDENDUM

DIVERSIFIED SATELLITE OCCUPATIONS PROGRAM

ELEMENTARY DSOP PROGRAM

PROPOSAL NO. 0-361-0056

Submitted January 25, 1972

Granite School District
340 East 3545 South
Salt Lake City, Utah
84115

ADDENDUM TO PROJECT NO. 0-361-0056

Additional information and clarification of proposal as requested in the January, 1972, telephone conversation between Dr. Hilda B. Jones and Program Officer, Polly Garrett.

ELEMENTARY DSOP PROGRAM

The 1st phase of the work of the Elementary DSOP program is virtually completed. The three writers, with the assistance of Dr. Ralf Riches, have completed their designated purpose: To produce film strips, packets, and related materials concerned with the occupations in Law Enforcement. In addition, they have obtained appropriate books, assembled resource materials, listed the available resource persons, obtained personal on-the-job diaries and job descriptions of this occupation. Their purpose was an in-depth study of all phases of this particular field and the application of it to the interests of elementary students. Combined with this purpose was the identification of the potential 6th grade dropout.

Based on the materials produced, the knowledge gained from our junior high program, and the expertise of the educators involved, we are proposing the implementation of the program into action and usage in the following manner:

1. The principal and the social worker in a westside area will identify the potential 6th grade dropouts. This school is marked by a low socio-economic level and has a representative minority population.

2. Grade point averages, some attendance records, test results, and the family pattern of older sibling dropouts will be gathered.

3. The jobs held presently - or in the past - by the parents will be determined.

From 1 through 3 above, we will make up our class of 6th grade students for the remainder of the year. In a similar manner, we will obtain those needed for our class of next year, from the current 5th grade classes.

We would then proceed to establish an "Elementary DSOP Program" in the school, based on the work which has been done, and drawing from our year and one-half with the junior high DSOP programs.

We would recommend the following format for the 6th grade program:

1. Employment of one fulltime elementary teacher who enjoys teaching on a one-to-one basis with disadvantaged, high risk dropout students. One who can teach in an open, meaningful way, with a great deal of caring for each individual.

2. Arrange the schedule for 1/2 day in the classroom and the other 1/2 of the day to be devoted to meaningful, researched field studies into the particular job they are studying at the time.

3. Select about 4 to 5 occupations to study. Determine those in which the parents of these students are or were employed.

4. Use the subject matter produced and obtain additional material which relates to the jobs. Teach the skills needed in the academic areas which are needed and meaningful to these jobs.

With the help of the Utah State Employment Service, determine the entry skills needed for initial employment into a given field. OF GREATER IMPORTANCE, determine the ADDITIONAL skills, experience and education needed for advancement in the occupation chosen. Do careful work into the various levels of pay.

For example, what are the entry, advancement, and pay steps which can be taught in the following occupations:

Dispatcher	narcotics division
patrolman	Protective Services
radio car	Detention Center
sergeant	Drug Division
detective	Criminologist
vice-squad	Pathology Lab.

Following the selection of the materials, resources, employment locations, and employers, focus the learning skills needed for the occupation at the appropriate level.

Plan on the students being in a self-contained classroom, with one teacher for 4/7's of the day. Insofar as is possible, have the student "be" that employee, while in the classroom learning his skills. Also, plan on their being with this same teacher the remaining 3/7's for fieldwork. Thus, they would have the opportunity to form a meaningful bond, one which would improve their low self-concept through becoming of importance to someone.

The latter 3/7's of the day, make careful arrangements for on-the-job observation of levels, skills needed, pleasure of the work, attitude of the employees - the positive and negative sides of the occupation.

At the end of the year, carefully evaluate the approach and examine the findings. Also, start the study into the incoming 5th grade students' records. Different occupations may need to be added and a wider range of skills may need to be taught. Evaluation needs here should take about a two-week period following the end of the school year in order to determine results and plans.

In conjunction with the present junior high DSOP program and in co-operation with the State Board of Education, have the social worker from the elementary make contact and enroll the out-going 6th grade students into the 7th grade junior high program. As in the other three junior high programs, the following recommendations for staff are made:

1. A self-contained classroom, with one teacher.
2. Approximately 15 students.
3. Emphasize field studies which support the skill studies of the occupations selected.
4. Concentrate on raising the skills to a succeedingly higher employment level.
5. Emphasize the attainment of higher employment skills in each of the occupations as compared with those attained on the 6th grade level.

6. Establish warmth, understanding, and "human-ness" in the relationship between the teacher and the students.
7. Program a similar pattern of 4/7's of a day in academics and 3/7's of the day in field studies associated with the occupations chosen.
8. Follow our current DSOP pattern of pre- and post testing.

Results and Accomplishments

Elementary

The students involved in this program enjoyed telling the teacher what they knew instead of the teacher telling them what to learn. As a result, each unit was preceded by a brainstorming session during which the teacher wrote on the board everything the students said. The students then grouped themselves and chose an area they wished to know more about. They approached their study from the standpoint of how a person in this particular field would behave. In order to gather the necessary information they had to do a good deal of reading. These books then became the basis for the curriculum in reading and language arts. In addition to their reading, they also prepared reports, did experiments, and other related activities. The units the class covered in this way were:

1. Archeology: (a) each group constructed a city then buried it; (b) another group dug up the city and hypothesized as to its culture.

2. Machines: (a) each student built a simple machine, then calculated its speed.

3. Electricity: (a) one group made 2 dry cell batteries; (b) another group used these batteries to run a classroom bell; (c) the other groups made a telegraph key.

4. Map study: (a) using a map each student planned a trip taking into consideration such factors as why he was going, where he would stay, how much for gas, what was his gas mileage, etc.

Junior High

Central Junior High. Three students in the program (Connie Brown, Evelynn Garrett and Lona Vang) made the school's "B" Honor Roll for the 3rd quarter. A "B" average is necessary for this. Lona also made the "B-H" honor roll which includes high citizenship.

Two students (Eldon Beardall and Lona Vang) were nominated for and accepted into the school's B.E.A.R. Club (Better Effort and Responsibility). To be accepted, a student must be approved by all of his teachers.

Janet Wiley won a first place ribbon in the Art Festival for her copper work.

Marty Sartain sang a solo in the Music Festival.

The teachers of the school were asked to vote for the most improved student in each grade (7, 8, & 9). These students were to be recognized and invited to the school's Honor Banquet (along with their parents). Art Price was nominated by several teachers in the 9th grade and Lona Vang was nominated by a teacher in the 8th grade. Juergen Steinmann was also nominated in the 9th grade. Art won as most improved student in the 9th grade and attended the Honor Banquet with his parents.

Brockbank Junior High. Further work in individualized programmed material--math, spelling and reading. A lot of work was done on posters and beads and at the time it seemed that the students almost took refuge in these activities because of the pressures of the end of the year and graduation.

Kearns Junior High.

A. Major activities and accomplishments:
   1. Completion of programmed individual study materials--The Academics
      a. Houghton-Mifflin, Modern Math for Achievement
         Sets I by 30 kids
         1/2 of Set I by 7 kids
         Sets II and I by 3 kids.
      b. Completion of assigned spelling workbooks graded 6 thru 12 grade level by about 32 students.
      c. 5 students worked through the SRA computational skills and
      d. 10 students finished AEP Ecology Remedial Reading 3 part reading and workbook series.
      e. All 40 students finished my "How to Prepare for a Job and Job Readiness Unit" (Self-developed)
      f. Before end of school year about 19 of my 40 kids had made overt-outside-individual--but with support from me job attempts, applications through N.Y.C. at Kearns Family Life Center. Of the 13 that went there, they all received negative responses. Six students received employment on their own initiative. Several more (8) are still trying. Those that were hired managed to either get applications in early enough or knew some friend or relative who was willing to help a 14 or 15 year old get started.

B. Generally the drug abuse and use problems subsided a great deal.
   1. Several students became genuinely afraid of being caught and decided their options for the future were worth more than the summer or longer in confinement and fines.
   2. They began to think more of their self worth, due, I suspect, to realizing they were commencing from 9th grade and could (were) succeeding.

3. A lot of the local suppliers were caught and these kids became scared

C. All students agreed to enter the regular high school on a trial basis next year for at least a month.

D. I saw signs of the "magic maturation" process starting in about three-fourths of the class enrollment. With this came the realization that one must plan for the future; and individual willingness to begin to think about oneself, even though afraid.

E. More kids quit the constant open rebellion in other class or school situations, or anyway I ceased to hear so much about this with three exceptions.

F. Even the students who had "chosen not to attend" by agreement with the office, plus the three I had to remove from the program during the last four weeks, plus a couple of others who were suspended for other reasons chose to return off and on for the last two weeks and established aimable relationships here.

G. These kids finally realized when, how and why disruptive, protesting behavior cannot be used thru the unfortunate example of the three we exempted. They accepted finally the sensibility of "thru the system."

H. They participated, as a group, in more within-the-school activities than had been done all year.
   1. We had class participants (3 girls, 2 boys) in intra- inter-school and statewide sporting events this last six weeks.
   2. Attended assemblies as a group.
   3. Attended class movies as a group.
   4. Attended concerts as a group.
   5. Attended plays as a group.
   6. Attended Lagoon Day as a group (after a great deal of hasseling by me; but they got to go).

I. Two or Three DSOP students had selections: stories, poetry, in the Kearns Junior Literary Magazine, The Quill. Two were in the talent assembly (9th); three received within school sports awards as well as the others who placed in inter-school and state competitions and also received awards.

J. I expect the same follow-up frustrations and needs I have expressed before. They will need follow-up support in the Fall at their high schools; I haven't yet come up with a satisfactory response to this fear-concern of mine.

K. Other activities included:
   1. No field trips for reasons explained in last interim report
   2. Seven boys became involved in a Karate class and exibition for K-Daze Week. Three placed "3 highest of group."
   3. Four girls worked on, saved, and became very involved in preparing for commencement activities. We served in class. One other teacher, Mrs. Mary Jane Cannon helped one student extensively. This was very refreshing. The boys planned out actively what they would wear, how they would dress. This was a turn-about from Levi-t shirt staunch supporters. We had groups of two or three shopping excursions for sewing needs and accessories rather constantly, about three times a week for the past six weeks.

Senior High

EAVC - CAVC

Major activities and accomplishments:

March 29	Easter egg decorating and candy hunt
April 7	Sewing class field trip to Fashion Fabrics
April 11	State and Federal visit
April 20	Field trip to University of Utah Museum of Fine Arts
April 21	Field trip to Job Fair at Salt Palace
April 25	Field trip to University of Utah Library and Sociology Department
May 2	Field trip to Utah Museum of Natural History
May 5	Field trip to Pioneer Memorial Theater
May 8	Lagoon Day
May 9-12	Liberty Park Week
May 9	Pie Eating Contest. Murray Banks Record "A Lesson in Love" and discussion
May 10	Films, Tracy Aviary, Murray Banks record and discussion--"What to do until the Psychiatrist Comes"
May 11	Speaker, Dr. Lori Clarke, University of Utah
May 12 -	Visit Isaac Chase--Brigham Young Home, Pot Luck Lunch

Student teacher from University of Utah taught Physical Education (karate, exercise, volleyball, general P.E.) and guitar classes.

Three teaching assistants from the University of Utah taught science, drafting, sociology and reading workshops.

May 22	Field trip and hike to Timpanogos Cave
May 23	Testing
May 24	Field trip to Utah State Training School for Mentally Retarded
May 25	End of the Year Steak Fry--Millcreek Canyon
May 26	Graduation--Last Day of School!

Summary of Liberty Park Week - May 8-12

Objectives. It was proposed that we meet for one week (May 8-12) at Liberty Park to break the tedium of coming to school each day and to increase group awareness and involvement with our students. The students were getting restless and even though we would be doing "regular school work" along with activities, it was felt that meeting someplace other than the school would "add some new life" to the students and increase attendance as well as the students' length of stay at school.

Method. Arrangements were made with the Parks Department to reserve the North Shelter from Tuesday to Friday. (Monday was Lagoon Day.) The North Shelter consisted of a large room which was heated in case of cold weather. It contained a piano, fireplace and several tables. Outside under the shelter were picnic tables and we were near a large grassy area with football field and baseball diamond.

Extensive planning was done ahead of time by each teacher so that a variety of activities and projects would be going on at all times . . . something to interest everyone.

We worked the whole week around a behavioral modification approach. We printed tickets with a value of 1 or 5 points and awarded these to the students for participation in activities and completion of assignments. When they had earned 15 or 25 points they could cash the tickets in on ride tickets at the amusement part!

As a means of evaluation we printed up a booklet which was distributed to each student and asked them to fill out at the end of each day with what they had accomplished during the day and how they felt about it. (In retrospect, this was not very effective because the students wanted to spend their time doing things rather than writing about what they did.)

Enclosed is a schedule of the daily plan as well as proposed activities in the fields of academics, art and sports. Since there were many things going on simultaneously and since this list covers all of the activities and projects, I will merely outline the highlights of the week rather than submit an hour-by-hour schedule of what actually went on.

There was always great participation in sports and due to the large open spaces, frisbies were a favorite. We had a volleyball net up, horseshoe pits, tennis courts, and, of course, football field and baseball diamond. Although many students participated in these activities, it was interesting to note that they soon grew tired of sports and were anxious to come back to the shelter and either read or do other bookwork or participate in the academic games.

We had a group of mimeographed "brain teasers" on the table where each time one was completed the student received a 1-point ticket. These sheets included crossword puzzles and word games, some of which are enclosed with this report.

Another favorite "quiet-type" activity was the Concentration Board game. It was used during the week with several different games set up behind it including current affairs (such as matching "Nixon" and "Haiphong Blockade"), a math game (matching such problems as 6^3 with its equivalent 216), and a homonym game (such as matching "pear," "pair," and "pare" and then telling what each one meant in order to get the points.) This game sounds easy but, for example in the math game, one must not only be able to work the problem, but he must also remember where its answer lies.

We conducted general group meetings in the mornings and outlined the special activities for the day, but the best group discussion of the week centered around a record by Dr. Murray Banks entitled "A Lesson in Love." Quite a lively discussion followed the playing of this record.

During the week we had a variety of films running all day long for those who wanted to sit and watch. The films that were shown were: Medieval England--The Peasant Revolt; Saga of Western Man 1964; Clean Town USA; The Problem with Water Is People; Quest for Freedom.

DIVERSIFIED SATELLITE OCCUPATIONS PROGRAM

PLAN OF OPERATION

GRANITE SCHOOL DISTRICT
Department of Pupil Services
and
Special Education

Submitted by:

Hilda B. Jones, Ed. D.
Project Director

Janice C. Romney
Project Coordinator

School Year
1972-1973

DSOP/Career Development
Dropout Prevention

Rationale

The Granite School District's proposal and program are based on three factors:

1. Preventing dropout.

2. Providing career education information to dropouts or dropout-prone students.

3. Working for improvements in attitudes toward school and vocation; improvement in attitudes; lowering of anxieties.

Locale

Redwood Elementary
Brockbank Jr. High
Central Jr. High
Kearns Jr. High
Western Area Vocational Center
3572 West 3500 South
Eastern Area Vocational Center
Central Area Vocational Center
3646 South Main

Funding

The funding for this program is provided through two grants:

Diversified Satellite Occupations Program

Exemplary Project in Vocational Education
Part D of Public Law 90-576

Project Number 0-361-0056
Contract Number OEC-0-70-5176 (361)

Sidney C. High Jr., Chief

and

Career Development

Utah State Board of Education
Division of Research and Innovation

Quentin E. Utley
Administrator

I. INTRODUCTION AND STATEMENT OF NEED:

Students dropping out of school numbered 780[1] during the 1969-70 school year. This was an alarming number, since lack of interest in the curriculum offered seemed to be a major factor. Consequently, District personnel explored all possible resources for the development of programs centered around career instruction and related experiences. Proposals were submitted requesting Federal and State funds. Fortunately, two grants were obtained, specifically, the Diversified Satellite Occupations Program, and the State Career Development Program. These projects have been in operation since the 1970-71 school year.

The results for the past two years have been significant as indicated in the following table:

Percent of High School Dropouts

1969-70	1970-71	1971-72
5.78	4.44	3.70 (Est. April 1)

This proposal seeks to continue both projects for the 1972-73 school year.

1. See Appendix A.

COMPARISON OF ENROLLMENTS
Percentage of Non-Whites 1970-71

Junior High	Granite District School	Granite District DSOP/CDP
Indian	.72	.91
Chicano	3.10	15.80
Oriental	.57	.70
Negro	.11	1.40
Other	.01	1.40

Senior High	Granite District School	Granite District DSOP/CDP
Indian	.50	.90
Chicano	2.49	2.72
Oriental	.49	.45
Negro	.06	---
Other	.03	1.30

3. Placement of students in work stations for training and "hands-on" experiences.

4. Follow-up student evaluation with appropriate records for future job placement.

The above objectives will be coordinated with District vocational education programs as well as Rehabilitation and the programs for the handicapped.

All professional staff will be involved with the accomplishment of these objectives. Classified staff will be employed for building maintenance.

2. In-service Training.

Teaching skills in career instruction will be enhanced through intensive in-service training which will be initiated at all levels. Curriculum Specialists of the district will be assigned to work with all levels for greater integration of this program with total district activities. This will be done in cooperation with the project staff.

III. STRATEGY AND PLAN OF ACTION (Activities) TO ACCOMPLISH OBJECTIVES.

A. Curriculum

1. Elementary Level

a. General orientation to occupations by regular school staff--Redwood Elementary School.

b. Specific career education curriculum units used for instruction by DSOP teacher.

c. Employment of one fulltime elementary teacher who enjoys teaching on a one-to-one basis with disadvantaged, high risk dropout students. One who can teach in an open, meaningful way, with a great deal of caring for each individual.

d. Arrange the schedule for 1/2 day in the classroom and the other 1/2 of the day to be devoted to meaningful, researched field studies into the particular job they are studying at the time.

e. Select about 4 to 5 occupations to study. Determine those in which the parents of these students are or were employed.

f. Use the subject matter produced and obtain additional material which relates to the jobs. Teach the skills needed in the academic areas which are needed and meaningful to these jobs.

g. Refer to testing assessment appendix.

2. Junior High

   a. Occupational guidance classes will be taught by DSOP Teachers.

   b. Materials will be obtained from National Exemplary Projects and State and District Offices to be used in these classes.

   c. Testing time will be reduced to allow for maximum time in career instruction.

   d. Observation and study of jobs in the community will be done (age prohibits actual job training.)

3. Senior High

   a. Instructional occupational classes will be conducted, emphasizing job skills and personal responsibilities, such as punctuality, etc.

   b. National, State, District career materials will be obtained and utilized.

   c. Each DSOP/Career Development student in secondary school is scheduled to "go through" COPE centers and enroll in classes within geographical school to meet career education interests, while still remaining in the program. This means that their interests and aptitudes will be assessed; the staff will pursue, with them, their particular vocational interests and opportunities through the use of career education materials, resources, and files.

If available, enrollment in relevant classes will be made. Opportunities for "hands-on" and job placements for career education will be offered to the students.

d. DSOP/Career Development Program staffs will maintain year around contact with counselors in COPE centers in schools in order to integrate the programs.

e. We will work toward more cooperation between DSOP/Career Development staff and school counselors for job, class placement, and guidance.

f. Placement on a job in cooperation with State Rehabilitation Service.

B. In-service Training

In-service training will be a continual process based on observation of curriculum specialists, project staff, and evaluative instruments. The following specific activities have been set .

May 31

In-district conference on curriculum, remediation, recommendations, and strategies.

June 1

All DSOP/Career Development staff and District Counselors are scheduled to go through Career Orientation Planning Experience Centers at Olympus High School

June 5-9

Three District Counselors and all staff members are attending the Career Education workshop at Logan, Utah, under direction of the State Board of Education-Vocational/Career Education.

August 16-20

Lesson plans, resources, uses of "A Conceptual Approach to a Total Information System," the Technical Assistance Information Service (TAIS), for nine-week time span.

Subsequent quarterly reports will carry the results of these nine-week plans.

IV. EVALUATION

Evaluation will be done in accordance with Federal, State, and District requirements.

A. Student Evaluation

Procedures for student evaluation have been summarized in Appendix B. A more complete description is found in a booklet prepared by Mr. Phillip Rusk, entitled Proposed Psychometric Assessment Procedures and Evaluation for the Career Development and Diversified Satellite Occupation Programs.

This material also shows tests which will be discontinued as recommended.

B. The following records will also be maintained and evaluated:

1. Evaluation of attendance and dropout records.
2. Examination of extent and dissemination, exposure, and knowledge of career education materials, resources, and contacts.
3. Enumeration of number of students who went through Career Orientation Planning Experience programs and the subsequent class schedule changes and/or job placements and follow-up.
4. Evaluation of non-white enrollment.

C. A third party evaluator will be obtained. His responsibility will center around total project evaluation.

BUDGET

Title of Project: Diversified-Satellite Occupations Program

Name of Project Director: Dr. Hilda B. Jones

Applicant Organization: Granite School District

Proposed Beginning and ending dates: 1 July 1970 to 30 June 1973

Category	Third Twelve Months		Total (All Years)	
DIRECT COSTS Personnel	Federal	Local	Federal	Local
A. Project Director		3,400.		10,200.
B. 1 Center Coordinator 211.05	1,100.		6,931.	
C. 3 Basic Education-Vocational Orientation Teachers (Jr. High School--10 month contract) 211.09	26,972.		78,017.	
D. 1 Training Center Professional Teacher (10 month contract) 211.09	8,003.		30,717.	
E. 1 Training Center Technician (10 month contract) 211.09	8,000.		24,400.	
F. 1 1/2 Basic Ed. Voca. Orient. Teachers (10 month contracts) 211.09	12,000.		12,000.	
G. 1 Project Guidance Counselor-Teacher (K-12--11 month contract) 221.09	13,000.		27,555.	
H. 1 Vocational Teacher (Elementary School - 10 month contract) 211.09	11,025.		31,525.	

Category	Third Twelve Months		Total (All Years)	
	Federal	Local	Federal	Local
I. Driver's Education--hourly 211.10	1,500.		1,500.	
J. 1/2 Employment Security Counselor & District Office Placement Counselors		6,615.		18,915
K. 1/2 Vocational Rehabilitation Counselor		6,615.		18,915.
L. 1 Secretary (10 month contract) 233.09	4,000.		13,020.	
M. Custodians 614.06	3,000.		3,000.	
N. Employee Benefits (Retirement, FICA, Sick Leave, Insurance-14%) 810.01 810.05 820.05	15,000.		34,609.	
O. Mileage for Teachers and Counselors 280.05 280.06	2,500.		6,500.	
P. Building Rental 640.17	6,950.		14,150.	
O. Vocational Field Trips (Elementary and Jr. High) 560.33	1,000.		5,000.	
R. Consultation Services 430.06	500.		2,500.	
S. Telephone Services 640.13	1,200.		1,440.	
T. Duplicating & Reproduction		500.		1,500.

Category	Third Twelve Months		Total (All Years)	
	Federal	Local	Federal	Local
U. Transportation for Students		12,000.		36,000.
V. Instructional Supplies (Training Center) 270.01	2,000.		8,000.	
W. Instructional Supplies (Elementary & Jr. High) 270.01	1,924.		7,924.	
X. Instructional Equipment (Training Center) 1230.50	500.	1,000.	2,500.	6,000.
Y. Instructional Equip. (Jr. High) 1230.50	500.		500.	1,000.
Z. Furniture & Work Benches (Training Center)				2,000.
A-1 Miscellaneous 280.09	71.		71.	
A-2 Fuel 630.01	1,200.		1,200.	
A-3 Electricity 640.05	825.		825.	
B-1 Testing & Evlauation 270.07	450.	200.	540.	600.
B-2 Total Direct Costs	123,220.		314,424.	
B-3 Indirect Costs (7.49%) of V. -Adm, Supervision, Payroll, etc.)	8,376.		22,703.	
4. GRAND TOTAL	*131,596.	30,330.	**337,127.	95,130.

1972-73 Funding 115,582
Balance +16,014 - to be paid from carry-over funds.
* $131,596

** 337,127
-16,014
$321,113 - Net Federal Total

APPENDIXES

Appendix A

THE GRANITE SCHOOL DISTRICT

1970-1971 SCHOOL DROPOUT REPORT

Submitted by Dr. John Reed Call
Assistant Superintendent (Pupil Services)

GRANITE SCHOOL DISTRICT
340 East 3545 South
Salt Lake City, Utah 84115

June 15, 1971

GRANITE SCHOOL DISTRICT
340 East 3545 South
Salt Lake City, Utah 84115

During the 1969-70 school year, 780 high school students withdrew from high school prior to graduation. That number constituted a new high for the number and percent of students who dropped out within the Granite School District. That number helped provide motivation for the Granite School District's participation with the federal government and with the State of Utah in a program of dropout prevention through utilization of state and federal funds. In capsule form, three small Career Development Centers were established within the Granite School District wherein actual dropouts were placed for further academic schooling and vocational training.

As indicated in Table I, 191 dropouts were enrolled in the training centers. Of the 191 students enrolled, all but 37 held for further schooling or high school graduation. Had additional centers and staff been available, a larger number of dropouts would have been enrolled as opportunities for re-enrolling dropouts exceeded capacity for doing so.

The effect of the centers upon high school dropout statistics is demonstrated through examination of Tables II and III. Without the centers, the names of 154 students would be added to the 597 withdrawing during the 1970-71 school year. Table IV gives a breakdown on the reasons given by the students who dropped out during the 1970-71 school year. The reader is cautioned to avoid the assumption that the 153 students dropping for reasons of marriage include any unwed mothers. Unwed mothers are schooled through the Granite School District program for homebound or hospitalized students. (See separate report dated June 15, 1971)

TABLE I
AREA VOCATIONAL CENTERS

DROPOUT PREVENTION-CAREER DEVELOPMENT

CENTER	REGISTERED	ACTIVE STUDY/WORK	GRADUATES	TRANSFERRED	DROPOUT
*EAVC Upland Terrace	96	66	7	9	14
*CAVC Blaine	48	30	1	7	10
*WAVC 3572 West 3500 South	47	23	0	11	13
TOTALS	191	119	8	27	37

* Eastern Area Vocational Center
Central Area Vocational Center
Western Area Vocational Center

TABLE II
GRANITE SCHOOL DISTRICT
NUMBER AND PERCENT OF HIGH SCHOOL DROPOUTS
1970-1971

HIGH SCHOOL	ADJUSTED 2ND WEEK ENROLLMENT	NUMBER OF DROPOUTS	PERCENT OF DROPOUTS
Cottonwood	1,779	77	4.33
Cyprus	1,393	73	5.24
Granger	1,419	88	6.20
Granite	2,048	117	5.71
Kearns	2,141	154	7.19
Olympus	1,876	36	1.91
Skyline	2,790	52	1.86
TOTALS	13,446	597	4.44

TABLE III
GRANITE SCHOOL DISTRICT
COMPARISON OF NUMBER AND PERCENT OF HIGH SCHOOL DROPOUTS
1969-1970 to 1970-1971 SCHOOL YEARS

HIGH SCHOOL	ADJUSTED 2ND WEEK ENROLLMENT		NUMBER OF DROPOUTS		PERCENT OF DROPOUTS	
	69-70	70-71	69-70	70-71	69-70	70-71
Cottonwood	----	1,779	----	77	----	4.33
Cyprus	1,528	1,393	97	73	6.34	[illegible]
Granger	1,523	1,419	129	88	8.40	6.20
Granite	2,558	2,048	211	117	8.24	[illegible]
Kearns	2,438	2,141	171	154	7.01	[illegible]
Olympus	2,458	1,876	58	36	2.36	[illegible]
Skyline	2,987	2,790	114	52	3.81	1.86
TOTALS:	13,504	13,446	780	597	5.78	4.44

TABLE IV
GRANITE SCHOOL DISTRICT
NUMBER, GRADE, SEX, AND GIVEN REASONS
FOR
HIGH SCHOOL DROPOUTS
1970-1971

SCHOOL	NUMBER	GRADE			SEX		REASONS GIVEN					
		10	11	12	M	F	Dislike of school	Non-attend	Employment	Military	Marriage	Other
Cottonwood	77	24	19	34	47	30	6	33	20	3	10	5
Cyprus	73	23	26	24	39	34	12	17	11	4	19	10
Granger	88	18	36	34	55	33	16	18	10	5	25	14
Granite	117	28	55	34	58	59	7	21	14	10	42	[illegible]
Kearns	154	37	55	62	82	72	21	35	23	9		[illegible]
Olympus	36	5	13	18	21	15	2	9	10	1	10	4
Skyline	52	8	25	19	21	31	1	16	4	3	11	17
TOTALS	597	143	229	225	323	274	65	149	92	35	153	102

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Appendix B

Volume II

Proposed Psychometric Assessment Procedures and Evaluation for the Career Development and Diversified Satellite Occupation Programs

Paradigm for the 1972-1973 Academic Year

APPENDIX C

SUMMARY REPORT OF PRACTICUM IN INSTRUCTIONAL OR CURRICULUM IMPROVEMENT

SUMMARY REPORT OF PRACTICUM

IN

INSTRUCTIONAL OR CURRICULUM IMPROVEMENT

The Development of an Independent Individualized Reading Program to be Used with Pupils in an English Literature Class

by

Timothy J. Collins

A summary submitted to the faculty in partial fulfillment of the requirements for the degree of

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Major: Education

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I. Introduction

There is one major skill that every pupil in high school needs to have before he can have a successful experience in school. This skill is the ability to read. In almost every class, pupils are assigned a text or reading materials which everyone in the class has to read. The class is based upon the material but if a pupil cannot read what he is assigned, he is penalized and becomes frustrated. This happens especially in English literature classes. The pupil cannot read what he is assigned and becomes a problem pupil and eventually a dropout, either from the classroom or the school.

The writer works with pupils who have dropped out of school because of various reasons: family problems, school discipline problems, or frustration because of inability to compete with their peers who are two, three, or more grade levels above in their reading ability. The writer has developed an independent reading project in which the pupils read paper back books of their choice. This is an attempt to help stimulate and motivate these pupils to want to read.

Their grade is determined by the pupils, based upon the quantity of books they decided they would read and not by critical evaluations (book reports) of the books read.

An observation from the writer's research is that an unhappy phenomenon occurs as children advance from elementary school to secondary school. Many learn to dislike reading or the idea of reading, especially pupils who have had trouble in schools, and become dropouts or potential dropouts. In the average English literature classroom, the pupil is assigned a textbook or certain books to read and to make critical evaluations of them. These books are considered classics and above reproach, but hold no interest for pupils and turn them off to the pleasure of reading.

> In the modern history of education, attitudes of readers and writers toward the processes of reading and writing have been regarded when they have been considered at all - as no more important than the attitude of any mechanical object to the work it performs. Who would ask if a computer likes its work or if a can opener likes the act of opening of the can it opens? Judging by their policies, American educators believe that most children are well disposed toward reading and writing and that they will so continue, independently of the methods and materials used to teach them. No alternate explanation is available. Either the reader/writer is like a mechanical device, to be rated in terms of the relation between input and output (performance), or educators have believed that attitude does not really matter very much at all. One apparent resolution of this unhappy choice was offered me by the former chairman of one

of Michigan's largest and most successful (very large percentage of graduates doing well in college) high school English departments: "Reading and writing are necessary, don't you see. If we get the performance up, we know we've got a child with the right attitude."

This is the same man who gave me information he felt I would be glad to have in my role as Accreditation Visitor in English for the university. His staff of English teachers was so cooperative and sensible that he had been called up only once to ban their use of a book The Catcher in the Rye. But of course we both understand about that, we both did not understand about attitude. Attitude follows performance only where children are performance-oriented, and even with such children the attitude may not be the one that educators tend to foster. When reading and writing are merely means to the end of school success, what happens to the performance-oriented children when that success has been attained? To put the question another way, what happens when the performing child becomes the school-graduated (performance-certificate) adult? Any librarian or bookseller will tell you that the average adult avoids bookstores and libraries as though they were leprosaria. Had the goal of modern, performance-oriented education been the creation of unwilling readers and writers, it could not have succeeded more completely. All the supporting evidence is bottom-rooted in front of television screens across the nation. [1]

[1] Daniel N. Fader, Hooked on Books: Program and Proof, New York: Berkeley Madellion Books, 1966. pp 21-22.

II. Review of the Literature

Much research has been done with independent reading on the elementary level but there is very little on the secondary level. It is important to look at some of the research which is available.

The consensus of the authors and editors of the material available on independent reading program is that they are as effective, if not more effective, than traditional methods of reading instruction.

1. Burrows, Alvin T., "Caste System of Democracy in Teaching Reading", Elementary English, 27: 145-148 March 1950.
   In a six-week period with IR in a fifth grade, the smallest gain was two months, the largest gain was three years. Median gain for the class was a full year.

2. Dean, Ray B., "A Plan for Individual Reading in the Intermediate Grades", National Elementary Principal 17: 557-568, July 1938.
   Says, "not infrequently a child will raise his reading level as much as two full grades in one year under IR."

3. Fannin, Lois, "Reading for the Brightest Child", Bulletin of School Library Association of California, 27:29, March 1949.
   Studied grades 5 and 6 who had IR once a week. After 8 months the progress made by IR group was greater in "directly measurable areas" than was progress of group without IR.

Why do we have an independent reading program? Trusty says:

1. Children learn best when activities and material are meaningful.

2. Learning is more meaningful when pupils participate in goal setting, planning and evaluation.

3. Learning is more meaningful when the pupil has self-understanding and direction, leading him ultimately to greater success in life.

4. Children learn more when they are permitted first-hand experience.

5. Children learn more readily when many sensory approaches are used.

6. Children learn better when relieved of the pressure for competition and allowed the opportunity for cooperation.

7. Learning is more meaningful when failures are viewed constructively and appropriate measures of remediation are continued.

8. Children learn best when given opportunities to learn activities, feelings, values, and appreciation through experiences, the same way they gain skill and knowledge.

9. Children learn best when their efforts are appreciated by teachers and classmates.

10. Learning is most effective when children are freed from distractions of personal problems.

11. Children learn best when the rhythm of mental achievement, physical activity and leisure relaxation are appropiate.

12. Learning opportunities are richer when children are not restricted to the things the teacher already knows. [2]

[2] Ray Trusty, Principals of Learning and Individualized Reading, The Reading Teacher, Vol. 24 Number 6 1971

On the secondary level, G. Robert Carlson states that pupils will read books of great language difficulty if the subject lies close to their interests and they reject even simple books about subjects that bore them. The content young people between the ages of ten and eighteen seek in books usually undergoes three transformations, according to Carlson. They are:

I. Early Adolescence (Period between 11-14, grades 5-9)

1. Animal stories
2. Adventures stories
3. Mystery stories
4. Tales of the supernatural
5. Sports stories
6. Growing up and the world
7. Home and family-life stories
8. Broad, bold Baptist
9. Settings in the past
10. Car or hot-rod stories
11. Science fiction

II. Middle Adolescence (Period between 15-16, grades 9-10)

1. Nonfiction accounts of adventure
2. Biography and autobiography
3. Historical novels
4. The mystical novels
5. The story of adolescent life

III. The Late Adolescence (Last two years of high school and entering either college or the adult working world)

1. The search for personal values
2. Books of social significance
3. The strange and unusual human experience
4. The transition into adult life

[3]Robert G. Carlson, Books and the Teenage Reader, New York: Harper & Row Publishers, Inc., 1967, pp. 23-28.

Unfortunately, most schools stifle the pupils' interest in reading. These schools have required book lists. Pupils are allowed to read certain books but not others. Such books as Ken Kesey's One Flew Over the Cuckoo's Nest, Mario Puzo's The Godfather, and Salinger's The Catcher in the Rye are not acceptable reading material in certain school districts; but Shakespeare's plays, Silas Marner, Tale of Two Cities, and other books which hold little relevence or interest for the majority of pupils are acceptable. Teenagers should not be forced to read. Each teenager is an individual with problems and interests of his own. The important thing is not that he has read Chaucer, Johnson or Shakespeare, but that he reads.

Daniel Fader presents a total program, saturation and diffusion, integrating reading into the total school structure. The program was developed in a training school for boys. These pupils were given the freedom to choose what they wanted to read as long as they started to read. The program worked. The boys started to read and to develop this skill so necessary to life.[4] Unfortunately the statistical research available in his study cannot be compared with the testing the writer has conducted because the test instruments used were different.

[4] Daniel N. Fader, Hooked on Books: Program and Proof, New York, Berkley Medallion Books, 1966

III. The Practicum

This practicum was developed to be used as a method of evaluating an independent reading approach to English Literature carried on during the second semester of the 1971-72 school year in the Granite School District Career Development Center program. It was hypothesized that the pupil would increase statistically significantly in his basic reading skill areas (vocabulary, oral reading, speed and accuracy, and comprehension), as evaluated by pre and post test results of the Gates MacGinitie Reading Test and the Wide Range Achievement Test. Since there is very little research in this area on the secondary level, hopefully this practicum will add to this knowledge.

A. Procedure (Method of Practicum)

1. Definition: (According to Utah State Board of Education)

   a. Dropout - any student who discontinues school for any reason other than graduation, transfer, death, or release for early admission to college.

   b. Potential dropout - a student who the local school administration judges to be unlikely to complete the education program leading to successful graduation. Experience has shown that potential dropouts may be identified by one or more of the following traits:

1. At least one year behind his classmates in academic achievements.
2. At least two years older than his classmates.
3. Resides in a home with only one parent.
4. Is diagnosed by teachers as displaying a lack of interest in school.
5. Comes from a low socio-economic environment.
6. Married and/or pregnant.
7. Fails to participate in extra-curricular activities.
8. Has discipline problems of a severity that requires referral to the school administrators.
9. Has below a sixth grade level reading ability.
10. Member of a minority race.

2. Testing:

Each student was given a pre-and post-test of his reading ability. The test instruments used were the Gates MacGinitie Reading Test and the Wide Range Achievement Test.

a. The Gates MacGinitie Reading Test was developed by Arthur I. Gates and Walter H. MacGinitie, Teachers College, Columbia University. The test evaluates the speed, vocabulary, and comprehension levels of pupils.

b. The Wide Range Achievement Test was developed by J. F. Jastak and S. R. Jastak and published by Guidance Associates, 1526 Gilpin Avenue, Wilmington, Delaware. It indicates the level of skill development in oral reading, spelling and arithmetic computation. The testing range is individually adjusted to the achievement level (kindergarten through college).

3. Hypotheses:

   a. There will be a statistically significant improvement in pupils' reading abilities in the basic reading skills as evaluated by the Gates MacGinitie Reading Test and the Wide Range Achievement Test.

   b. The pupils will show average gains of at least 5 months in the basic reading skills as evaluated by the Gates MacGinitie Reading Test and the Wide Range Achievement Test.

4. Pupil-Teacher Conference

   a. The pupil decides how many books he can read in the semester for his grade; example: eight books for an A, six for a B, four for a C, etc. The books are of his own choosing from the books made available at the Eastern Area Vocational Center or any source available to the pupil.

   b. The pupil and teacher working together outline basic questions and ideas that could be asked in a discussion; they are used as checks to make sure the pupil has read the book and not just the cover. Records are kept of each book read, plus the number of pages in each book.

   c. The pupil is required to answer two questions on a small card which is available to other pupils who may be interested in reading the book and would want to know what other pupils thought of the book. The two questions are:
   "Did you like the book?"
   "Why or why not?"

One aspect of an independent reading program with students who normally do not like reading is their aversion to hardcover books. They see these books as symbols of the world of scholastic failure.[5] No hardback texts can be put in a pupil's back pocket or can be written in. They prefer paperback books because they are very inexpensive and they are easy to exchange with other students. But most of all, the pupil can own the book. It is his and no one else's.

[5]Ibid. pp. 44-45

IV. Findings

To asses academic growth, all pupils enrolled in the independent reading program were given a pre-test and post-test of the Wide Range Achievement Test (WRAT) and the Gates MacGinitie Reading Test (GMRT). The results of the tests were tabulated and are reported in tables (1-12).

On the WRAT Reading Subtest, the pupils averaged gains of 1.8 grade rating growth (Table 1).

TABLE 1 -- Results of the Reading Subtest of the Wide Range Achievement Test for Pupils in an Independent Reading Program in the Career Development Program

Pupils	Mean Difference in Months between Pre-test and Post-test	Grade Level Score (Pre-test)	Grade Level Score (Post-test)	Grade Level Score Growth (Post-test minus Pre-test)
N= 14	5.2	10.0	11.8	1.8 *

* equivalent to 17 months gain

The pupils showed statistically significant improvements at the .001 level of confidence in the statistical difference in means and Pearsons Product Moment Correlation (Table 2).

TABLE 2-- Results of the Statistical Evaluation of Standard Scores of the Reading Subtest of the Wide Range Achievement Test for Pupils in an Independent Reading Program in the Career Development Program

Pupils	Pearsons Product Moment Correlation	Statistical Difference in Means
N=14	.949 **	5.03 **

** Significant at the .001 level of confidence

On the WRAT Spelling subtest, the pupils averaged gains of 2.5 grade rating growth (Table 3).

TABLE 3--Results of the Spelling Subtest of the Wide Range Achievement Test for Pupils in an Independent Reading Program in the Career Development Program

Pupils	Mean Difference in Months between Pre-test and Post-test	Grade Level Score (Pre-test)	Grade Level Score (Post-test)	Grade Level Score Growth (Post-test minus Pre-test)
N=14	5.2	8.1	10.6	2.5 *

* equivalent to 23 months gain

The pupils showed statistically significant improvements at the .001 level of confidence in the statistical difference in means and Pearsons Product Moment Correlation (Table 4).

TABLE 4.--Results of the Statistical Evaluation of Standard Scores of the Spelling Subtest of the Wide Range Achievement Test for Pupils in an Independent Reading Program in the Career Development Program

Pupils	Pearsons Product Moment Correlation	Statistical Difference in Means
N = 14	.984 **	5.03 **

** Significant at the .001 level of confidence

On the GMRT Speed subtest, the pupils averaged gains of 1.6 grade rating growth (Table 5).

TABLE 5.--Results of the Speed Subtest of the Gates MacGinitie Reading Test for Pupils in an Independent Reading Program in the Career Development Program

Pupil	Mean Difference in Months between Pre-test and Post-test	Grade Level Score (Pre-test)	Grade Level Score (Post-test)	Grade Level Score Growth (Post-test minus Pre-test)
Z				
N = 14	5.2	8.8	10.4	1.6 *

* equivalent to 15 months gain

The pupils showed statistically significant improvements at the .001 level of confidence in the statistical difference in means and at the .01 level of confidence in the Pearsons Product Moment Correlation. (Table 6).

TABLE 6.--Results of the Statistical Evaluation of Standard Scores of the Speed Subtest for the Gates MacGinitie Reading Test for Pupils in an Independent Reading Program in the Career Development Program

Pupils	Pearsons Product Moment Correlation	Statistical Difference in Means
N = 14	.690 *	5.04 **

* Significant at the .01 level of confidence

** Significant at the .001 level of confidence

On the GMRT Accuracy Subtest, the pupils averaged gains of 1.7 grade rating growth (Table 7).

TABLE 7.--Results of Accuracy Subtest of the Gates MacGinitie Reading Test for Students in an Independent Reading Program in the Career Development Program

Pupils	Mean Difference in Months Between Pre-test and Post-test	Grade Level Score (Pre-test)	Grade Level Score (Post-test)	Grade Level Score Growth (Post-test minus Pre-test)
N = 14	5.2	9.2	10.9	1.7 *

* equivalent to 16 months gain

The pupils showed statistically significant improvements at the .001 level of confidence in the statistical difference in means and at the .01 level of confidence in the Pearsons Product-Moment Correlation (Table 8).

TABLE 8.--Results of the Statistical Evaluation of Standard Scores of the Accuracy Subtest for the Gates MacGinitie Reading Test for Pupils in an Independent Reading Program in the Career Development Program

Pupils	Pearsons Product Moment Correlation	Statistical Difference in Means
N = 14	..672 *	5.51 **

* Significant at the .01 level of confidence

** Significant at the .001 level of confidence

On the GMRT Vocabulary Subtest, the pupils averaged gains of 1.6 grade rating growth (Table 9).

TABLE 9.--Results of Vocabulary Subtest of the Gates MacGinitie Reading Test for Pupils in an Independent Reading Program in the Career Development Program

Pupils	Mean Difference in Months between Pre-test and Post-test	Grade Level Score (Pre-test)	Grade Level Score (Post-test)	Grade Level Score Growth (Post-test minus Pre-test)
N = 14	5.2	9.5	11.1	1.6 *

* equivalent to 15 months gain

The pupils showed statistically significant improvements at .001 level of confidence in the statistical difference in means and Pearsons Product-Moment Correlation (Table 10).

TABLE 10.--Results of the Statistical Evaluation of Standard Scores of the Vocabulary Subtest for the Gates MacGinitie Reading Test for Pupils in an Independent Reading Program in the Career Development Program

Pupils	Pearsons Product Moment Correlation	Statistical Difference in Means
N = 14	.887 **	4.32 **

** Significant at the .001 level of confidence

On the GMRT Comprehension Subtest, the pupils averaged gains of 1.4 grade rating growth (Table 11).

TABLE 11.--Results of Comprehension Subtest of the Gates MacGinitie Reading Test for Pupils in an Independent Reading Program in the Career Development Program

Pupils	Mean Difference in Months between Pre-test and Post-test	Grade Level Score (Pre-test)	Grade Level Score (Post-test)	Grade Level Score Growth (Post-test minus Pre-test)
N =14	5.2	9.5	10.9	1.4 *

*equivalent to 13 months gain

The pupils showed statistically significant improvements at the .02 level of confidence in the statistical difference in means and .01 level of confidence in the Pearsons Product-Moment Correlation (Table 12).

TABLE 12.--Results of the Statistical Evaluation of Standard Scores of the Comprehension Subtest for the Gates MacGinitie Reading Test for Pupils in an Independent Reading Program in the Career Development Program

Pupils	Pearsons Product Moment Correlation	Statistical Difference in Means
N = 14	.760 *	2.90 * **

* Significant at the .01 level of confidence

*** Significant at the .02 level of confidence

During the 18 weeks of the second semester, the fourteen pupils read 93 books totaling 19,945 pages. The average number of pages per book was 214 (Table 13).

The pupils enrolled in the Center for both the first and second semesters read 56 more books in the second semester than the first (Table 14). On the average, they read seven more books the second semester than the first.

The books read by the students are in Table 15.

TABLE 13.--The Number of Books Read by Each Pupil; the Total Number of Pages Read; and the Average Number of Pages Per Book;Read by Each Pupil

Pupil	Number of Books Read	Pages Read	Average Number Pages Per Book
A	4	1490	370
B	9	1690	187
C	4	739	185
D	4	665	166
E	10	2419	242
F	4	705	176
G	8	1626	203
H	4	710	177
I	3	411	137
J	7	999	143
K	25	4029	161
L	5	1138	228
M	6	1854	309
N	4	1470	367
Total	14	19,945	214

TABLE 14.--The Comparison of the Number of Books Pupils Read First Semester to Second Semester

Pupil	Number of Books Read First Semester	Number of Books Second Semester	Difference in Books Read (Second Semester-First Semester)
A	N A *	--	--
B	4	9	5
C	0	4	4
D	0	4	4
E	4	10	6
F	0	4	4
G	3	8	5
H	NA*	--	--
I	NA*	--	--
J	NA*	--	--
K	2	25	23
L	NA *	---	--
M	1	6	5
N	NA *	--	--
8	14	70	56

* NA--Pupil not enrolled in Center First Semester

TABLE 15. --The Books Read by the Pupils

Pupils Who Read Book	Number of Students Reading Book	Author	Title of the Book
A, B, C, D, F, H, I, M	8	Orwell, George	Animal Farm
A, B, D, F J, K	6	Zindel, Paul	The Pigman
A, B, C, F I, J	6	Steinbeck, John	Of Mice and Men
B, L, K	3	Keyes, Daniel	Flowers for Algernon:Charley
B, H	2	Orwell, George	1984
L, G	2	J	The Sensuous Woman
J, G	2	Golding, William	Lord of the Flies
B, G	2	Salinger, J.D.	The Catcher in the Rye
B, G	2	Segal, Erich	Love Story
K	1	Shakespeare, William	A Midsummer Night's Dream
E	1	Translated by Rouse, W.H.D.	Homer the Illiad
E	1	Translated by	Homer the Odessey
N	1	Bengtsson, Frans Gunnar	Long Ships
K	1	Boulle, Pierre	Planet of the Apes
K	1	Braithwaite, E.R.	To Sir, With Love
J	1	Brautigan, Richard	The Abortion
J	1	Brautigan, Richard	The Pill Versus the Springhill Mine
J	1	Brautigan, Richard	Trout Fishing in America
D	1	Butler, Ivan	Horror in the Cinema

TABLE 15.--Continued

Pupils Who Read Book	Number of Pupils Reading Book	Author	Title of Book
M	1	Camus, Albert	The Stranger
K	1	Capote, Truman	Breakfast at F Tiffany"s
K	1	Capote, Truman	In Cold Blood
E	1	Charteris, Leslie	The Saint: Two in One
K	1	Curtis, Dan	Barnabas Collins in A Funny Vein
D	1	Doyle, Conan	Hounds of the Baskervilles
N	1	Elkins, Michael	Forged in Fury
J	1	Fast, Julius	Body Language
K	1	Friday, Bill	I Love You, Alice B. Toklas
G	1	Friedan, Betty	The Feminine Mystique
K	1	Gregory, Dick	Nigger
K	1	Gregory, Susan	Hey, White Girl
K	1	Griffin, John	Black Like Me
K	1	Gunther, John	Death B Not Proud
E	1	Harper, Lee	To Kill a Mockingbird
N	1	Hayes, Joseph	The Third Day
J	1	Head, Anne	Mr. & Mrs. Bo Jo Jones
E	1	Hersey, John	Hiroshima
E	1	Hilton, James	Lost Horizon
H	1	Hinton, S. E.	The Outsider
K	1	Hitchock, Alfred	Murders I Fell in Love With
K	1	Johnston, William	Soul City, Downstairs

TABLE 15.--Continued

Pupils Who Read Book	Number of Pupils Reading Book	Author	Title of Book
K	1	Jones, Le Roi	Dutchman *The Slave
K	1	Kerr, Jean	Please Don't Eat the Daisies
K	1	Kingman, Lee	The Peter Pan Bag
G	1	LaMarr, Hedy	Ecstasy and Me
B,C	2	Levin, Ira	Rosemary's Baby
L	1	M	Sensuous Man
G	1	McCullers, Carson	Member of the Wedding
M	1	Mitchener, James	Caravans
K	1	Olsen, Theodore	Soldier Blue
K	1	Oswald, Ian	Sleep
N	1	Puzo, Mario	The Godfathers
C,I	2	Raucher, Herman	Summer of '42
F	1	Remarque, Erich	All Quiet on the Western Front
L,K	2	Reuben, David	Everything You Always Wanted to Know About Sex
E	1	Richter, Conrad	The Light in the Forest
L	1	Robbins, Harold	The Inheritors
E	1	Ryan, Cornelius	The Longest Day
K	1	Sinclair, Upton	The Jungle

TABLE 15.--Continued

Pupils Who Read Book	Number of Pupils Reading Book	Author	Title of Book
B	1	Smith, Betty	Joy in the Morning
K	1	Stanford, Don	The Red Car
M	1	Stegner, Wallace	Joe Hill
K	1	Steinbeck, John	The Red Pony
A	1	Stryon, William	Confession of Nat Turner
M	1	Uris, Leon	Exodus
M	1	Uris, Leon	Topaz
E	1	Wilson, Joyce	The Complete Book of Palmistry

Pupils Comments on " Did you like the book? "

" Why or why not ? "

Black Like Me

I would definitely recommend this book to others but I would be selective about it. It is a hearbreaking reality of prejudice in America.

The Catcher in the Rye

I think it would depend on the type of book you liked. This book is about a boy who is sent to quite a few different schools because of cutting classes, failing them and also not keeping rules and regulations. The struggle for Holden to identify who he is was so sad , so if you want to know what happens, read and find out.

Flowers for Algernon

Yes, it shows the other half of the world of retardation. It has a lot of meaning. It makes you stop and think of how lucky we are.

The Godfather

Yes, because I think it is one of the best books I've ever read. I like it because it was about the Mafia and it had a lot of killing in it.

Mr. and Mrs. Bo Jo Jones

Yes, I would recommend this book to everyone in school or out. It's just a story on how two young people solve the situation they get themselves into. I really think it was a true story of unexpected parenthood. It's interesting to find out how they finally worked things out without splitting up completely. You'll Really Dig This Book.

Trout Fishing in America

No, because it's hard to follow and understand. It just kept talking about little experiences when he was a kid.

Pigman

Yes, I would recommend this book to someone else because I enjoyed the book very much and it's a book that makes you feel good after reading it.

I would not recommend this book to someone else unless they liked to put up with consistent inconsitencies, unbelievability and other fallacies. The author has forgotten what teenagers are really like.

The Outsiders

Yes! Because it sounds so real to the things that have happened to the people in the slums and the people on the rich side of town.

Yes, the book tells of two different groups of people- rich and poor- and how they are always fighting because of the hate among them.

Summary of Findings

1a. Statistically, there was a significant improvement to the .001 level of confidence on the WRAT Reading Subtest.

1b. The pupils averaged gains of 1.8 (seventeen months) grade rating growth on the WRAT Reading Subtest.

2a. Statistically, there was a significant improvement to the .001 level of confidence on the WRAT Spelling Subtest.

2b. The pupils averaged gains of 2.5 (twenty-three months) grade rating growth on the WRAT Spelling Subtest.

3a. Statistically, there was a significant improvement to the .001 level of confidence on the GMRT Speed Subtest.

3b. The pupils averaged gains of 1.6 (fifteen months) on the GMRT Speed Subtest.

4a. Statistically, there was a significant improvement to the .001 level of confidence on the GMRT Accuracy Subtest.

4b. The pupils averaged gains of 1.7 (sixteen months) on the GMRT Accuracy Subtest.

5a. Statistically, there was a significant improvement to the .001 level of confidence on the GMRT Vocabulary Subtest.

5b. The pupils averaged gains of 1.6 (fifteen months) on the GMRT Vocabulary Subtest.

6a. Statistically, there was a significant improvement to the

.02 level of confidence on the GMRT Comprehension Subtest.

6b. The pupils averaged gains of 1.4 (thirteen months) on the GMRT Vocabulary Subtest.

7. The pupils who were in the Center first and second semester read on the average seven more books in the second semester than in the first semester.

V. Conclusions

The following conclusions were reached based upon the data gathered in this practicum:

1. Some instruction should be given to improve comprehension, inasmuchas the data showed more increase in the reading skills which are mechanical in nature, i.e., in speed and accuracy, spelling, oral reading and vocabulary than in comprehension which is cognitive in nature.

2. Students, when left to their own selection of books, will not necessarily select only the simplest books to read, but will also read books of considerable sophistication.

3. An independent reading approach to English literature where the pupils have the choice of selecting what they want to read can significantly benefit them.

4. The writer, therefore, encourages more extensive use of independent reading programs in the secondary schools.

SELECTED BIBLIOGRAPHY

A. One Author

Barbe, Walter B. Educators Guide to Personalized Reading Instruction. New Jersey: Prentice-Hall, Inc., 1961.

Carlsen, G. Robert. Books and the Teen-age Reader. New York: Bantam Books, 1971.

Duker, Sam. Individualized Reading Readings. New Jersey: The Scarecrow Press, Inc., 1969.

Fader, Daniel N. Hooked on Books: Program & Proof. New York: Medallion Books, 1968.

Karlin, Robert. Teaching Reading in High School. New York: The Bobbs-Merrill Co. Inc., 1966.

Marksheffel, Ned. Better Reading in the Secondary School. New York: The Ronald Press, 1966.

Thomas, Charles C. Reaching Delinquents Through Reading. Illinois: Bannerstone House, 1957.

Reiter, Irene M. Why Can't They Read It ? . Penn: Polaski Company, 1970.

Umans, Shelly. New Trends in Reading Instruction. New York: Teachers College Press, Columbia University, 1966.

B. Two Authors

Bruning, James L., and Kintz, B.L. Computational Handbook of Statistics. Illinois: Scott Foresman and Company, 1968.

Olson, Arthur V., and Ames, Wilbur S. Teaching Reading Skills in Secondary Schools: Readings. Scranton: International Textbook Co., 1970.

Otto, Wayne, and Smith, Richard J. Administering the School Reading Program. Boston: Houghton Miffin Co., 1971.

Schnepf, Virginia, and Meyer, Odessa. Improving Your Reading Program. New York; MacMillian Co., 1971.

Staiger, Ralph, and Sohn, David. New Directions in Reading. New York: Bantam Books Inc., 1967.

C. International Reading Association

Dietrich, Dorthy M., ed. and Mathews, Virginia H. Reading and Revolution. Newark: International Reading Association, 1970.

Huus, Helen., ed. Evaluating Books for Children and Young People. Newark: International Reading Association, 1971.

International Reading Association. Reading Instruction in Secondary Schools. Newark: International Reading Association, 1964.

Singer, Harry and Ruddell, Robert B. Theoretical Models and Process of Reading. Newark: International Reading Association, 1970.

Whipple, Gertrude and Black, Millard H. Reading for Children Without-Our Disadvantaged. Newark: International Reading Association, 1966.

D. Periodicals

Burrows, Alvin T. " Caste System of Democracy in Teaching Reading. " Elementary English, Vol. 27 (March, 1950) , 145-148.

Dean, Ray B. " A Plan for Individual Reading in the Intermediate Grades. " National Elementary Principal , Vol. 17 (July, 1938) 557-568

Fannin, Lois. " Reading for the Brightest Child. " Bullentin of School Library Association of California, Vol. 26 (March, 1949) 29.

Trusty, Kay. "Principles of Learning and Individualized Reading." The Reading Teacher, Vol. 24 Number 8 (1971).

Turabian, Kate L. A Manual for Writers of Term Papers, Theses, and Dissertations. Chicago: The University of Chicago Press, 1967.

APPENDIX D

VOCATIONAL GUIDANCE MATERIALS AND LIST OF INSTRUCTIONAL MATERIALS

Vocational Guidance Materials

Bulletin and catalogues from:

Utah Technical College
University of Utah
Westminster
Adult Education

Steven Henager Bus. College
Brigham Young University
United Business Schools

Guidance Assistance:

Jobs for High School Students
Four Who Quit
High School Course Selection and Your Career
Getting and Keeping Your First Job

Directory of Business Schools
Service Index of Different State and Local Programs
Counselors Manual of Apprenticeable Occupations prepared by the Utah Apprenticeship Council

Sources of Occupational Information:

Division of Guidance and Testing
State Department of Education
Columbus, Ohio

Handbook for Sources of Occupational Information
Utah State Board of Education

70 Pamphlets prepared by the Utah State Employment Agencies on jobs and apprentice training

Occupational Exploration Kit (SRA)

Private Career Training Facilities in Utah
State of Utah

Brochures from 50 exemplary projects

Broad ranged miscellaneous material from Department of Vocational Education, Granite School District

LIST OF INSTRUCTIONAL MATERIALS

ART

Pittman Series
- Figure Drawing
- Drawing Faces and Expressions
- Anatomy

Quick Sketching
Commercial Art Techniques
Advertising Graphics
Inclined Lettering
Basic Mechanical Drawing
Mechanical and Machine Drawing
Architectural Drawing
Integrated CDP Mechanical Drawing Series: Books 1-23
Hand Woodwork
Leatherwork
The Story of Painting

AUTO MECHANICS

Automotive Essentials

BUSINESS

Basic and Advanced Type
Typewriting Office Practice
Secretarial Office Practice
Office Machines
Shorthand (Stenoscript)
Distributive Education
- Retailing
- Retail Merchandising
- Clerical Office Practice

Vocational Guidance and Preparation
- Consumer Education Kit--Job Corps
- Career Development Kit

ENGLISH

Basic English Skills
- English Grammar BRL - Vol. I & II
- Programmed English - Sullivan
- English Can be Easy
- Vocational English - Book I & II

Language Arts - Job Corps
- Handwirting
- Spelling
- Basic Language Skills
- Vocabulary Skills
- Information Finding Skills
- Grammar and Usage
- Letter Writing Skills

ENGLISH (Cont.)

Spelling BRL - Books 1 thru 8
Composition
  Modern Composition - Books 4 thru 6
  Ananse Tales
Reading
  You Can Read Better
  How to Become a Better Reader SRA
  How to Improve Your Reading SRA
  Reading for Understanding Kit SRA
  Speed Reading
Literature
  Literature to Enjoy - 7
    Readings to Enjoy
    Stories to Enjoy
  Literature to Remember - 8
    Readings to Remember
    Stories to Remember
  Currents in Literature - 9
    Currents in Drama
    Currents in Nonfiction
    Currents in Fiction
  Designs in Literature - 10
    Designs in Nonfiction
    Designs in Fiction
    Designs in Drama
  The American Experience - 11
    The American Experience: Fiction
    The American Experience: Nonfiction
    The American Experience: Drama
  The English Tradition - 12
    The English Tradition: Fiction
    The English Tradition: Nonfiction
    The English Tradition: Drama
Voices - Books 1 - 6
Holt Impact Series
  Cities
  I've Got a Name
  At Your Own Risk
  Larger than Life
English for Today - Book 1 & 2
The Magic World of Dr. Spello
Conquests in Reading
Teaching Comprehension Skills
Manual for Writers - Turabian
Testing English as a Second Language

HEALTH

First Aid BRL
Safety BRL
Nutrition BRL
Personal Health - Hygiene BRL
Body Structure BRL

HEALTH (Cont.)

Prevention of Communicable Disease BRL
Venereal Disease BRL
Health & Hygiene - Job Corps

HOME ECONOMICS

Smart Sewing
Fashion Your Own
Housing & Home Management
Introductory Foods

JOURNALISM

News in Print
Advertising Graphics

MATHEMATICS

Fundamentals of Mathematics - Sullivan
  Addition, Subtraction, Multiplication & Division
Introduction to Modern Mathematics BRL
  Series I; Books 1 thru 5
  Series II; Books 1 thru 5
Computation Skills Development Kit SRA
Algebra - Banks, Sobel, and Wash - Book I and Book II
Pre-Algebra
Trouble-Shooting
Consumer Mathematics Series BRL
  Vocational Opportunities and Life Earnings
  The Paycheck
  The Household Budget
  The Wise Buyer
  Income Tax
  Insurance
  Investments

SCIENCE

Pathways in Science
  Physics 1, 2, 3
  Chemistry 1, 2, 3
  Biology 1, 2, 3
  Earth Science 1, 2, 3
Principles of Modern Biology BRL
  1. Cells: Structure and Function
  2. Cells: Structure and Function
  3. Organisms: Upkeep
  4. Organisms: Upkeep
  5. Organisms: Integration
  6. Organisms: Reproduction, Development & Genetics
  7. Organisms: Structural and Function Diversity
  8. Populations: Genetics & Ecology
  9. Populations: Bio-Geographic and Evolutional

SCIENCE (Cont.)

General Science - Macmillan
1. Motion
2. Force
3. Energy and Work
4. Simple Machines
5.
6.
7. Light
8.
9.
10.
11. Earth
Applied Logic BRL
Astronomy:
The Night Sky
The Solar System
Principles of Chemistry BRL
Volumes 1 thru 8
Chemistry Made Simple

SOCIAL SCIENCE

Introduction to American Government - Vols. I, II BRL
Exploring American History
Our Nation's History - Follett
American Economics System BRL
1. Free Enterprise System
2. Gross National Product
3. Problems of Economic Stability and Growth
4. Federal Reserve System and Its Effect on Money and Banking
5. Taxes and Government Spending
6. International Trade
7. Capitalism, Communism and Socialism
Geography of the United States - East, Central & West
Study Lessons in Map Reading
Citizenship in Action
World History - Follett
World Studies Inquiry Series
Latin America
Asia
Africa
Middle Eastern Culture
Islam
The Arabs in History
The Negro Revolution
The Shaping of Western Society
Modern Sociology
Psychology
Engle
Statistics
Human Behavior

APPENDIX E

MINORITY ACCOUNTING

8

75 TOTAL

43 m
32 f

1 7th
14 8th
58 9th

Kearns Center

45 withdrawls

[redacted]can
1 portugeuse
1 puerto Rican
11 Spanish
2 Italian
2 Indian
1 Negro

[redacted]can
11 Spanish
2 Italian
1 Hawaiian
1 Negro

Name	Sex	Grade	Date of Entry	Date of Withdrawal	Ethnic Background		Address	Job Placement
					Mother	Father		
Albrand, Chuck	M	8	8-9-70	5-28-71	Caucasion	Caucasion	Magna	No - Cyprus
Brace, Norman	M	8	8-9-70	5-28-71	Caucasion	Caucasion	Magna	No - Cyprus
East, Manny	M	8	8-9-70	5-28-71	Sp. Speaking	Sp. Speak.	Magna	No - Cyprus
Florence, Doug	M	8	8-9-70	5-29-71	Caucasion	Caucasion	Magna	No - Cyprus
Harvey, Stan	M	8	8-9-70	5-28-71	Caucasion	Caucasion	Magna	No - Cyprus
Ward, Norman	M	8	8-9-70	5-28-71	Caucasion	Caucasion	Magna	No - Cyprus
Cole, Scott	M		11-20-70	5-28-71	Caucasion	"	Magna	
Delashmutt, Dennis	M	8	11-16-70	5-28-71	"	"	Magna	No - Cyprus
Aho, Arvid	M	8	2-17-71	5-28-71	"	"	Magna	No - Cyprus
Butterfield, Sheila	F	8	2-17-71	5-28-71	"	"	Magna	No - Cyprus
Dutton, Darlene	F	8	2-17-71	5-28-71	"	"	Magna	
Heisey, Vicky	F	8	2-17-71	5-28-71	"	"	Magna	
Herrera, Becky	F	8	2-17-71	5-28-71	Spanish	Spanish	Magna	Home Teaching
Kerr, Lovey Ann	F	8	2-17-71	5-28-71	Caucasion	Caucasion	Magna	School
Grow, Karen	F	8	2-17-71	5-28-71	"	"	Magna	Is married
Brown, Kelly	M	9	8-9-70	5-28-71	"	"	Kearns	Kearns High
Burke, Mitzi	F	9	8-9-70	5-28-71	"	"	Kearns	Working
Dust, Dean	M	9	8-9-70	5-28-71	"	"	Kearns	Jail
Thomas, Jeff	M	9	8-9-70	5-28-71	Portuguese	"	Kearns	Kearns High
Ramsay, Kathy	F	9	8-9-70	5-28-71	Caucasion	Caucasion	Kearns	Working
Rizzutto, Regina	F	9	8-9-70	5-28-71	"	Italian	Kearns	Working
Vigil, Anthony	M	9	8-9-70	5-28-71	Spanish	Spanish	Kearns	Kearns High
Bently, Tom	M	9	8-9-70	5-28-71	Caucasion	Caucasion	Kearns	Kearns High
Loveless, Allison	M	9	8-9-70	5-28-71	"	"	Kearns	Worked in Boys Ranch
Jacketta, Ralph	M	9	8-9-70	5-28-71	Italian	Italian	Kearns	Kearns High
Juarez, Charles	M	9	8-9-70	5-28-71	Spanish	Spanish	Kearns	Kearns High

Center

Name	Sex	Grade	Date of Entry	Date of Withdrawal	Ethnic Background		Address	Job Placement
					Mother	Father		
Stuart, Jim	M	9	8-9-70	5-28-71	Caucasion	Caucasion	Kearns	SIS
Adderly, Darrell	M	9	8-9-70	5-28-71	"	"	Kearns	Kearns or Granite
Iversen, Nadine	M	9	8-9-70	5-28-71	Swedish	Swedish	Kearns	Married
Venz, Aaron	M	9	8-9-70	5-28-71	Caucasion	Caucasion	Salt Lake	
Ellis, Mark	M	9	8-9-70	5-28-71	"	"	Out of State	
Smith, Tommie	M							
Ponce. Larry	M	9	8-9-70	5-28-71	Spanish	Spanish	Kearns	Kearns High
Humphries, Mark	M	9	8-9-70	5-28-71	Caucasion	Caucasion	Kearns	Kearns High
Babbitt, Tracy	F	9	11-8-71	5-26-72	"	"	Kearns	
Herron, Lori	F	9	11-8-71	5-26-72	"	"	Kearns	
Davies, Connie	F	9	11-8-71	5-26-72	"	"	Kearns	
Luman, Terry	F	9	11-8-71	5-26-72	Italian	"	Kearns	
Bridwell, Kim	F	9	11-8-71	5-26-72	Caucasion	"	Kearns	
Lucero, Randy	M	9	11-8-71	5-26-72	Spanish	Spanish	Kearns	
Loveless, June	F	9	11-8-71	5-26-72	Caucasion	Caucasion	Kearns	
Withers, June	F	9	11-8-71	5-26-72	"	"	Kearns	
Broadbent, Vicky	F	9	11-8-71	5-26-72	"	"	Kearns	
Martinez, Louis	M	9	11-8-71	5-26-72	Spanish	Spanish		
Martinez, Mike	M	9	11-8-71	5-26-72	Spanish	Spanish	Kearns	
Wood, Bob	M	9	11-8-71	5-26-72	Caucasion	Caucasion	Kearns	
Slack, Jill	F	9	11-8-71	5-26-72	"	"	Kearns	
Chidester, Margo	F	9	11-8-71	5-26-72	"	"	Kearns	
Johnson, Linda	F	9	11-8-71	5-26-72	"	"	Kearns	
Smith, Vicky	F	9	11-8-71	5-26-72	"	"	Redwood	
Ponce, Larry	M	9	11-8-71	5-26-72	Spanish	Spanish	Kearns	
Glasgow, Ann	F	9	11-8-71	5-26-72	Caucasion	Caucasion	Kearns	
English, Katie	F	9	11-8-71	5-26-72	Indian	Caucasion	Kearns	
Shaw, Barbara	F	9	11-8-71	5-26-72	Caucasion	Caucasion	Kearns	
Hymas, David	M	9	11-8-71	5-26-72	"	"	Kearns	

Center

Name	Sex	Grade	Date of Entry	Date of Withdrawal	Ethnic Background		Address	Job Placement
					Mother	Father		
Yarberry, Steve	M	9	11-8-71	5-26-72	Caucasion	Caucasion	Kearns	
Gallagher, Nancy	F	9	11-8-71	5-26-72	"	"	Kearns	
Miller, Scott	M	9	11-8-71	5-26-72	"	"	Kearns	
Maghoney, Roger	M	9	11-8-71	5-26-72	Indian	Hawaiian	Kearns	
VanValkenburg, Les	M	9	11-8-71	5-26-72	Caucasion	Caucasion	Kearns	
Santiago, David	M	9	11-8-71	5-26-72	Puerto Rican		Kearns	
Pogue, Susan	M	9	2-2-72	5-26-72	Caucasion	Caucasion	Kearns	
Crismon, ~~Gworge~~ George	M	9	12-17-71	5-26-72	"	"	Kearns	
Nelson, Glenna	F	9	11-8-71	1-21-72	"	"	Kearns	
Gotchy, Cheryl	F	9	11-8-71	1-21-72	"	"	Kearns	
Ortega, Jennie	F	9	11-8-71	1-21-72	Spanish	Spanish	Kearns	
Larson, Kirk	M	9	11-17-71	1-21-72	Caucasion	Caucasion	S.I.S.	
Stewart, Jim	M	9	11-17-71	1-21-72	"	"	S.I.S.	
Stewart, Jack	M	9	12-14-71	1-21-72	"	"	S.I.S.	
Wilkerson, Marvin	M	9	11-8171	1-21-72	"	"	S.I.S.	
Banks, Debbie	F	9	11-8-71	1-21-72	"	"	Kearns	Regular classes
Padjen, Debbie	F	9	11-8-71	1-21-72	"	"	Kearns	" "
Bugger, Robyn	F	9	11-8-71	1-21-72	"	"	Kearns	" "
Robison, Suzanne	F	7	11-8-71	1-21-72	Negro	Negro	Salt Lake	District Transfer
Gomez, Carlos	M	9	11-8-71	1-21-72	Spanish	Spanish	Granger	Regular classes

APPENDIX F

SAMPLE OF WEEKLY PLACEMENTS

AND TEACHER AIDES PLACEMENT

DSOP/Career Development within Granite School District

WESTERN AREA VOCATIONAL CENTER STUDENTS
(as of December 9, 1971)

		Referred by	Grade	School From	Presently working at:
Dave Thompson:					
Adderley, Darrell	(M)	Pattillo	Soph.	Kearns	Oquirrh Hills Elementary
Barnes, Mike	(A)	Pattillo	Jr.	Granger	Monroe Elementary
Bowden, Doug	(A)	Fessler	Sr.	Cottonwood	K-Mart
Clayton, John	(A)	Pattillo	Jr.	Granger	Academy Park Elementary
Giles, JoLynn	(A)	Pattillo	Sr.	Cyprus	Monroe Elementary
Jolley, Roland	(M)	Pattillo	Jr.	Granger	South Kearns Elementary
Manwaring, Ric	(A)	Pattillo	Jr.	Granger	
Mendenhall, Marc	(M)	Fessler	Jr.	Kearns	WAVC
Peck, Jeff	(M)	Pattillo	Soph.	Granger	Hillsdale Elementary
Riley, Wade	(M)	Pattillo	Soph.	Granger	Monroe Elementary
Romero, Hermie	(M)	Pattillo	Jr.	Granger	Pioneer Elementary
Simons, Shane	(A)	Pattillo	Soph.	Kearns	David Gourley Elementary
Wall, Deena	(A)	Pattillo	Soph.	Granger	
Beeson, Bonnie	(A)	Fessler	Sr.	Moab	Monroe Elementary
Keith Gubler:					
Bailey, Bill	(M)	Pattillo	Sr.	Granger	Plastic Specialties
Bailey, Stephen	(M)	Pattillo	Sr.	Davis	Plastronic Corp.
Baster, Tom	(M)	Pattillo	Soph.	Granger	Hillsdale Elementary
Campbell, Casey	(M)	Pattillo	Jr.	Granger	Premium Oil Co.
Darling, Richard	(A)	Romney	Soph.	Granger	Waste Company
Lammert, Don	(A)	Fessler	Soph.	Olympus	Monroe Elementary
Robbs, Kevin	(M)	Romne6	Soph.	Granger	Sperry Rand
Scott, George	(M)	Pattillo	Jr.	Granger	P & S Performance
Slack, Linda	(A)	Pattillo	Jr.	Granger	South Kearns Elementary
Wilson, Laurie	(M)	Fessler	Jr.	Cottonwood	Academy Park Elementary
Winters, Jerry	(M)	Pattillo	Sr.	Kearns	U of U
McLaughlan, Jerry	(M)	Fessler	Soph.	Granger	Barton's Cafe & Pioneer Elem.
Ortega, Joe	(M)	Pattillo	Sr.	Kearns	Pioneer Elementary
Sutton, Ed.	(A)	Pattillo	Jr.	Granger	

WAVC Student Placements (Cont.)

Carmen Snyder:	Referred by		Grade	School From	Presently Working at:
Cline, Orrie	(M)	Pattillo	Jr.	Granger	Granger Elementary
Crane, LaMar	(M)	Pattillo	Jr.	Granger	Porkey's Cafe
Drain, Rhonda	(A)	Pattillo	Soph.	Granger	Hillsdale Elementary
Jackson, Nancy	(M)	Pattillo	Sr.	Granger	Minter's
Lammert, Terry	(A)	Fessler	Sr.	Olympus	Monroe Elementary
Reiber, Bill	(M)	Pattillo	Soph.	Granger	Farnsworth Elementary
Roeling, Ron	(A)	Fessler	Soph.	Granite	J & R Waste Co.
Rondas, Shane	(M)	Pattillo	Sr.	Granger	Pioneer Elementary
Spencer, Dave	(A)	Pattillo	Sr.	Granger	
Williams, Janice	(M)	Romney	Soph.	Granger	Hillsdale Elementary
Witt, Tony	(A)	Pattillo	Soph.	Granger	Whittier Elementary
Barnett, Jody	(M)	Pattillo	Soph.	Granger	Robert Frost Elementary
Thompson, Ric	(A)	Pattillo	Jr.	Granger	
Turnbow, Robin	(A)	Pattillo	Soph.	Granger	

EAST VALLEY COMPLEX

Chan Brewer
262-6511

Canyon Rim
3005 South 2900 East
Pam Whitecotton EAVC

Cottonwood Library
5205 South Holladay Blvd.
Corinne Covington EAVC

Crestview
2100 East Lincoln Lane
David Austin CAVC

Eastwood
3305 South Wasatch Blvd.
Mark Peterson CAVC
Gary Cannegeiter EAVC

Fortuna
4630 Fortuna Way
David Wright CAVC

Holladay
4580 South 2300 East
Kim Bantock EAVC
Jim Lethenstrom EAVC
Robert McCafferty EAVC
Mike McGuiere EAVC

Howard R. Driggs (Library)
4340 South 2700 East
Pam Barnett EAVC
Barbara Lambert CAVC

Oakridge
4325 South Jupiter Drive
Roger Castleton EAVC

Rosecrest
2420 Fisher Lane
Jeff Hartle EAVC
Kevin Chilton CAVC

William Penn
1670 Siggard Drive
Tom Schriver CAVC
Tunie Johns EAVC
Tari Thomas CAVC

Churchill Jr.
3450 Oakview Drive
Frank Lewis CAVC

Olympus Jr.
2217 East 4800 South
Terry Rothwell CAVC

CENTRAL VALLEY COMPLEX

Julie Peterson
262-6741

Blaine
41 East 3300 South

Taren Lynch	EAVC
Debbie Wafford	CAVC

Lincoln
501 East 3900 South

Russ Benton	EAVC
Karen Weber	CAVC
David King	CAVC

Oakwood
5815 South Highland Drive

David Spencer	CAVC

Redwood
2650 South Redwood Road

Brian Reed	EAVC

Vista
4925 South 2200 West

DyAnna Butterworth	EAVC
Jana Wey	EAVC
Karen Clark	CAVC

Central Jr.
3031 South Second East

George Morris	CAVC

WESTERN VALLEY COMPLEX

Carmen Snyder
298-1315

Academy Park
4580 West Point Drive
Kearns

Laurie Wilson	WAVC
John Clayton	WAVC

Arcadia
3461 West 4850 South

Cheryl Newton	EAVC
Dave Kendall	EAVC

Robert Frost
344 West 3400 South

Jody Barnett	WAVC
Scott McCune	EAVC
Steve Wink	EAVC
Russ Thornblad	CAVC

South Kearns
4430 West 5570 South

Kathy Riddle	CAVC
Pam Carlson	CAVC
Linda Slack	WAVC
Roland Jolley	WAVC

Oquirrh Hills
5241 South 4280 West

Darrell Adderley	WAVC

Pioneer
3860 South 3380 West

Joe Ortega	WAVC
Shane Rhondas	WAVC
Hermie Romero	WAVC

Monroe
4004 West 3500 South

Mike Barnes	WAVC
Jo Lynn Giles	WAVC
Wade Riley	WAVC
Bonnie Beeson	WAVC
Don Lammert	WAVC
Terry Lammert	WAVC

Granger
2450 West 3850 South

Orrie Cline	WAVC

Hillsdale
3275 West 3200 South

Rhonda Drain	WAVC
Janice Williams	WAVC
Jeff Peck	WAVC
Tom Baxter	WAVC

Whittier
5975 West 3500 South

Tony Witt	WAVC

David Gourley
4905 South 4300 West

Shane Simmons	WAVC

Farnsworth
4225 West 3751 South

Bill Reiber	WAVC

APPENDIX G

FEDERAL AND STATE VISIT AGENDA

AGENDA
FOR EVALUATION OF DIVERSIFIED SATELLITE OCCUPATIONAL PROGRAM
AND CAREER DEVELOPMENT PROGRAM

Monday, April 10th

9:10	Meet visitors at airport Flight 671 Western		Dr. Jones
10:00-10:45	Briefing	Room 19 Granite District Office 340 East 3545 South	Federal, State and District Office Staffs
11:00-11:30	Brockbank Jr. High DSOP	Room 26 2935 South 8560 West Carol Jaglinski	Federal, State and District Office Staffs
11:45-12:20	Kearns Jr. High DSOP	Room 113 4040 West 5305 South Margaret Copley	Federal, State and District Office Staffs
12:30-1:30	Luncheon	Ming Restaurant 2055 West 3500 South	Federal, State and District Office Staffs. Jaglinski, Copley, and Nicol, Riley O'Neil, Holt
1:45-2:30	Central Jr. High DSOP	Room 12B 3031 South 2nd East David Nicol	Federal, State and District Office Staffs
2:45-3:30	Redwood Elementary DSOP	2650 South Redwood Rd. Riley O'Neil Principal	Federal, State and District Office Staffs
3:45-4:45	Summary and Evaluation DSOP Junior High and Elementary	Room 19	Federal, State and District Office Staffs

Tuesday, April 11th

8:10	Meet visitors at Hotel Utah	District Office Staff
8:30-9:15	WAVC - DSOP/Career Development 3572 West 3500 South Keith Gubler Carmen Snyder David Thompson	Federal, State and District Office Staffs
9:35-10:45	EAVC and CAVC DSOP/Career Development Chan Brewer Julie Peterson Becky Clark Gary Stutz Tim Collins	Federal, State and District Office Staffs
11:00-12:15	Visit to student aid in school WAVC--Doug Mendenhall--Jackling Visit to student aid in printing EAVC--Wayne Smith--Blaine Jackling--3760 South 4610 West--Teacher-Mr. Dennison Blaine--41 East 33rd South--Teacher-Charlotte Pack	
12:30-1:30	Luncheon Minoa Restaurant 1140 East 3900 South	Federal, State and District Office Staffs. Staffs from WAVC, CAVC, and EAVC.
1:45-2:15	Visit to student aid in school CAVC--Mark Hardman--Printing - District Office Works with Paul Christianson	Federal, State and District Office Staffs
2:30-3:30	Summary and evaluation Room 19 DSOP/Career Development - High School	" " Federal &
5:30	Evening Session	Federal & Local Personnel

Wednesday, April 12th

9:10	Meet visitors at Hotel Utah	District Office Staff
9:30-11:00	Final "wrap-up" Recommendations and format for 1972-73 Room 19	Federal, State and District Office Staffs

APPENDIX B VOLUME II

PROPOSED PSYCHOMETRIC ASSESSMENT PROCEDURES AND EVALUATION FOR THE CAREER DEVELOPMENT AND DIVERSIFIED SATELLITE OCCUPATION PROGRAMS

PARADIGM FOR THE 1972-1973 ACADEMIC YEAR

. . . compendium and schedule of current and recommended testing and evaluation procedures to be used in the Career Development and Diversified Satellite Occupations Programs for the 1972-1973 academic year.

May 5, 1972

Prepared by:

Philip E. Rusk
Psychologist
Division of Psychometry and School Psychology

Hilda B. Jones, Ed.D.
Director
Pupil Services and Special Education

Janice C. Romney
Coordinator
Career Development and Diversified Satellite Occupations Programs
Granite School District

LOSTOLAR

Proposed Psychometric Assessment Procedures and Evaluation for the Career Development and Diversified Satellite Occupation Programs

---

Initial Design for the 1972-1973 Academic Year

5 May 1972
Division of School Psychometry and School Psychology
Department of Pupil Services
Granite School District

GRANITE SCHOOL DISTRICT

Administration:

Superintendent of Schools	Dr. T. H. Bell
General Deputy Superintendent	Dr. William L. Hutchinson
Deputy Superintendent	Dr. Orvil C. England
Deputy Superintendent	Dr. Charles P. Lloyd
Deputy Superintendent	Dr. Ted T. Peterson
Assistant Superintendent	Dr. John Reed Call
Assistant Superintendent	Dr. Ralf C. Riches
Assistant Superintendent	Dr. Willis D. Wynn

DEPARTMENT OF PUPIL SERVICES

Career Development and Diversified Satellite Occupation Programs

Director of Pupil Services	Dr. Hilda B. Jones
Coordinator of Counseling and CDP/DSOP	Mrs. Janice C. Romney
District Counselor	E. Robert Pattillo
District Counselor	W. Vern Fessler
District Counselor	Mrs. Joan B. Neilson
Psychologist for Pupil Services and CDP/DSOP	Mr. Philip E. Rusk

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PROPOSED PSYCHOMETRIC ASSESSMENT PROCEDURES AND EVALUATION FOR THE CAREER DEVELOPMENT AND DIVERSIFIED SATELLITE OCCUPATION PROGRAMS

PARADIGM FOR THE 1972-1973 ACADEMIC YEAR

Philip E. Rusk

In compliance with Federal and District level directives that a less demanding testing and evaluation schedule be inaugurated for the forthcoming scholastic year (1972-1973), it is here proposed that the testing and evaluation schedule used during the 1971-1972 scholastic year, as designed by the Utah State Department of Education Division of Research and Innovation, be modified and redesigned.

The following outline of assessment procedures includes only standardized psychometric evaluation techniques and instruments. Optimal analyses of test data, including comparisons of students' test-evaluation scores to national normative data, may therefore be accomplished and subsequent reporting of the statistical significance of all protocols' results made available to the teachers, administrators, and students of the CDP/DSOP. It is regarded as crucial that all test and evaluation scores/results be reported in a manner that is meaningful and pragmatic . . . the paramount considerations to an effective testing program. This "feedback" principle (to teachers, administrators, and students), requires that there will be provisions for the statistical analyses and handling of all testing and evaluation data established by the Granite School District administrative CDP/DSOP staff.

SECONDARY EVALUATION:

I. Academic Achievement

The Wide Range Achievement Test, 1965 Edition: This is an individually administered evaluation primarily for use in indicating level of skill development in oral reading, spelling, and arithmetic computation. The testing range is individually adjusted to the achievement level (kindergarten through college). The WRAT has been extremely useful in remedial and vocational studies of children and adults. A promising feature of this instrument is its possibilities for the diagnosis (via clinical analyses only) of personality maladjustments and deviation through the avenues of uneven scholastic achievement scores. Patterns of achievement are hypothesized to be indicative of certain broad types of affectual disturbance.

Time Required for Administration: 20 to 40 minutes (some subtests are timed)

Time Required for Scoring: 20 to 30 minutes (approximate)

EVALUATION: For determining significant differences in subtest scores of the above-mentioned instrument between the administrations of the battery (initially after the student enters the program and subsequently after the student completes a given period of the treatment program . . . e.g., one semester). Statistical analyses of collected data will be integral to evaluation and resulting statistical summaries made available to CDP/DSOP staff.

II. Attitude of Students Toward Educationally Oriented Areas of Behavior . . . The Identification of the Potential Dropout

The Demos D Scale attempts to identify and measure attitudes which may be the precursors of behavior indicative of dropping from school. Responses made by students on this attitude scale would appear to be very revealing of attitudes, feelings, behavior, values, and standards, "even one response on the DDS can provide significant information to the counselor, teacher, therapist, administrator, and researcher."

The five Demos D scores obtained through its use are:

A. DDS Total Score: This score is the most important of the datum. On basis of clinical experiences with the DDS, the examiner can interpret these scores in terms of probabilities . . . chances of scores identifying potential dropouts.

B. Basic "T" Area Score: deals with attitudes toward teachers, counselors, administrators.

C. Basic "E" Area Score: deals with attitudes toward education, training, college.

D. Basic "P" Area Score: deals with attitudes toward peers and parents.

E. Basic "S" Area Score: deals with attitudes toward school behavior.

The Demos D Scale "provides an objective method for obtaining expressions of attitudes related to dropping out of school . . . the DDS is of special help in working with junior and senior high school students." Furthermore, this scale attempts to identify those students with strongly negative attitudes toward teachers and school, so preventive or corrective work can take place while students still are in school . . . and, it can provide data about students to facilitate the counseling or psychotherapy of problem pupils. In addition, this instrument helps in the establishment of structure and special school programs for identifying and working with potential dropouts so schools can be of help in reducing dropouts.

Time Required for Administration: 15 to 40 minutes.

Time Required for Scoring: 10 to 20 minutes.

EVALUATION: For determining significant differences in basic area scores, as well as the DDS Total Score, between the administrations of this attitude scale (initially after the student enters the program and subsequently after the student completes a given period of the treatment program . . . e.g., one semester). Statistical analyses of collected data will be integral to this evaluation and the resulting statistical summaries made available to CDP/DSOP staff as soon after administration and scoring as possible.

III. Attitudes Toward Specific/Specialized Programs and Vocations

In an attempt to determine students' attitudes toward this specific program (DSOP-CDP), as well as other specialized programs (institutions), The Purdue Master Attitudes Scales: "A Scale For Measuring Attitude Toward Any

Institution," is recommended. And, to measure students' attitudes toward specific vocations The Purdue Master Attitudes Scales: "A Scale For Measuring Attitudes Toward Any Vocation" is proposed for use in the CDP/DSOP programs.

The purpose of The Purdue Master Attitudes Scales is to give standardized measures of attitudes toward attitude objects as indicated in the titles of the various scales. For example, the "Scale To Measure Attitude Toward Any Occupation enables measuring the attitudes toward any and all vocations. Each of these scales is available in two equivalent forms, "A" and "B". The scaling procedure for each of the scales is the psychophysical principle that equally often observed differences are equal, often referred to as the Thurstone attitude scaling technique. "Thurstone conceived this psychophysical principle as applicable to the scaling of attitude statements relevant to specific attitudes."

The unique advantage of these scales is that a single scale can validly measure attitude toward any one of a large number of specific attitudes with a known, adequate degree of reliability. Since the experimental work required in the construction of a single scale requires perhaps approximately 200 hours, this makes readily apparent the tremendous practical advantage of these scales over those designed for specific attitude objects.

Administration Time: per scale . . . 5 to 10 minutes

Scoring Time: per scale . . . 5 to 10 minutes

IV. Personality Assessment, Evaluation of Anxiety Levels and Compensatory Development in Self-Concept

The IPAT Anxiety "Self-Analysis" Scale measures general anxiety through a self-report multiple choice procedure, here the assessment of anxiety level is purported by the authors of the evaluation to be accessable to psychometric evaluation as distinct from general neurosis or psychosis. This test was planned for use as a brief verbal, clinical questionnaire clerically scorable. "The total score is susceptible for analysis to give indications of the origins of anxiety . . . thus, it is valuable in both diagnosis and prognoses where it can be re-administered to plot changes during the course of therapy or treatment." The single anxiety score can be analyzed along two parameters: overt-manifest and covert-indirect anxiety. There is also a breakdown of the total anxiety score into components or etiological variables of anxiety; these are:

A. Anxiety generated by lack of self-sentiment development.
B. Anxiety generated by lack of ego strength and complicating defenses.
C. Anxiety generated by suspiciousness and protensive types of insecurity.
D. Anxiety generated by guilt proneness and abasement presses.
E. Anxiety generated by ergic tension, id pressures.

Compensatory developments in self-sentiment and ego strength can be noted as negative functions of increased anxiety. The efficacy of these particular programs (CDP/DSOP) in lessening anxiety and promoting a more progressive and compensatory ego defense system and personality can be assessed through this type of procedure.

Time Required for Administration: approximately 20 to 30 minutes

Individually administered and clinically scored.

EVALUATION: With reference to the above two classifications of the CDP/DSOP Evaluation Procedure (III and IV), for determining significant differences in test protocol scores and scale scores, between the administrations of both The Purdue Master Attitudes Scales and the IPAT Anxiety Scale (initially after the student enters the program and subsequently after the student completes a given period of the treatment program . . . e.g., one semester). Statistical analyses of the collected data will be integral to these two evaluation procedures and the resulting statistical summaries made available to CDP/DSOP staff as soon after administration as possible.

V. Intellectual and Cultural Knowledge Competencies

A unique approach in psychometric assessment of intellectual functioning is The Fundamental Achievement Series; these two new tests FAS-"Verbal" and FAS-"Numerical", cover the ability range from basic literacy to somewhat above the eighth grade level. The content taps the knowledge and competencies that a job applicant may reasonably be expected to have acquired in the course of ordinary daily living and that will be relevant for actual job performance. Questions are based on experiences assumed to be familiar to both the disadvantaged and the advantaged. Two forms: "A" and "B" are published. Tape-recorded administration insures accurate timing and identical presentation to all students, it is designed to equalize opportunities for those examinees who may lack mastery of reading skills.

Percentile norms for both white and black students in northern and southern schools, applicants and employees in a southern plant, are available.

Time Required for Administration: 30 minutes

RECOMMENDED TESTING SCHEDULE:

All evaluation procedures and protocols, both elementary and secondary levels, are to be administered during the first two weeks of the commencement of the CDP/DSOP (1972) treatment program by the teachers of the respective centers and schools.

Second administration, if so directed by administration, can be accomplished at the close of the First Semester (1973).

Final or Third administration of all protocols can be accomplished at the close of the academic year (end of Second Semester . . . 1973).

In no case should any of the above instruments be administered more than three times during the scholastic year to the same students; the optimal number of evaluations for all the above-described testing and assessment procedures is two.

The IPAT Anxiety Scale, "Self-Analysis Form," will be scored completely by the psychological division of the Granite School District (P.E. Rusk) because of its classification as a Level "C" protocol (APA Code of Clinical Assessment Standards). All other tests and procedures are to be scored completely by teachers of the various CDP Centers and DSOP Schools, under the supervision of the District Counselor and Psychologist.

EVALUATION SCHEDULE:

The statistical analyses and computations necessary for determining significance of differences between "First" and "Final" testings will be accomplished by District personnel (to be stipulated by Director of programs).

RECOMMENDED PSYCHOMETRIC EVALUATION PROCEDURES FOR ELEMENTARY CDP/DSOP PROGRAM

In contrast to previous years assessment of CDP/DSOP programs, where evaluation and testing was designed for use at the secondary level (grades 7 through 12), the 1972-1973 academic year will incorporate an additional CDP/DSOP classroom unit at the elementary grade level (grade 6).

The addition of this elementary unit to the general program requires supplemental testing and evaluation procedures in addition to the present repertoire of instruments. Except for The Wide Range Achievement Test, all other previously mentioned instruments have been standardized for use only from grades seven and above, furthermore, the reading difficulty levels (determined through applications of various reading difficulty level formula . . . e.g., Stelfre Index) preclude the use of any of these instruments being used at the elementary level (except for the WRAT).

With these factors in consideration the following assessment procedures are proposed:

I. Academic Achievement

The Wide Range Achievement Test, 1965 Edition: Cf., previous commentary in this compendium for description.

II. Multi-factor Personality Self-Report Inventory

The IPAT Children's Personality Questionnaire (CPQ) yields a general assessment of personality development by measuring fourteen distinct dimensions or traits of personality which have been found "by psychologists to approach the total personality . . . By working with these fourteen scores individually and in combination, the psychologists can obtain predictions of school achievement, especially underachievement, the tendency toward delinquency, the likelihood of leadership potential, the possible need for clinical help, and avoiding excessive emotional disturbance, etc. . . ." The latest edition of the CPQ offers a continuous measurement of certain personality traits from ages 8 to 12 years and yields fourteen independent factors via factorial analysis. It is claimed by the authors of this test that "even children enrolled in grade three are usually able, with a little help, to handle the separate answer sheet." The test is administered without a time limit, but for younger children, two sessions should be used for Form "A" with part "A-1"

given at one time and part "A-2" given at another time. The fourteen scores obtained from testing include the following:

1. reserved . . . versus . . . outgoing
2. less intelligent . . . versus . . . more intelligent
3. affected by feelings . . . versus . . . emotionally stable
4. phlegmatic . . . versus . . . excitable
5. obedient . . . versus . . . assertive
6. sober . . . versus . . . happy-go-lucky
7. disregards rules . . . versus . . . conscientious
8. shy . . . versus . . . adventuresome
9. tough-minded . . . versus . . . tender-minded
10. vigorous . . . versus . . . doubting
11. forthright . . . versus . . . shrewd
12. self-assured . . . versus . . . apprehensive
13. casual . . . versus . . . controlled
14. relaxed . . . versus . . . tense

Cattell, et al, employs a "Universal Index" system in which these traits derived through factor analysis are designated by an alphabetical code (symbol), and in some cases, a number. Besides the trait descriptions listed in the above 14 categories, each factor further delineates and operationally defines what the separate factor encompasses.

Time Required for Administration: 40 to 50 minutes

EVALUATION: For determining significant differences in factor scores of the above-mentioned instruments between the administrations of the entire inventory (initially after the student enters the program and subsequently after the student completes a given period of the treatment program . . . e.g., one semester). Statistical analyses of collected data will be integral to evaluation and resulting statistical summaries made available to CDP/DSOP staff.

SCORING AND CLINICAL ANALYSIS: As in the case of the IPAT Anxiety Scale, the IPAT CPQ will be scored completely by the psychological division of the Granite District (P.E. Rusk), because of its classification as a Level "C" protocol (APA Code of Clinical Assessment Standards). All other functions of test administration and proctoring will also be supervised by qualified District personnel: administrator of the test protocols will remain with the instructor to insure optimal group testing rapport. Upon request of the class instructor, further intensive clinical analyses of completed protocols can be performed by the program psychologist.

INTENSIVE INDIVIDUAL PSYCHODIAGNOSIS PROVISION

As in previous years of the CDP/DSOP programs, individual psychodiagnostic assessment in conjunction with interventive therapy (in limited cases) will be made available to all CDP/DSOP centers and classroom units for those students in need of emergency psychological attention. Acute episodic decompensative behavior (e.g., transient situational adolescent-child maladjustment, transient acute maladaptive behavior and situational maladjustment, acute interruptive anxiety and depressive episodes, phobic psychoneurotic reactions, etc.). Such psychological services availability shall be dependent upon alloted time to the program's counselor and psychologist as directed by

District administration and the program director. The following instruments, in combination or in serial use, are included in individual psychological work-ups:

The Stanford Binet Intelligence Scale
The Wechsler Intelligence Scale For Children
The Wechsler Adult Intelligence Scale
The Leiter International Performance Scale
The Bender Visual-Motor Gestalt Test
The Graham-Kendall Memory-For-Designs Examination
The Hooper Visual Organization Test
The Grayson Perceptualization Test
The Machover Draw-A-Person Procedure
The Thematic Apperception Test
The Children's Apperception Test
The Szondi Examination
The Kahn Symbol Arrangement Test
The Rosensweig P-F Studies
The Peabody Achievement Test
The Rotter and Rhode Sentence Completion Technique
The Minnesota Multiphasic Personality Inventory
The California Personality Inventory
The Edwards Personal Preference Test
The IPAT 16 P-F Examination and IPAT HSPQ
The Goldstein-Scheer Examination
The Slossen Drawing Coordination Test
The Strong Vocation Interest Survey
Word Association (Jung, Kent, Rosanoff lists)
The Jesness Inventory

Other clinical instruments and/or techniques are available and can be employed when appropriate.

Case conferences subsequent to individual examination are usually accomplished in each case accepted for psychological work-up, and are arranged between various interested parties (e.g., parents, counselors, teachers). An individual interpretive session is included in each case study at the conclusion of the examination.

HYPOTHESES USED AS PSYCHOMETRIC BASES IN EVALUATION PROCEDURES FOR THE CAREER DEVELOPMENT AND DIVERSIFIED SATELLITE OCCUPATIONS PROGRAMS FOR THE ACADEMIC YEAR 1972-1973

The following hypotheses are offered concerning the directionality of those parameters intrinsic to psychometric evaluation and assessment procedures to be used in the forthcoming 1972-1973 academic year:

I. *In order to determine a level of skill development and academic proficiency, especially in areas of reading, spelling, and arithmetic computation, The Wide Range Achievement Test 1965 Edition, has been selected to test the following hypothesis:*

> *HYPOTHESIS: As a result of modified and corrective approaches in reading, spelling, and arithmetic-numerical computation skills, it may be expected that CDP/DSOP student will obtain a statistically significant increase and improvement in grade level scores on The Wide Range Achievement Test after application of the aforementioned curriculum and treatment program.*

II. *In the attempt to identify and measure attitudes of students who have dropped from formal public schooling in the Granite School District, The Demos D Scale is recommended to test the following hypothesis:*

> *HYPOTHESIS: Subsequent to the application of modified and corrective curriculum and treatment program for CDP/DSOP, it may be expected that students will obtain statistically significant decreases in all five Demos D Scale subscale scores, including the DDS "Total" Score.*

III. *The Purdue Master Attitude Scales, (subscales "A Scale For Measuring Attitude Toward Any Institution" and "A Scale For Measuring Attitudes Toward Any Vocation")has been proposed for use in the Career Development and Diversified Satellite Occupation Programs for the 1972-1973 scholastic year, the following hypothesis can be made relative to anticipated changes in student scores subsequent to the application of the treatment plan inherent in curriculum design:*

> *HYPOTHESIS: Resulting from the application of modified and corrective approaches in emotional-social-scholastic configurations of CDP/DSOP programs, it may be expected that scores obtained from the administration of the Purdue Master Attitude Scales, "A Scale For Measuring Attitude Toward Any Institution" and "A Scale For Measuring Attitudes Toward Any Vocation," that there will be indicated more favorable attitudes toward all variables relative to the two scales than was initially obtained in testing at the beginning of the treatment plan (in operational terms, scores above 6.0 will be more frequently observed than scores below 6.0 which are considered unfavorable . . . the indifference point on all scales is 6.0).*

IV. *Application of the IPAT Anxiety Scale in the identification and general assessment of anxiety, and etiological variables contributing to it, to the CDP/DSOP programs will be made during the 1972-1973 school year.*

HYPOTHESIS: As a result of modified and corrective approaches in emotional-social and academic areas, thereby promoting a progressive personality development rather than fixative or regressive, it may be expected that CDP/DSOP students will obtain lower sten scores on all subscales of the IPAT Anxiety Scale as well as a lower general anxiety sten score, subsequent to the application of the aforementioned curriculum and treatment program.

V. *Application of the fundamental achievement series FAS-Verbal and FAS-Numerical to students in the CDP/DSOP programs for the 1972-1973 academic year will attempt to tap the knowledge and competencies that the student may be reasonably expected to have acquired in the course of ordinary daily living and will be relevant to actual job performance.*

HYPOTHESIS: As a result of modified and general curricular approaches, it may be expected that CDP/DSOP students will obtain a statistically significant increase and improvement in the Fundamental Achievement Series "Numerical," and Fundamental Achievement Series "Verbal," ability scores. Such increases will reflect a lessening of variables that interfere with optimal behavioral level functioning and academic proficiency.

IV. *The IPAT Children's Personality Questionnaire (CPQ) yielding a general assessment personality development by measurement of fourteen separate diminsions and traits of personality will be employed during the 1972-1973 school year by the Diversified Satellite Occupation Program and Career Development Program. Part of these fourteen variables measured by the IPAT CPQ will include six "Universal Index" factors (second-order factors) that collectively indicate low or high anxiety levels. Application of the "anxiety versus adjustment" formula to the stave scores of the six traits (excitability, ergic tension, guilt proneness, poor self sentiment control, ego weakness, and threctia), results in a general level of anxiety stave score.*

HYPOTHESIS: Resulting from the modified and corrective approaches used in the elementary DSOP program, including educational, social and emotional variables, it may be expected that elementary DSOP students will obtain a statistically significant decrease in general anxiety as indicated by a weighted pool of six scores (excitability, ergic tension, guilt proneness, poor self sentiment control, ego weakness, and threctia) with an average score of 30, and a score of 40 indicating high anxiety, and a score of 10 indicating low anxiety.

SYNOPSIS OF RECOMMENDED PSYCHOMETRIC ASSESSMENT PROCEDURES FOR THE CAREER DEVELOPMENT AND DIVERSIFIED SATELLITE OCCUPATIONS PROGRAMS

SUMMARY FOR THE 1972-1973 ACADEMIC YEAR

In the following summary of testing and evaluation procedures to be used in the CDP/DSOP programs for the forthcoming scholastic year, focus is primarily placed upon abbreviated classification of instruments and their administration time limits. Furthermore, a list of those procedures now being used for evaluation by the Utah State Board of Education (Division of Research and Innovation), is summarized; these assessment procedures will not be used in CDP/DSOP evaluative schedules for the coming 1972-1973 school year.

SECONDARY PSYCHOMETRIC EVALUATION:

I. *The Wide Range Achievement Test: 1965 Edition (WRAT)*
Measures academic proficiency and accomplishment, an individually administered standardized test.

. . . . . *Administration Time Required: 20 to 40 minutes*

II. *The Demos D Scale:*
Measures attitudes which may be the precursors of behavior indicative of dropping from school; a group administered standardized self-report multiple-choice inventory.

. . . . . *Administration Time Required: 15 to 40 minutes*

III. *The Purdue Master Attitudes Scales:*
Measures attitudes toward attitude objects as indicated in titles of the various scales:

A. *"Scale to Measure Attitude Toward Any Occupation"*

B. *"Scale to Measure Attitude Toward Any Institution"*

Both of these scales are group administered standardized self-report attitude scales.

. . . . . *Administration Time Required: 10 to 20 minutes*

IV. *The IPAT Anxiety Scale, "Self-Analysis Form":*
Measures the degree of anxiety, in general and in five etiological factors, operating in the personality; a group administered standardized forced-choice self-report inventory.

. . . . . *Administration Time Required: 20 to 30 minutes*

V. *The Fundamental Achievement Series:*
Measures intellectual and knowledge competencies in a unique psychometric numerical and verbal pragmatic approach and based on experiences assumed to be familiar to both the disadvantaged

and advantaged personality; a group administered standardized instrument.

. . . . . Administration Time Required: 30 minutes

ELEMENTARY PSYCHOMETRIC EVALUATION:

I. The Wide Range Achievement Test, 1965 Edition (WRAT) Measures academic proficiency and accomplishment; an individually administered standardized test.

. . . . . Administration Time Required: 20 to 40 minutes

II. The IPAT Children's Personality Questionnaire, (CPQ) Measures fourteen distinct dimensions or traits of personality yielding a general assessment of personality development; a group administered standardized self-report multiple-choice personality inventory for children.

. . . . . Administration Time Required: 40 to 50 minutes

CURRENT (1971-1972) TESTING AND EVALUATION PROGRAM TO BE DISCONTINUED

I. The Kuder E Interest Inventory; standardized group inventory.
. . . . . Administration Time Required: 45 to 55 minutes

II. The Gates-MacGinitie Reading Test; standardized group test.
. . . . . Administration Time Required: 45 minutes

III. Student Data Form, non-standardized data form
. . . . . Not a psychometric procedure, no time requirement

IV. Student Behavior Rating Form: non-standardized rating scale
. . . . . Administration Time Required: 45 to 55 minutes

V. Teacher Questionnaire, non-standardized teacher questionnaire
. . . . . Time Required: 50 to 60 minutes

**VI. The Minnesota Importance Questionnaire, standardized group test.*
. . . . . Administration Time Required: 50 to 60 minutes

VII. The Minnesota Satisfactoriness Scale; standardized group scale.
. . . . . Administration Time Required: 30 to 40 minutes

VIII. The Minnesota Satisfaction Questionnaire, standardized group test.
. . . . . Administration Time Required: 25 to 35 minutes

**Deleted from Spring Evaluation . . . offered by Granite School District as an "optional" protocol to Career Development Centers*

Psychological Services
Career Development and Diversified Satellite Occupations Programs
Granite School District

Proposed Psychometric Evaluation Schedule For Autumn Quarter of the Academic Year 1972-1973

Test/Evaluation	Initial Dates to Administer	Scoring by:	Dates to Submit to Psychological Services	Type of Psychometric Procedure	Use to be Made of Test	Statistical Analyses and Compilation by	Administrative Time Required
The Wide Range Achievement Tests, 1965 Edition[1,2,4]	During 1st two weeks of academic year	Psychologist of DSOP-CDP	At completion of scoring (during third week of Academic year)	Academic Achievement	To determine characteristics of students in program relative to academic achievement	To be determined by Administration	20 - 40 minutes
The Demos D Scale [2,3]	During 1st two weeks of academic year	Psychologist of DSOP-CDP	At completion of scoring (during third week of Academic year)	Personality self-report attitude scale	To determine proneness of students to drop from school and the analysis of contributing factors	To be determined by Administration	15 to 40 minutes
The Purdue Master Attitudes Scales[2,3] a. Toward any Institution b. Toward any Vocation	During 1st two weeks of academic year	Psychologist of DSOP-CDP	At completion of scoring (during third week of Academic year)	Personality self-report special purpose attitude survey	To determine students' attitudes toward program and certain vocations	To be determined by Administration	5 to 10 minutes per scale

Proposed Psychometric Evaluation Schedule For Autumn Quarter of the Academic Year 1972-1973

(Continued)

Test/Evaluation	Initial Dates to Administer	Scoring by	Dates to Submit to Psychological Services	Type of Psychometric Procedure	Use to be Made of Test	Statistical Analyses and Compilation by	Administrative Time Required
The IPAT Anxiety Scale, "Self-Report" Form[2,3,4]	During 1st two weeks of Academic year	Psychologist for DSOP-CDP	At completion of scoring (during third week of Academic year)	Personality clinical self-report inventory	To determine levels and origins of anxiety, assessment of personality compensatory progression and defenses	To be determined by Administration	20 to 30 minutes
The Fundamental Achievement Series (FAS-"verbal"; FAS-"Numerical"[2,3]	During 1st two weeks of academic year	Psychologist of DSOP-CDP	At completion of scoring (during third week of Academic year)	General Mental Ability, group intellectual assessment	To determine academic aptitude intellectual functioning of DSOP-CDP students	To be determined by Administration	30 minutes
The IPAT Children's Personality Questionnaire IPAT CPQ[1,3,4]	During 1st two weeks of academic year	Psychologist for DSOP-CDP	At completion of scoring (during third week of Academic year)	Personality clinical self report inventory	To determine relative strength of separate personality traits and factors contributing to anxiety	To be determined by Administration	40 to 50 minutes

1 Elementary level
2 Secondary level
3 Group Administrated Test
4 Individually Administrated Test

APPENDIX

IPAT CHILDREN'S PERSONALITY QUESTIONNAIRE (CPQ)

1963 Four-Form Edition

Revised

TEST SYNOPSIS
June 10, 1968

Test: IPAT CHILDREN'S PERSONALITY QUESTIONNAIRE (CPQ) 1963 Four-Form Edition (Revised)

Publisher: Institute for Personality and Ability Testing

Distributor: Institute for Personality and Ability Testing
Type: Measure of Personal-Social Adjustment; Personality Inventory, Self-Report
Purpose: According to the authors of this instrument, Raymond B. Cattell and Rutherford B. Porter, "the CPQ yields a general assessment of personality development by measuring fourteen distinct dimensions or traits of personality which have been found by psychologists to approach the total personality. By working with these fourteen scores individually and in combination, the psychologists can obtain predictions of school achievement, especially underachievement, the tendency toward delinquency, the likelihood of leadership potential, the possible need for clinical help, and avoiding excessive emotional disturbance, etc." This 1963 edition of the CPQ offers a continuous measurement of certain personality traits from ages 8 to 12 years and yields fourteen independent factors via factorial analysis.

Range: Ages 8 to 12 years

Time: No time limit is set; however, it is claimed by the authors that a single session should not be expected to exceed 50 minutes. Where time permits, it is recommended by the authors that forms "B-1" and "B-2" also be used and that interpretations be made on the composite scores for each factor.

Description: This test is designed for children ages 8 to 12 with a reading level properly adapted and with appropriate age and sex norms. Scoring is purported to be rather simple and rapidly done by using a stencil key (however the parsimonious nature of the scoring procedure is overemphasized by the authors in the 1963 interim manual). The child's answers may be marked directly on the booklet . . . however, for easier scoring, a separate answer sheet is available with a profile and test synopsis form on the reverse side of this protocol. It is claimed by the authors that "even children enrolled in grade 3 are usually able, with a little help, to handle the separate answer sheet." This present reviewer has tested children at this age level and found this to be a valid statement, although some children whose reading level as indicated by the Stelfre Index falls below third grade will find great difficulty in using either the answer sheet or recording answers directly in the test booklet. The test is administered without a time limit, but for younger children, two sessions should be used for Form "A" with part "A-1" given at one time and part "A-2" given at another time. The fourteen scores obtained from testing include the following: reserved versus outgoing, less intelligent versus more intelligent, affected by feelings versus emotionally stable, phlegmatic versus excitable, obedient versus assertive, sober versus happy-go-lucky, disregards rules versus conscientious, shy versus adventuresome, tough-minded versus tender-minded, vigorous versus doubting, forthright versus shrewd, self-assured versus apprehensive, casual versus control, relaxed versus tense. Cattell, et al, employs a "Universal Index" system in which these traits derived through factor analysis are designated by an alphabetical code (symbol), and in some cases, a number. The new 1963 edition contains twice as many items (140 in "A-1", "A-2", and 140 in Form "B-1" and "V-2".) The CPQ is designed for group administration, answers being marked directly on the test booklet or on the aforementioned answer sheet. The manual reports that each factor was balanced for response set by having the same number of "yes" and "no" answers, contributing positively to each trait. This procedure controls only the acquiescent set not the social desirability set and there is evidence that the latter

TEST SYNOPSIS

Test: IPAT CHILDREN'S PERSONALITY QUESTIONNAIRE . . . . . (Continued)

Description: (Cont.)

materially affects scores at least in some of the CPQ traits. In this reviewer's evaluation, scoring is facilitated by somewhat well designed cardboard stencils. Raw scores are converted to stanes or five point standard scores with a mean of three and a standard deviation of one. Norms are reported for each sex separately but age differences (which are significant in three traits) are handled by the use of correction items. Normative samples were comprised of 735 boys and 741 girls age 8 to 12 (not otherwise described).

Standardization and Norms: The norms for the 1959 edition were based upon 1,476 cases, 735 boys and 741 girls as stated above (in age range from 8 years through 12 years, but centering on 10 years). There is no information given in the handbook to indicate how this sample of children was obtained; furthermore, there is no information about other details of the normative sample in the handbook.
Reliability: The handbook presents four types of reliability coefficients ("stability," "dependability," "consistency," and "equivalence") for each of the fourteen factors for Form "A" and "B" of the 1959 edition combined in three types (all but consistency) for the separate form. The reliability coefficients are based on 280 boys and girls of nine years of age in United States elementary schools. Stability coefficients are based on a two week interval. The coefficients of stability for forms "A" and "B" combine range from .52 to .85 with a median of approximately .70. The dependability coefficients represent test-retest of the same form coefficients without a time interval. Coefficients range from .55 to .87 for the two forms combined with the median of approximately .75. The coefficients of equivalence estimated for the combination of "A" and "B" forms range from .52 to .87 with a median of approximately .55. The coefficients of homogeneity (split-half coefficients based on a mean of three stanes) range from .30 to .94 with a median of .54. These reliabilities are reasonably good, and according to Wilber L. Layton, "considering they are based upon only ten items but are not high enough to permit use of factor scores with individuals, the authors, of course, are now lengthening the scales so a total of 30 items can enter each factor score. This is in line with the recommendations of Cattell."

Cattell states, "it can be shown statistically that a scale meeting reasonable practical demands for validity and reliability requires over this range 0.3 to 0.5 loading per item in any required factor ten to thirty items as a minimum."

Validity: As the authors state in the longer manual of 1959, ". . . the essential validity of a factor scale is detemined by the extent to which the scale scores correlate with the pure factor which it claims to measure. This value is its construct, or, as we prefer, its concept validity." In the new Interim Manual for the 1963 edition, validity and reliability statistics are not presented but are promised to be released within the near future. At the present time, it is anticipated that a longer and more comprehensive manual will be released sometime in early 1969.

Cattell calculates concept validity in three ways: "by the multiple correlation of the ten items in each factor with the pure factor" (2) from the equivalence reliability coefficient "assuming that by reason of suppressor action, the two halves of the test have nothing in common except the common factor they set out to mea-

Test: IPAT CHILDREN'S PERSONALITY QUESTIONNAIRE . . . . . (Continued)

Validity: (Cont.)

ance" and a "circumstantial or indirect validity which is the pattern of relationships between the factor of interest and the other personality and general ability factors defined by the questionnaire."

According to Wilber L. Layton, "theoretically the use of suppressor action by items is a good one. Thus Cattell advocates combining in a scale pairs of items scored in opposite directions which measure both a wanted factor and unwanted factor to enable the items to suppress the unwanted factor in each other and to produce on the final scale only variance attributable to the wanted factor. However, the well-known reliability of test responses and instability of coefficients of correlation between pairs of items combined to make a suppressor approach empirically difficult, it is unlikely, even with the item suppressor action, that a scales communality is as great as its reliability. Thus, the reliability coefficient is not an adequate estimate of the proportion of common factor variance in the items . . . in deriving the coefficient of validity from the coefficient of equivalence, Cattell, takes the square root." The resulting coefficient is the index of reliability in Guilford's terms, the index of intrinsic validity. This coefficient is also what Tryon has labeled "behavior domain validity" and as Layton interprets it, "it may be considered to be the correlation between the sample of a trait and its perfect criterion measure . . . if this index is very high, one knows that the examinees are ranked by observed scores close to their ranking in a perfectly reliable measure of the trait as operationally defined by the item. Cattell might better use the square root of commonality as an index of what Guilford calls relevant validity, the upper limit of the test validity coefficients." The range of the indices of validity computed from coefficients of equivalence range from .32 to .82 performs "A" and "B" combined with a median value of approximately .74. The lowest value is for Zappia versus Coasthenia which in terms of trait configurations may be interpreted as vigorous versus internally restrained, and the largest for Harria versus Premsia which may be operationally described as tough-minded versus tender-minded. The data are based on relatively small samples and have not been cross validated. The coefficients of validity presented are based on the first edition, evidently a 1959 edition according to Layton, at least. "They must be regarded as tentative and cross validation is a must before the CPQ can be used in making inferences about individuals. End of correlations of the fourteen scores indicate little overlap among them. About of half of these correlations fall below .20 and none reaches .50. Validity is discussed, therefore, largely in terms of factorial analysis of items based primarily on a group of 200 boys and girls not otherwise described. The manual (1959 long manual) contains detailed interpretations of the fourteen traits, much of this discussion apparently drawing upon early research with older groups. Utilization of data external to the test is meager and the original studies to which reference is made are not readily accessible.

Anne Anastasi purports " . . . there are repeated references to unpublished dissertations and to an OMR research report. Many references are to Cattell's personality and motivation structure and measurement in which studies pertaining to the age level 8 to 14 receive only brief and general mention because they were still in progress when that book was published. The test authors recommend that computation of an index of profile similarity between an individual's profile and the mean profiles of the various groups (e.g., delinquents, creative artists), as well as specification equations for predicting criterion performance (e.g., academic

Test: IPAT CHILDREN'S PERSONALITY QUESTIONNAIRE . . . . . (Continued)

Validity: (Cont.)

achievement); but the data required for these purposes are still largely unavailable.

Comments by Reviewers: According to Anne Anastasi, Professor of Psychology at Fordham University, "as one of the series of coordinated personality inventories extending from the pre-school to the adult level, the IPAT Children's Personality Questionnaire (CPQ) should be considered within the framework of the other inventories constructed by Cattell and his associates and of the factorial research on personality traits that led to their development . . . it is difficult to evaluate the contributions that the CPQ can make because of inadequacy and vague reporting of validation data and insufficient description of normative samples. Comparative studies of the performance of this instrument in relation to other available instruments, would also be desirable as would direct studies of the longer 1963 forms."

Wilber L. Layton, Professor of Psychology and Head of the Department of Iowa University states, ". . . this was the reviewer's first excursion to the wonderful world of perspicacious Professor R. D. Cattell. This man is creative and a prodigious producer of things psychometric. He has a great talent for neologizing and has generated some fascinating labels for personality factors he has defined. Consider such factor labels as Harria, Premia, Premsia, and Zeppia. I can visualize a counselor saying to his student, 'Threatia will get you if you don't watch out.' After reading the handbook for the IPAT Children's Personality Questionnaire (CPQ) and many of Cattell's writings, I was driven to coin the label 'Cattelliopsychosis' to describe Professor Cattell's professional activities. He has done a tremendous amount of psychologizing about personality traits. Unfortunately, today, most of his psychologizing has been supported only by factor analyses of items in tests and he has accumulated little evidence in the nomological net sense. To support the definition of his personality traits, no doubt further nomological evidence will accumulate . . . it is perhaps not worthwhile to review the 1959 edition of the CPQ because it is being lengthened and re-normed, however, the revision does not represent a change in the scales, and according to Cattell (personal communication) it is aimed primarily at increasing the reliability of the scales; therefore, this review shall discuss the information from the handbook and from Cattell with emphasis on the present edition but with reference to the 1963 edition whenever possible . . . if one assumes that the factors defined by Cattell through his measurement procedures are well defined operationally, one still must question whether or not he has established meaning for these factors separate from his factor analytic procedures. He has accumulated very little evidence that the factors identified in the CPQ bear a relationship to behavior outside of the test situation. Consequently, the bulk of the material discussed under 'Psychological Interpretation of the Fourteen Primary Personality Traits' is pure speculation; now all is not lost, Cattell has demonstrated he is a generator of good hypotheses so the handbook is a goldmine of hypotheses which can be tested by him and his colleagues and by interested researches, however, the evidence for practical validity is inaccurate . . . it is this reviewer's opinion that the 1959 edition of the IPAT Children's Personality Questionnaire because of its low reliability and insufficient evidence for validity must be considered a research tool which should not be used in counseling or otherwise dealing with individual children. It may

[illegible] (Continued)

Comments: (Cont.)

be possible for the revised questionnaire to be used to make inferences if it is more reliable than the test edition and if there is substantial evidence that the factor scores allow inferences to be made about children's behavior. Lacking such evidence, the new instrument should also be used solely for research purposes."

Robert D. Wirt, Professor of Psychology at the University of Minnesota, evaluated in the Sixth Mental Measurements Yearbook, The Children's Personality Questionnaire and stated, "The IPAT Children's Personality Questionnaire is an extension downward to the age range from 8 to 12 years of the IPAT High School Personality Questionnaire (HSPQ) and the Sixteen Personality Factor Questionnaire (16 PF). A further extension to years 6 through 8, the Early School Personality Questionnaire (ESPQ) is promised for early publication. The series of tests with one year overlap between tests will give continuity from early childhood through adulthood along what are purported to be the same dimensions of personality . . . most test users will appreciate having alternate forms of the test but will be somewhat dubious of the stability of even a ten item scale based on the use of both forms. . . . the format of the booklet is practical for the use by children. It's questions are clearly stated and most questions require an either/or response which is to be indicated directly on the test booklet. The scoring is quite straightforward and easily accomplished in a few minutes. The test yields raw scores which can be plotted on a profile in stanes . . . the language used in defining the dimensions of the CPQ will be bothersome to those not familiar with the 16 PF however, test users well acquainted with the now considerable literature on factored scales will be pleased that this new edition to the series as the authors point out makes possible some kinds of longitudinal studies of personality not before available. It is certainly true as the authors state in the opening sentence of their handbook that there is a great need for trustworthy personality measures of children, that the CPQ is such a noteworthy measure is not established by the data now available. The publication of the test was premature. There are repeated cautions in the handbook which warn the reader and potential test users that numerous additional research investigations are underway to clarify one point or another to establish the meaning of certain factors to improve upon the reliability of scales, etc. It is true, of course, that continuing research and refinement are desirable in the upgrading of all aspects of mental measurement and than an author need not wait upon perfection before publishing his works; but still he probably should not publish work designated as a useful practical measuring device and at the same time indicate that much study is yet required before the instrument can be safely used, perhaps, the authors of this instrument should be commended, however, for the care they have taken in indicating the areas of weakness which do exist in the CPQ. The handbook is unusually well written in parts and quite worth reading for its clear explication of several important problems of test construction. There are sections on various meanings of reliability and validity and on the clinical use of test data that are elegant examples of careful reasoning and statistical sophistication, but when it comes to the specifics of the particular standardization of this CPQ, one looks in vain for equal clarity . . . nowhere are there data which describe the norm groups. For this reason, it is, of course, impossible to know what standard a test user is to compare results of his subjects . . . the writing style of the handbook is often in poor taste in that the virtues of the approach to testing used by the authors and the validity of the CPQ are over sold.

Test: IPAT CHILDREN'S PERSONALITY QUESTIONNAIRE . . . . . (Continued)

Comments: (Cont.)

The reader is urged to believe that all the information, dimensions of personality of children are reflected in the CPQ. The authors quite blandly assure the test users that the test is equally valid given individually or in groups whether the items are read by the subject or read aloud by the examiner, but they do not give data to support these contentions. Perhaps, most distressing is the section on reliability and validity. The discussion of these issues relative to general considerations of test purpose is brilliant but the relationship of these concepts to the CPQ is absent. The reader is given skimpy secondary data on validity and is referred to other sources for further detail. The references cited for this purpose relate almost exclusively to general texts upon the subject of test construction and the measurement and theories of personality having nothing whatever to do with the particular standardization of the CPQ . . . in summary it may be said that the CPQ is a hopeful beginning for careful assessment of personality in children but until further study is made this instrument should be used for research only . . ."

THE IPAT SELF-ANALYSIS FORM: ANXIETY SCALE

1963 Second Edition

TEST SYNOPSIS
June 13, 1968

Test: THE IPAT SELF ANALYSIS FORM: ANXIETY SCALE; Second Edition, 1963

Publisher: Institute for Personality and Ability Testing

Distributor: Institute for Personality and Ability Testing

Type: Measure of personal-social adjustment; personality self-report

Purpose: This test measures general anxiety level as distinct from general neurosis or psychosis; it is planned for use as a brief verbal, clinical questionnaire, clerically scorable.

Range: Senior high school students and adults of most educational levels.

Time: No time limit is enforced in the testing but the 40 items take about 5 to 10 minutes.

Description: The total score is susceptible of analysis to give indications of anxiety origins. It is valuable both in daignosis, (where it separates, for example, anxiety hysterics from general neurotics at the .001 significance level) and in prognosis, where it can be re-administered to plot changes during therapy. The test consists of 40 items with three answer choices, arranged in a four page booklet. It is intended for general clinical use and also for screening out individuals, e.g., in college counseling, to reveal cases in need of advice or therapy. Scoring is done by applying the cardboard stencil key directly to the test form. Three kinds of final scores are possible, according to choice; these are: a single total anxiety score; a breakdown into an overt, symptomatic anxiety score and an unrealized, covert, "cryptic question" anxiety score; a breakdown into scores on the five personality structure components ("Self Sentiment Development," "Ego Strength," "Protensions or Paranoid Trend," "Guilt Proneness," "Ergic Tension"). The main or single score is a standard "sten" score, in "total anxiety," showing the position of the patient on a ten point scale, relative to the general population and particular patient groups. The used test booklet itself constitutes a useful record of the specific qualitative form of the symptoms at time of referral.

Standardization and Norms: Original norms on 795 men and women, including comparisons of "normals" with a group of general neurotics and a group of anxiety neurotics, have been "substantially broadened" and enlarged by student norms and other recent criterion data. (Total number of cases over 1,000)

Reliability: The split half reliability of the test, when split symmetrically so that each factor (corrected by the S-B formula) above falls equally in the two halves, is 0.84 on a sample of 240 normal adults, and 0.91 on a mixed population sample of normals and hospitalized neurotics, a group of greater scatter. Research data is still being gathered on the instrument.

Validity: From the above-mentioned statements, the correlation of the test score with the pure anxiety factor itself equals 0. 2; however, the test has been also given external validation by correlating with the estimates of anxiety level; (in eighty-five patients, made independently by two psychiatrists; by correlating with physiological, behavioral, laboratory tests of anxiety; and by comparing scores of normals, neurotics, and anxiety hysterics. The first showed an "identity of the common factor in the psychiatrists' ratings with the general anxiety factor, measured with a validity of 0.92 by this test (but with

Test: THE IPAT SELF ANALYSIS FORM; ANXIETY SCALE . . .(Continued)

Validity: (Cont.)

lower validity by the ratings)." "The essential conclusion of the second is that the psychophysiological measures of anxiety largely fall in a factor identical with the present questionnaire measure. This measure is still in the process of complete standardization, validation, etc. All essential data found to date is summarized in the Examiner's Manual (bibliography included).

Comments: Jacob Cohen states ". . . what is notable about this test is that it is a mature fruit of a third of a century of both methodologically and clinically sophisticated large scale factor-analytic research." Commenting upon the recent additions to reliability information on the IPAT, Cohen continues ". . . reliability coefficients for the total anxiety score, depending on type and the nature of the group range from .80 to .93 an adequate level for most purposes." Evidence for the test's validity is varied and impressive. It rests first on the foundation of replicated factor-analytic researches involving not only questionnaire items but objective test and physiological measures, which established and cross-matched the anxiety factor. From these "construct" validity coefficients in the range .85 to .90 are claimed. Finally, Cohen summarizes the value of the IPAt in saying ". . . the IPAT Anxiety Scale's impressive systematic research background commends it for use as an overall measure. No competing test can compete in this crucial regard. For a quick measure of anxiety level in literate adolescents and adults for screening purposes, it has no peer . . ."

Guilford relates " . . . it would seem that the instrument should have its best use as a quick screening device used with large groups . . . A general comment would be that there is a danger that such an instrument indicates too much. The score discriminates neurotics from normals, somewhat, which is reasonable, since anxiety cases are also in the general category of neurotic, but it is hinted by the author that the score also discriminates psychotics. Questions on lack of confidence, nervousness, and depression represent item types that any person who does not feel well for any reason is likely to answer similarly, particularly if he knows he is not well and is ready to admit it . . ."

E. Lowell Kelly purports, ". . . this 40-item inventory is a highly promising brief assessment instrument. Although but recently published, it is a product of the author's very extensive program of research aimed at mapping the "personality sphere" and hence deserves more serious consideration than the typical newly offered inventory. Judged by the criteria established by the APA Committee on Test Standards, the mimeographed manual is reasonably adequate, especially for a newly published instrument . . . This is a highly promising brief scale for assessing a pervasive personality variable. It is likely to be widely used as a research instrument and probably should be in view of the substantial evidence for its construct validity. Clinicians who are willing to give the scale a trial (in spite of its being a by-product of factor analysis!) are likely to find it a useful diagnostic device for initial screening purposes . . ."

Laurence F. Shaffer comments, ". . . in view of the widespread current interest in the concept of anxiety, the publication of a new scale for its measurement is a noteworthy event. The IPAT Anxiety Scale is a product of its author's extensive studies of the factorial structure of personality. A prominent second-order

Test: THE IPAT SELF ANALYSIS FORM; ANXIETY SCALE . . . (Continued)

Comments: (Cont.)

factor of his Sixteen Personality Factor Questionnaire has been identified as anxiety. The present questionnaire consists of 40 items which best represent the five scales most heavily loaded in the anxiety factor the IPAT Anxiety Scale has a sounder conceptual base than other current instruments of its type. Many of the functional properties of its scores remain to be established by future research, which will almost surely be forthcoming . . ."

Comments Concerning the Second Handbook Edition, 1963:

Although the IPAT Anxiety Scale questionnaire test items remain the same as in the original edition, the handbook has been revised and data relative to its reliability have been purported by the authors, Raymond B. Cattell and Ivan B. Scheier. Cattell states in the new handbook, " recent research confirms that anxiety as measured by the IPAT Anxiety Scale is indeed sensitive to change over time and to conditions. Measurement of anxiety as a fluctuating state has some slight differences from anxiety as a trait, particularly in physiology but not so much that different instruments are required at the verbal level. Research shows individual differences in anxiety to be affected only moderately by heredity, less so than is neurosis and anxiety is thus in large measure susceptible to change via environmental manipulation, some of which can already be specified, for example, it is known that a collective therapy can significantly reduce anxiety level in certain forms of moderate environment stress or change, for example, academic exams, physical exertion can likewise reduce anxiety." Also according to Cattell, " a vast amount of background research has now been conducted and supporting and developing a rationale and validity of the IPAT Anxiety Scale. This source material will repay study by the research minded and historically oriented user and it is touched upon again in Section III of this manual and VI but the following summary suffices for the present. (1) Some 16 major dimensions of personality source traits and factors are discoverable in the four to five thousand items which represent all possible known questionnaire responses in regard to personality. (2) Five or six of these 16 dimensions contain immediate manifest contents suggesting psychiatric symptoms of anxiety. (3) These same five or six factor dimensions also can be independently shown to cluster together statistically as distinct from the other eleven known dimensions in experimental empirical analysis by correlation and factor analysis. This grouping together has been impressively confirmed in more than a dozen separate studies involving over three thousand persons of many different types. (References are extensively given in the new 1963 manual.) (4) Not only is the Anxiety Scale valid to the psychometrist in thus measuring a definite replicable unique second order factor but what is sometimes of greater interest to clinicians it tends to agree with a central tendency and anxiety rating among psychiatrists. A relatively new study is reported in the 1963 revised manual by Cattell, "a second way of estimating construct validities from the correlation of the actual 40 scale items with total score on the scale. The best available determinations here are from the work of Tadachi and Yukiko Tsushima using a sample of 347 Japanese University students. The average correlation between individual items and the total test score was almost .40 with no cases of inconsistent direction of relation and the multiple correlation between all items in the total test score exceeds .92." Cattell also states, "that in a split half reliability study .84 was obtained and an estimated construct validity therefore becomes the square root of .84 or .92." Cattell further reports that in two

Test: THE IPAT SELF ANALYSIS FORM: ANXIETY SCALE . . . (Continued)

Comments: (Cont.)

separate studies it was demonstrated that "consensus of psychiatrists' diagnosis as to anxiety level correlates high with scores on this anxiety test factor than with any known personality factor. The correlation between clinical consensus and IPAT Anxiety score ranges from .30 to .40." Cattell also reports that statistical comparison made between the IPAT Anxiety Scale score of 795 normals, of which 482 were men and 313 women in an"average age range" and 59 anxiety hysterics in an outpatient clinic, the anxiety cases averaging a raw score of 45 or almost 20 full points higher on the scale than the normals and their superiority reached statistical significance at the one tenth of one percent level. "Since this comparison was first made and reported in the original handbook for this test, IPAT data files have expanded to include a total of 174 anxiety cases. The anxiety level of this large group matches the earlier group in severity of anxiety level relative to normals. Also their score is higher than any others found in a survey of some 2,000 cases in over 20 groups of clinical interest, such general neurotics, alcoholics, etc. . . . this is in agreement with what would be expected on clinical grounds for none of these other groups is supposed to involve anxiety in such 'pure form as the group of 174 anxiety cases . . ." The list of references at the end of the new manual is, of course, considerably much longer than the previous manual. 51 references are given in the bibliography; furthermore, the IPAT information service bulletins are often released and many of which deal with the IPAT Anxiety Scale and certain criteria data relative to clinical and occupational groupings. For example, in IPAT Information Bulletin No. 3, Cattell reports, "research with the anxiety factor as measured by the IPAT Anxiety Scale has confirmed that females are significantly more anxious than males except in one recent study where this trend though present was not at a significant level. Also volunteers for psychological experiment are significantly less anxious than the persons who fail to volunteer. Scholastic success seems generally to be associated with slightly lower than average level of anxiety in junior high school through college.

VT 016 679

VT 016 679
FREEDOM OF CHOICE IN CAREER SELECTION: "THE AMERICAN WAY." OCCUPATION BY CHOICE INSTEAD OF OCCUPATION BY CHANCE. AN EVALUATION OF THE SCIOTO COUNTY FIFTH GRADE CAREER ORIENTATION PROJECT.

PILASCO EDUCATION CENTER, OHIO.
OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C.
MF AVAILABLE IN VT-ERIC SET.
PUB DATE - ND 39P.

DESCRIPTORS - *PROGRAM EVALUATION; GRADE 5; *CAREER EDUCATION; *CURRICULUM EVALUATION; CURRICULUM DEVELOPMENT; COURSE OBJECTIVES; COURSE CONTENT; FILMSTRIPS; FIELD TRIPS; RESOURCE MATERIALS; LEARNING ACTIVITIES; OCCUPATIONAL INFORMATION
IDENTIFIERS - CAREER AWARENESS; *CAREER ORIENTATION

ABSTRACT - THIS EVALUATION OF A FIFTH GRADE CAREER ORIENTATION PROJECT CONSISTS OF THE OBSERVATIONS OF A CONSULTANT, A HISTORY OF THE PROGRAM, OBJECTIVES SOUGHT, MATERIALS ACQUIRED DURING ITS DEVELOPMENT, AND LISTS OF FIELD TRIPS AND SPEAKERS USED. RECOMMENDATIONS BY THE TEACHERS INCLUDED INVOLVING MORE PARENTS, INCORPORATING THE MATERIAL INTO VARIOUS SUBJECT AREAS, AND WIDENING THE USE OF THE PROGRAM TO ALL FIFTH GRADES. AN OCCUPATIONAL HANDBOOK USED BY THE TEACHERS PROVED VERY HELPFUL IN ANSWERING PUPIL QUESTIONS AND INVOLVING PUPILS IN DISCUSSIONS OF VARIOUS OCCUPATIONS. PRETESTS AND POSTTESTS ARE INCLUDED IN THE APPENDIXES. (MU)

FREEDOM OF CHOICE IN CAREER SELECTION

"THE AMERICAN WAY"

OCCUPATION BY CHOICE
INSTEAD OF
OCCUPATION BY CHANCE

EVALUATION

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AN EVALUATION OF THE SCIOTO COUNTY FIFTH GRADE CAREER ORIENTATION PROJECT

Sponsored by

PILASCO EDUCATION CENTER

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OBSERVATIONS OF THE CONSULTANT

Lloyd M. Swan

I have been privileged to participate in the Career Orientation Program in Scioto County's fifth grade as a consultant. It has been a rewarding experience.

As the program was presented to the fifth grade teachers last fall there was a great deal of doubt and questions as to its value and need. Teachers were reluctant to undertake the project. This was understandable since we were beginning an entirely new program.

Only a few materials were available. Others we would need to develop as the program unfolded. It was easy to understand teacher scepticism. In addition to the novelty there would be involved considerable out of school time for all teachers. In-service meetings helped to get the program going. Additional materials were written and purchased.

The Steering Committee worked with teachers in their own districts. An incidental value was derived here. The specialist, the counselor, became better acquainted with fifth grade teachers and the fifth grade teacher found an able and willing resource in her own district.

The program gradually started the second semester. Because it was new, teacher contacts with speakers required lengthy explanations. Very few people who were contacted as speakers refused. Interest of parents and community began to develop. These were public relations benefits that were incidental to the objectives of the program. They were positive.

Speakers were pleased with the interest of the children. They expressed appreciation in being involved in the program. Several speakers had children in the class and it was very satisfying to know they were involved in their child's education. Teachers reported great interest was shown by the children. In the question period, that followed the speaker presentation, time was all too short. The children had many questions and often the questions had to be terminated bucause of time schedule. There was considerable carry over as students began applying points that had been made by speakers to class work. Students began looking at the world of work more realistically. The dignity of all work was becoming apparent. One thing that was observed in the question period was that many students knew little about common everyday occupations.

They had, for example observed a lineman working on a telephone line but really knew little of what he was doing. After the demonstration they were much better informed about the lineman's work. This interest and enthusiasm of the children was mentioned

by many teachers. It is an indication of the relevance of the program.

During late winter I visited each school district and had a brief conference with the fifth grade teachers. I was impressed with the change in attitude of the teachers toward the program. They were just beginning to have speakers into the schools. They were enthusiastic with the response of the students. In a few districts there were minor problems such as scheduling speakers for two classes and no meeting room, or the fact that teachers were finding it necessary to go outside their district for a speaker on a particular career. These were minor problems, not all were resolved but the willingness of teachers to adjust, adapt, and improvise was very evident. A few supportive suggestions were made. Some trouble with distribution of materials was overcome.

In the final work shop in the spring a much different attitude toward the project was evident. Teachers were pleased with the results. They had been able to see the interest and enthusiasm of the children. They had discovered that the World of Work could be incorporated into curriculum. They were planning next years program and sharing ideas with each other. It had been an experience involving much additional time, much planning, some revisions of plans, but a very worth while project. The teachers without any urging desired to carry on the program for the next school year. They suggested that other grades become involved also.

I prepared an evaluative questionaire to be used before the program and after the program. This presented some problems since I could find no research on which to base the instrument. I finally used fifteen (15) questions that dealt with specifics of careers using a positive three (3) selection from an eight (8) point choice. Questions seventeen (17) and eighteen (18) were added for the teachers use but were not included in the evaluation. The post tests show an increase in knowledge. It is interesting to know that in all areas an increase of knowledge is shown. However, not all of the questions were covered in the program. It may be assumed that children being aware of career information acquire additional knowledge from sources outside that presented in the program. The total summary is not as revealing as the individual school breakdown. In schools where the most time and effort were expended the post tests shows a very sharp rise in response. This is what we would expect.

There was some feeling on the part of a few teachers that the questions were too difficult. The results do not support this. However, in a very slow class this could well be true. To do any graphic or statistical study the same questions must be used county wide. Had they been easier average and above average classes would have gone over the top of the scale.

Possibly one of the best evaluative points is the fifth grade teachers desire to continue the program. With the additional

work load involved, unless the program had real worth for the children I am sure there would have been reluctance to continue. Such was not the case and their expressed wish to expand to other grades is being followed. Orientation meetings for teachers in grades four and six have been held. Hopefully what we have learned in the fifth grades this year will mean a smoother running and more sophisticated approach in these two grades. There remains several problems, one of which is to avoid duplications and plan a consecutive program. We will attempt to do this. The end result should be that students entering high school two years hence should have more career information than those now in high school. The choices of careers of these children should be made on facts and information they have acquired in the elementary grades.

I am pleased with the program. Any evaluation at this time would not be as meaningful as an evaluation at the time these children select courses in high school that will prepare them for the world of work. I think they will be better prepared to make an intelligent choice rather than a choice without some knowledge of occupations.

INTRODUCTION

The PILASCO Education Center in cooperaton with the Scioto County Joint Vocational School and the following school districts of Scioto County: Bloom Local, Clay Local, Green Local, Minford Local, New Boston City, Northwest Local, Portsmouth City, Valley Local, Washington Local, and Wheelersburg Local sponsored a Career Orientation program involving fifth grade pupils. The need for Career Information at an early age has been established by several research studies. Attitudes toward school and work are developed early in school and are difficult to change. Many students find little relevance to school and begin to fall behind in academic success during elementary school years. Hopefully, with some knowledge of the World of Work, positive attitudes toward work may be developed. No longer can the poorly trained youth or the dropout find it possible to enter America's labor market. The very rapid expansion of technology is now apparent and by the year 1977, when the present fifth grade pupils graduate, there will be even higher standards required for employment. We must begin to make career information available early.

To help plan the program an advisory committee was formed in each school district. Membership included fifth grade teachers, parents, and a representative from the Career Committee. The advisory committee assisted the teacher in finding speakers and arranging community contacts. Many members of the community were involved as speakers.

The entire concept of career information in the fifth grade is new. Few materials have been published that are on the fifth grade reading level. A career guide was developed which covered broad areas of work, and these areas were called clusters. At the fifth grade level students were given career information. NO CAREER CHOICE WAS PLANNED AT THIS GRADE LEVEL. However, before a choice is made in high school, these pupils will have acquired career information that will assist in their career choice.

Some specific objectives of the project were:

(1) To conduct in-service education programs to orientate teachers to the need for incorporating pertinent occupational information into the curriculum.

(2) Develop a teacher's guide that includes aims and objectives for the grades involved in the project.

(3) Each local district will develop a reference file on various occupations and will use resource materials provided by PILASCO.

(4) Each student will spend two hours per week exploring occupational information material.

(5) Each week a resource person from the community will speak to the students about his job. (People may be recruited from the PILASCO Community Resource Book.)

(6) Each class will schedule local field trips and emphasis will be placed on the worker and the skills necessary in his job.

(7) Each student will develop a notebook covering those occupations in which he is interested.

The broad objectives of the program, i.e. to develop knowledge of the World of Work and the dignity of work was developed during the second semester of the past school year. Materials were written, supplies were acquired, speakers secured and field trips arranged. In-service meetings were held with the fifth grade teachers. At the end of the year an evaluation meeting was held.

The materials listed on the following pages were acquired during the development of the project. The suggestions for their use were made by personnel working with the project. Materials collected by teachers for use in their rooms will be retained and supplemented by additional material, for use during the coming school term. Teachers are now interested in all types of materials that may enhance the program. Teachers, themselves have acquired additional knowledge of occupations and hopefully will encourage their children to consider vocational education in high school.

Childrens interest was evidenced as all types of materials were presented in the program. Speakers were very effective. The suggestion sheet given to all speakers prior to their appearance at the school served as a guide for their speech.

Field trips, although difficult to arrange for the children of this age, contributed to the program.

The supplement to the manual, covering brief notes on career clusters, were developed as a result of a need felt by teachers.

Film strips and slides were used in nearly all fifth grades. Some problem of relating these to field trips or speakers was encountered. This can be resolved next year as teachers become better acquainted with materials

FILM STRIPS

In this area of the World of Work some provision should be made for the purchase of a film strip projector to be reserved especially for this purpose. When the program is expanded into other grade areas, we recommend that teachers, and the cordinator involved investigate areas to secure film strips relating to the World of Work. When possible, slides and film strips should be prepared on local businesses and industries to create more interest in the World of Work. Commercially prepared film strips cover a broad perspective of the World of Work, yet in our opinion, inserting local slides would stimulate student interest to a greater degree. An over-use of film strips tends to cause a loss of interest of the students. We recommend the use of filmstrips and slides and getting community involvement through the local P.T.A., Mother's Clubs, etc. Film strips are developed in multi-level areas, so individual differences may determine the effectiveness of their grade level. Living people in job situations are more meaningful to the students than animation, except in . illustrations, or diagrams.

Filmstrips should be selected and previewed before presentation to the students. We recommend that student involvement with a particular vocation will enhance the interest of the film strip.

Students with some academic difficulties will be stimulated through the use of film strips. Motion pictures give better illustrations of a particular vocation. We recommend that a

constant review and updating of the contents of audio-visual aids be done periodically. Audio-visual aids can be valuable tools if used properly --- over-use or under-use will be a detriment to their effectiveness. It is possible to create your own film strips simply by requesting that the pictures not be mounted as slides when you have them developed. If the sequence of pictures is not satisfactory, they can be rearranged into any desirable sequence on a film strip by sending them to on of the processing companies. Also, if a person wishes, he may have a filmstrip made from a set of 35mm slides.

SPEAKERS AND FIELD TRIPS

A. Purpose

To familiarize students with various occupational types of training or educational need for specific jobs. Actual workers presenting their own job descriptions could provide a more meaningful understanding of what the job entailed. Field trips would provide students an opportunity to observe actual working conditions.

B. Method

A list was compiled of occupations of the children's parents within a given classroom. These parents were used as speakers when possible to make the project more meaningful to the students.

These specific points were suggested to the speaker as a guideline for his presentation: a-j - page: 14-15 Handbook.

a. What does a worker in this career do?
b. What personality traits are needed?
   What physical characteristics are needed?
   Do both men women work in this career?
c. What preparation is required? What will be the cost?
d. What are the working conditions? Is it outdoors, indoors, confining?
e. What does the career pay a beginner, an experienced worker?
f. What are the intangible rewards, service, travel, prestige?
g. What are the opportunities for advancement?
h. What are the legal requirements? Is a license, certificate, union, or professional membership required?
i. How does this career cluster permit change from one career to another?
j. What suggestions can you give the children interested in this career so they may secure further knowledge and information?

In addition to parent speaker, businessmen and others in various occupations were contacted by Pilasco. The school districts involved compiled a list of additional resource people available.

2. Field trips were more difficult to arrange because of industrial hazards. However, several field trips were arranged. Unlike the speakers, the field trip arrangements had no special pattern, but was left to the individual district and/or teacher.

C. Types of Speakers and Film Strips

Speakers

The speakers fell within the 21 clusters developed by the occupational Advisory Committee. The clusters are as follows: 1-21 - page 6-7, Handbook

1. Agriculture
2. Artistic
3. Clerical
4. Communicative Skills
5. Construction
6. Education
7. Entertainment
8. Finance
9. Food Service
10. Government
11. Health Services
12. Homemaking
13. Industrial Manufacturing
14. Legal Services
15. Management
16. Personal Services
17. Recreation
18. Transportation
19. Utilities
20. Wholesale and Retail Trades
21. Others

An example of the utilities cluster: A telephone lineman spoke to children in the classroom. The group then reassembled outside where the lineman proceeded to climb the power pole, tapping the wire and talking with the company's home office, and then contacted the company's troubleshooter who was miles away. Also, he showed them some elementary things about transformers.

Field Trips: Example - Cluster-Industry

The personnel manager visited the classroom and spoke with the children. He informed them of hazards they should be aware of while on the proposed field trip. The children were conducted through the office and plant while the stone plant was in operation.

D. Responses

1. Pupils - The students demonstrated more enthusiasm and curosity about the speakers and the field trips than any other area of the program.

2. Speakers- The speakers were very willing and interested in contributing to the students knowledge about their particular occupation.

3. Teachers and Principals - Although selecting and contacting speakers and arranging and preparing for field trips meant additional preparation for the

the teacher, they felt it was time well spent and that information was gained by the teacher as well as by the student.

4. Community- The public reaction was outstanding. Phone calls were received by the school administration asking what was going on and why the whole school was not included in the program. The community was impressed and pleased that the school was showing an interest in the "World of Work".

E. Recommendation

The following recommendations were made by the teachers, counselors, administration, as improvements or guide lines for future programming in the World of Work area:

1. This should be made a part of the daily curriculum, i.e., May become a part of the daily program to be incoorporated into the various subject areas.

2. More Parents should be involved in the planning of the program.

3. A field trip list be compiled and distributed to all School Districts.

4. The program should be introduced into all grades rather than a selected grade.

5. That certificates or letters be sent thanking speakers and companies who were visited for their contribution to the students education.

CAREER GUIDE

As a summary, the Career Guide was thought to be very well organized and easily understood by the teacher. However, several ideas were presented at the Career Development Seminar that might be included in a revision of the original guide book in order to make it more complete and useful to the teacher.

First, there should be a philosophy concerning the importance of work, good citizenship, and the ability to provide for family and country.

Secondly, a description of the program and list of objectives should be included for use of new fifth grade teachers and possibly teachers of the sixth grade, if the program is to be continued on into that grade.

Next it was felt that a list consisting of books, both school and public library, visual aids, such as film strips, movies, charts and records concerning vocational education should be included.

Each district could compile a list of industries, resource materials and speakers to be shared with other districts for their use in their program, which could then be included in the guide book.

As a completed text all school teaching personnel and administrative officials should receive a copy to incorporate in a school or individual classroom project instead of a separate program.

OCCUPATIONAL OUTLOOK HANDBOOK

The majority of comments from the teachers concerning the Occupational Outlook Handbook was, that it was very useful as reference material in the classroom. Many teachers were able to use the Handbook to answer students' questions concerning specific types of work, qualifications, salary ranges and future outlook. The book was made available to some students who had high interest in one particular field. Some teachers with high ability students were able to utilize the book for student reports. These students would then present these reports to other fifth graders.

The overall feeling of the teachers was that the Occupational Outlook Handbook made them feel more secure in the discussion of the various occupations. They knew that the book was in their classroom which enabled them to answer questions from the students concerning these occupations.

TEACHER COMMENTS

The orientation project was very well organized. Most discussions were helpful. Many ideas were repeated from one group to another. The over all program started in my school very pessimistically and by the time we completed a years work everyone seemed much more enthusiastic and I feel they gained quite a bit from it.

1. Children enjoyed speakers the most.
2. The film strips were a little too easy for fifth grade level.
3. I think it would be helpful if a list of speakers would be compiled and made available to all county teachers.
4. The SRA seemed to be of real future value.

This program is long overdue - all students required to make a judgement or decision now in high school with no background.

Todays program should have been done at the beginning - learned much.

I feel that the Vocational Guidance Program, has been very helpful in starting our boys and girls to think about their vocation.

They have different outlook on many occupations. If we help one child we have been successful.

Today, I learned of the new program career occupation in the fifth grade.

If our students got as much out of their sessions as I did today, I am sure they are well on their way for a successful career. I feel that this sort of program should continue.

Outlook Handbook - Good for teacher's reference. Not all people know all of the department that well.
Speakers - Increase interest of student, recommended strongly
Field Trips - Need work with community in this field, often unsuccessful.
Film Strips - Fair, could be improved as to actual situations in life.
Over-all Program - Seems useful to show students people should work for a living in modern society.

The idea of the career information is good. I cannot say that all the processes were good. If everything could have been worked out as planned, it would have been fine.

I understand that since it is in the development stage, some mistakes can be overlooked.

The orientation program in itself was very worth while. The amount of preparation and classroom time consumed was considerable. The people in my community were very interested and quite active in our programs. The students showed interest and enthusiasm for the program. I would be willing to initiate the program next year.

However, there were problems in scheduling, presentations and orientation for speakers and film strips due to our particular classroom arrangements.

I feel the project was a good beginning for vocational orientation. It should be begun at the beginning of the school year and should be more student involved.

I feel that the exchange of ideas about this program today has been very stimulating. I think we will go into the program with more enthusiasm next year and get an earlier start.

I feel that our experiences so far will insure a much better program for 1970-71. I know I will be better prepared for handling the various aspects of the program.

The director of the Career Orientation Program did a very good job coordinating the work of the various committees.

This project will be of much help in the future toward setting guidelines for future work along these lines. Participating fifth graders were helped a lot in becomming acquainted with jobs and careers.

This program will have tremendous long range effects.

Mr. Swan, as usual, did an outstanding job.

I have learned many things that will make another year more successful. Sharing ideas and comparing projects has indeed broadened the scope of the entire project. A new focus has been brought to the program.

Each group was well conducted and everyone participated.

I feel the program has made children more aware of careers. Really, when we get them in the fifth grade, all they are aware of are the jobs or occupations concerning Dad and Mother and <u>You</u> as a teacher. Speakers were enjoyed and information valuable by most speakers.

The program was interesting to the children because they like to talk about what they are going to be when they grow up. They especially liked to hear the speakers and ask them questions.

I feel the career or occupational awareness program has enriched our students beyond our expectations. This program is a step in the right direction.

The program must be expanded to include students who have not been exposed to this new kind of concept. The awareness of the World of Work must be <u>made in the primary grades</u> to develop a pride in working and earning a living.

The program needs extended pushing so as to continue it next

year. It is too valuable to drop just as it has had its beginning. The program was successful in that it did enlighten the students. I feel experience can work out the difficulties we ran into. The enthusiasm is there if we will take advantage of it.

I feel that the program is very good. The problem is time. Our curriculum is already full. However, I do feel that any time spent on this program in the fifth grade should deal with opportunities that will be available at the proper time.

I feel that the project is good and after the sessions we have had today I feel that the project will be much better next year. We have had an exchange of ideas that would have been very beneficial had we had them before we got into the program. A good orientation for all teachers with a prepared list of resource people would be of great help.

Film Strips not perfect but lack of prep time on part of teacher make them an excellent item. Handbook very good when children allowed to use in their spare time. Difficult for slow children to read. Speakers excellent part of program. Should not be used with film because of scheduling difficulty.

The project itself has great possibilities in introducing elementary children to job orientation. Do not necessarily pressure the child to know the type of job he wants; rather to inform the child to the different type jobs there are. We had twelve speakers this year and one field trip. All in all I feel we accomplished quite a bit in orientating students to the jobs that are available.

The over-all program is very valuable for all students involved. The speakers were well qualified, but I feel we failed to follow-up. I can see areas of discussion, field trips, individual reports that could be utilized to a greater extent. The work shop served as an eye-opener to me, especially in evaluating our local program to that of other areas.

Program should be carried on into sixth grade. Visiting a vocational school should come as early as possible before start of school or directly after start. A list of speakers used in all schools should be available to all schools. A list of all field trips should also be available to all schools.

The Career Orientation program in my opinion has been most beneficial in making children aware of the many avenues of earning a living and the preparation that is entailed. It has made me, a teacher, more cognizant of the need to present this.

SPEAKER LIST

The following were used by fifth grade teachers for Career Orientation Project for the school year 1969-70. It is hoped this list can be expanded within each local district as the fourth and sixth grades become involved in the Project.

BLOOM

Evelyn Barrenger, R.N. _Nurse
Pam Bennington - Beautician
Betty Hagen - Insurance Rep. Nationwide
Gary Howell - Deputy Sheriff
Mr. Ron McDade & Mr. Lambert Columbus & Southern Ohio Electric Co.
D.E. Prickett - Goodyear Atomic- Personnel Dept.
James Smith - Barber

CLAY

Mrs. Jane Bihl - Nurse
Mr. Ronald Horsley - Detroit Steel, Supt. in Engineering
Mr Raymond Patrick - Sales Manager
Mary Jo Cobbs - Home Economist
Orville Gable - Farmer

GREEN

Clyde Hazelit - Div. of Forestry
Mr. Hollbrook - State Patrolman
Mr. Mowbray - County Agent
Mrs. Nancy Litteral - Home Economics Teacher
Mr. Donald Williams - Truck Driver
Marvin Pauley - Auto Mechanic
Clyde Rambacher - Certified Public Accountant
James Boyer - Ohio Power Co.
Andrew Bihl - Farmer
Howard Jenkins - Detroit Steel, Supt. Steel Mill

NEW BOSTON

Bill Rand and Dick Brown - Williams Shoe Co.

NORTHWEST

Karolyn Kuhns - Registered Nurse
Myron Miller - Lineman, Columbus & Southern Ohio Electric Co.
Georgia Chandler - Cosmetologist
Glenn Shelton - Trouble Shooter, Columbus & Southern Electric Co.
Brent Anderson - Banker
Robert Malecke - Mechanic
James Boyd - Insurance
Mack Wamsley - Mail Delivery
Ross Dennis - Forestry
Guy Shoemaker - Farmer
Brenda Mason - Nurse's Aide
Micky Cochran - Sports
Raymond Smalley - Brick Plant
Thelma Shope - Owner of Paramount Beauty school
Dick Hyland - Detroit Steel, Public Relations
David VerBouryen - General Telephone Public Relations
Robert Sargent - Mechanic
Barbour Counts - Bakery Owner
Mr Walker - Pepsi Cola
Mr. Kline - Portsmouth Times
Stan Flaucher - Shoe Factory
Michael Ralstin - Ohio Stove, Production Foreman
Harold Thompson - Postmaster

NORTHWEST CON'T

Leonard Crabtree - Taylor's Stone Co.
David VerBowen - Telephone Co.
Loretta McClay - Beautician
Herb Loenig - Mechanic
Steven Bowles - Policeman
Mrs. Donal Crase - Practical Nurse
Lawrence Rhodes - Navy
Rebecca Hale - College Student, Teacher
Ronald Moore - Construction

Joyce Stapper - Nurse's Aide
Roy York - Barber
James Lovins - Waller Stone Plant Manager
Janet Pertusetti - Cosmetology
James Christian - Barber
Gene Alexander - Grocery

VALLEY

Dick Gilcher - Ohio Power
Mr. Mowery - Supt. of Chemical Plant
Mr. Vernal Riffe, Jr. Member of House of Representatives
Mr. Pennington - Manager of Funeral Home
Mr Smith - Manager of Insurance Agency
Mary Jo Cobb - Home Economist
George Stowell - Editor Portsmouth Times
Jack Whitt - Highway Patrolman
Glen Hiles Minister
Montie Spriggs - Ohio Asphalt

Mr. Leonard Chamberlain - Construction (Brickmason)
Mr. Larry [illegible] - Game Protector Conservation
Mr. Carl [illegible] - Yard Contractor, N [illegible]
Mr. Char[illegible]
Fred Wol[illegible] - Carpenter
Mrs Thu[illegible] - Carpenter
[illegible] Bruc[illegible] - Nurse
[illegible] - Detroit Steel
Wil[illegible] - Pharmacist
Cen[illegible] - Banker, Security
Thur[illegible] - Lawyer

WASHINGTON

Mr. Ronald Pollard - Insurance Rep.
Mrs. Phyllis Chilcote - Nurse
Mr. Franklin Toth - Forester
Mr. Jack Young - Attorney
Mr. Spires - Portsmouth Times
Mr. Richard Russell - Post Office
Mr. James Kimsey - Postal Clerk
Robert Stearnes - Ohio Power Lineman
Rev. John Waddell - Minister

Mr. Vict[illegible] Morgan - Jeweler
Mr. Boye[illegible] - Ohio Power
Donald S[illegible] - Data Processing, Wil[illegible]
Mrs. Erl[illegible] - Nurse's Aide
Mr. Joh[illegible] - Chiropractor (D.C.)
Patrolma[illegible] - Patrolman
Frank Pe[illegible] - Guard

WHEELERSBURG

Mr. Richard Foster - Metallurgist, Detroit Steel
Patrolman Estell [illegible] - Ohio Highway Patrol
Mr. Joe Hibbitts - Owner Hibbitts Norge Village

Mr. Eldr[illegible]
Mr. Lar[illegible] Gen[illegible]
Forest T[illegible]
Donald W[illegible] Tr[illegible]

PORTSMOUTH

John Hobstetter - Post Office
Walter Anderson - Custodian
Mrs. Laura Anderson - Supervisor of Nurses
Mrs. Ada Riordian - Nurse
Mr. McGlothlin & Miss Montavon Librarian
Mr. Weakland - Realtor
Gary Johnson - Pharmacist
Pat Burke - Receptionist
Mr. Bonzo - Draftsman
Mr. Gardner - Accountant
Mr. Balton - Butcher
Mr. Hicks - Electrician
Mr. Blevins - Barber

The above list represents only a fraction of the persons who were speakers in the fifth grade classrooms. Our apology to those who spoke but whose name is not listed. The list was compiled from periodic reports from each district and some teachers elected not to list the speakers used in their classroom.

SUGGESTION SHEET
FOR
CAREER INFORMATION SPEAKERS

PILASCO EDUCATION CENTER

I. Present the information at a level the children can understand. These children have little knowledge of careers. They lack experience and knowledge of the world of work.

II. Do not glamorize the career. Always present the barriers to a career as well as the advantages.

III. Use materials that are used in the career - slides, tools, manufactured articles, instruments. These will make your speech more interesting.

IV. Present the career in a general area. Specific areas of specialization within a career should come later in high school or even later after additional knowledge, experiences and maturity have been acquired by the student. Try to cover as many areas in the career cluster as possible.

V. Invite a question and answer period after your presentation.

VI. These are specific points you should cover in your talk about careers:

A. What does a worker in this career do?

B. What personality traits are needed?
What physical characteristics are needed?
Do both men and women work in this career?

C. What preparation is required? What will be the cost?

D. What are the working conditions? Is it outdoor, indoors, confining?

E. What pay the career pay a beginner, an experienced worker?

F. What are the intangible rewards, service, travel, prestige?

G. What are the opportunities for advancement?

H. What are the legal requirements? Is a license, certificate, union, or professional membership required?

I. How does this career cluster permit change from one career to another?

J. What suggestions can you give the children interested in this career so they may secure further knowledge and information?

A BASELINE EVALUATION OF THE OCCUPATIONAL AWARENESS OF FIFTH GRADE STUDENTS IN SCIOTO COUNTY

Sponsored by

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CHAPTER I

Many educators in Scioto County have verbally voiced concern pertaining to the lack of vocational information available for students to make realistic career choices. The decisions that students have and do make are usually based upon an unrealistic conception of an occupational career.

I. THE PROBLEM

Statement of the problem. Can the Fifth Grade students in Scioto County be given educational information that will enable them to evaluate different occupational careers more realistically?

II. PRE-TEST SURVEY

In order to more realistically evaluate the effect that the Fifth Grade Career Orientation Program, Sponsored by Pilasco Education Center, had on the fifth grade students in Scioto County: a pre-test instrument was given to measure occupational awareness before the orientation program began.

III. POST TEST SURVEY

A post test survey was conducted to evaluate the impact of the Career Orientation Program. The students who participated in the pre-test survey were surveyed again.

IV. SURVEY RESULTS

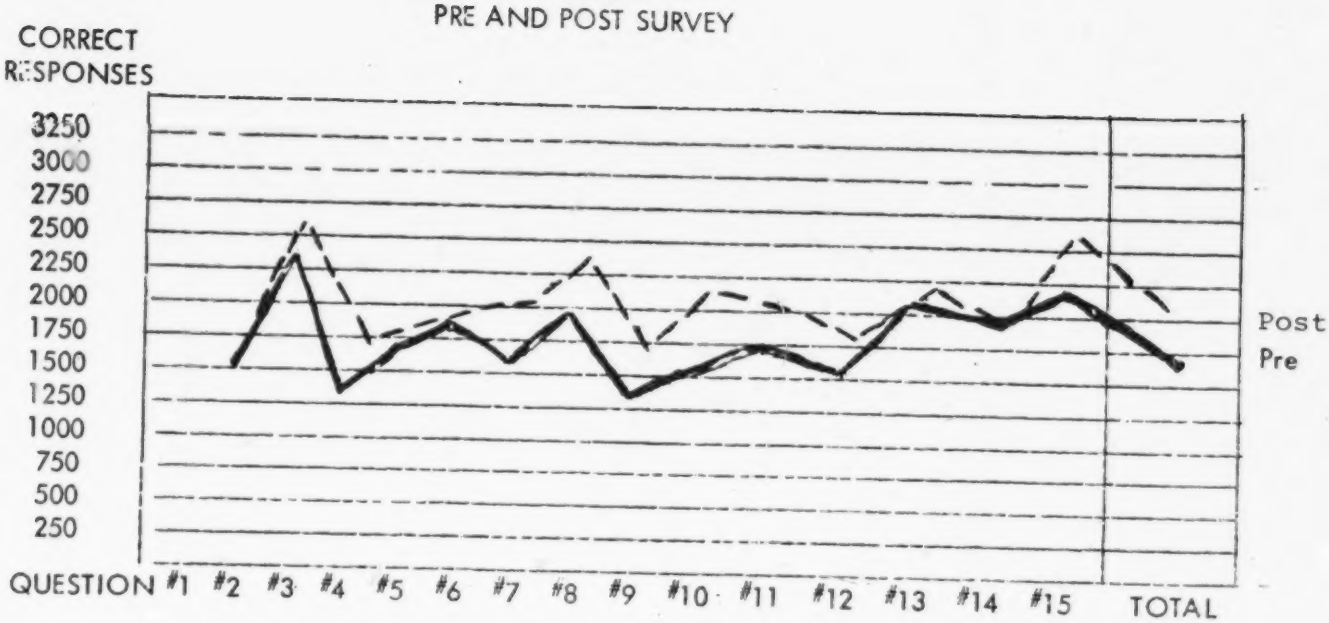
Nine hundred ninety seven fifth grade students were surveyed in Scioto County. A facsimile of the instrument used can be seen in Appendix A or Appendix B.

The instrument required forty-two responses pertaining to specific occupational requirements necessary to be qualified for a particular career.

The statistical results will be evaluated as a group in order to communicate to the reader the vocational awareness of the total group.

A line graph will be used to illustrate the composite of correct responses for each question on the pre-test and post test survey. A black line illustrates the pre-test data. A red line illustrates the post test data. The results are shown in Figure I.

FIGURE 1
PRE AND POST SURVEY



CAREERS FOR WOMEN ONLY
CAREERS REQUIRING PROTECTIVE CLOTHING
CAREERS IN SOCIAL SERVICES
CAREERS REQUIRING A STANDING POSITION
CAREERS THAT ARE SEASONAL
CAREERS REQUIRING COLLEGE
CAREERS REQUIRING A LICENSE
CAREERS REQUIRING GRAMMAR SKILLS
CAREERS REQUIRING MATH SKILLS
CAREERS INVOLVING TEAM WORK
CAREERS OF SELF EMPLOYMENT
CAREERS WORKING WITH DATA
CAREERS WORKING WITH THINGS
CAREERS REQUIRING A COLLEGE DEGREE
CAREERS REQUIRING APPRENTICE PROGRAM
(SAMPLE)

A COMPOSITE AVERAGE OF CORRECT RESPONSES

A facsimile can be seen in Appendix A of the raw scores for the pretest.
A facsimile can be seen in Appendix B of the raw scores for the post-test.

VI. SUMMARY AND CONCLUSIONS

The results of the pre-test survey strongly supported the preconceived ideal that Scioto County students had a limited amount of vocational information.

The post-test survey statistically supported the concept that Scioto County teachers on the fifth grade level have provided many vocational experiences during the 1969-1970 school year that has greatly " enhanced" the vocational knowledge of the fifth grade students.

The occupational information was presented as an integrated part of the curriculum which has made the educational experiences meaningful and relevant.

APPENDIX A

PRE TEST

Name _____ Teacher _____ School _____

List in spaces at left of each question the number of three careers that most nearly answer the statement or question underlined.

_____ 1. Some careers require that an apprentice (training) program be completed before the worker becomes a journeyman, (training craftsman). Which careers often require an apprentice program?

1. engineer
2. carpenter
4. truck driver
5. sales clerk
7. brick layer
8. secretary

1545 2. Some careers require at least 4 years of college. Which careers usually require 4 years of college?

1. bookkeeper
2. teacher
3. draftsman
4. engineer
5. medical lab technician
6. architect
7. insurance salesman
8. airline hostess

2369 3. In some careers workers work more with things than with people. List careers that work more with things.

1. auto mechanic
2. nurse
3. teacher
4. truck driver
5. doctor
6. carpenter
7. insurance salesman
8. case worker

1420 4. In some careers workers work more with data than with people. (Data means facts or figures from which conclusions are made.) List careers that involve work with data.

1. architect
2. teacher
3. actors
4. dentists
5. coaches
6. accountant
7. case worker
8. engineer

1710 5. Some careers permit people to be self-employed (they work for a fee or wage or operate their own business.) List careers that may provide self-employment.

1. machinist
2. bus driver
3. farmer
4. teacher
5. lawyer
6. policeman
7. real estate salesman
8. secretary

1768 6. Some careers involve team work, (the worker is dependent upon information or materials provided by others.) List careers that involve team work.

1. production line operator
2. farmer
3. truck driver
4. auto mechanic
5. nurse
6. lawyer
7. real estate salesman
8. astronaut

Name _____ Teacher _____ School _____

List in spaces at left of each question the number of three careers that most nearly answer the statement or question underlined.

1640 7. Some careers require good mathematics skill. List careers that require greatest math skill.

1. truck driver
2. engineer
3. farmer
4. carpenter
5. real estate salesman
6. accountant
7. actor
8. auto mechanic

1920 8. Some careers require good grammar skill. List careers that require greatest grammar skill.

1. plumber
2. reporter
3. farmer
4. secretary
5. bus driver
6. teacher
7. welder
8. check out girl

1310 9. Some careers require a license or certificate issued by the state or city. List careers that requires a license.

1. bus driver
2. welder
3. sales girl
4. nurse
5. secretary
6. teacher
7. policeman
8. reporter

1512 10. Some careers require more than 4 years of college. List careers that require more than 4 years of college.

1. teacher
2. doctor
3. nurse
4. lawyer
5. secretary
6. dentist
7. factory superintendent
8. store owner

1712 11. Work in some careers is seasonal (lay off occurs during certain months.) List careers that are most likely to be seasonal.

1. nurse
2. truck driver
3. carpenter
4. machinist
5. lawyer
6. doctor
7. bricklayer
8. painter

1510 12. Some careers often require continuous standing. List careers that require most standing.

1. secretary
2. sales clerk
3. draftsman
4. doctor
5. carpenter
6. engineer
7. bricklayer
8. lawyer

Name_____ Teacher_____ School_____

List in spaces at left of each question the number of three careers that most nearly answer the statement or question underlined.

2012 13. Some careers require helping others. List careers that require helping others.

1. welder
2. nurse
3. truck driver
4. teache
5. case w
6. secreto
7. [illegible]
8. [illegible]

1905 14. Some article of protective clothing is required in some careers. List careers that require protective clothing.

2180 15. In some careers more women are employed than men. List careers that employ more women.

1. farmer
2. accountant
3. teacher
4. archite
5. secreto
6. doctor
7. retail sales
8. lawyer

_____ 16. In selecting a career certain facts are important. Most children have said, "I am going to be _____". List left number of facts you know about your choice.

1. Amount of training needed and co of training.
2. How do you get started?
3. How much will it pay at beginnin
4. Do you know someone who is wor ng in this career and have you talked with this person about you choice?

_____ 17. Information about careers is acquired many ways. List the most important ways you have acquired knowledge of careers.

1. T.V.
2. books
3. school
4. parents
5. watchi people work
6. movies
7. travel
8. others

24,513 Composite

APPENDIX B

POST TEST

Name_____ Teacher_____ School_____

List in spaces at left of each question the number of three careers that most nearly answer the statement or question underlined.

_____ 1. Some careers require that an apprentice training program be completed before the worker becomes a journeyman. (Learning a trade.) Which careers often require an apprentice program?

1. engineer
2. carpenter
3. truck driver
4. sales clerk
5. butch layer
6. secretary

1714 2. Some careers require at least 4 years of college. Which careers usually require 4 years of college?

1. bookkeeper
2. teacher
3. draftsman
4. engineer
5. medical lab technician
6. architect
7. insurance salesman
8. airline hostess

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3. teacher
4. truck driver
5. doctor
6. carpenter
7. insurance salesman
8. case worker

1624 4. In some careers workers work more with data than with people. (Data means facts or figures from which conclusions are made.) List careers that involve work with data.

1. architect
2. teacher
3. actors
4. dentists
5. coaches
6. accountant
7. case worker
8. engineer

1614 5. Some careers permit people to be self-employed (they work for a fee or wage or operate their own business.) List careers that may provide self-employment.

1. machinist
2. bus driver
3. farmer
4. teacher
5. lawyer
6. policeman
7. real estate salesman
8. secretary

1840 6. Some careers involve team work. (the worker is dependent upon information or materials provided by others.) List careers that involve team work.

1. production line operator
2. farmer
3. truck driver
4. auto mechanic
5. nurse
6. lawyer
7. real estate salesman
8. astronaut

Name_____ Teacher_____ School_____

List in spaces at left of each question the number of three careers that most nearly answer the statement in question underlined.

1861 7. Some careers require good mathematics skill. List careers that require greatest math skill.

1. truck driver	4. carpenter	7. actor
2. engineer	5. real estate salesman	8. auto mechanic
3. farmer	6. accountant	

2235 8. Some careers require good grammar skill. List careers that require greatest grammar skill.

1. plumber	4. secretary	7. welder
2. reporter	5. bus driver	8. check out girl
3. farmer	6. teacher	

1586 9. Some careers require a license or certificate issued by the state or city. List careers that requires a license.

1. bus driver	4. nurse	7. policeman
2. welder	5. secretary	8. reporter
3. sales girl	6. teacher	

1989 10. Some careers require more than 4 years of college. List careers that require more than 4 years of college.

1. teacher	4. lawyer	7. factory superintendent
2. doctor	5. secretary	8. store owner
3. nurse	6. dentist	

1868 11. Work in some careers is seasonal (lay off occurs during certain months.) List careers that are most likely to be seasonal.

1. nurse	4. machinist	7. bricklayer
2. truck driver	5. lawyer	8. painter
3. carpenter	6. doctor	

1702 12. Some careers often require continuous standing. List careers that require most standing.

1. secretary	4. doctor	7. bricklayer
2. sales clerk	5. carpenter	8. lawyer
3. draftsman	6. engineer	

Name_____ Teacher_____ School_____

List in spaces at left of each question the number of three careers that most nearly answer the statement or question underlined.

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2306 15. In some careers more women are employed than men. List careers that employ more women.

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3. teacher
4. architect
5. secretary
6. doctor
7. retail sales
8. lawyer

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1. Amount of training needed and cost of training.
2. How do you get started?
3. How much will it pay at beginning?
4. Do you know someone who is working in this career and have you talked with this person about your choice?

_____ 17. Information about careers is acquired in many ways. List the most important ways you have acquired knowledge of careers.

1. T.V.
2. books
3. school
4. parents
5. watching people work
6. movies
7. travel
8. others

26, 881 Composite

VT 017 152

VT 017 152
GUIDED OCCUPATIONAL ORIENTATION PROGRAM.
INTERIM REPORT, VOLUME I.

SYRACUSE CITY SCHOOL DISTRICT, N.Y.
BUREAU OF ADULT, VOCATIONAL, AND TECHNICAL
EDUCATION (DHEW/OE), WASHINGTON, D.C.
OEG-0-71-1028(361)
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DESCRIPTORS - *PILOT PROJECTS; *CAREER
EDUCATION; ELEMENTARY GRADES; SECONDARY
GRADES; COMPREHENSIVE PROGRAMS; CAREER
PLANNING; *PROGRAM EVALUATION; *VOCATIONAL
EDUCATION; *PROGRAM DESCRIPTIONS
IDENTIFIERS - CAREER AWARENESS; *SYRACUSE
CITY SCHOOL DISTRICT

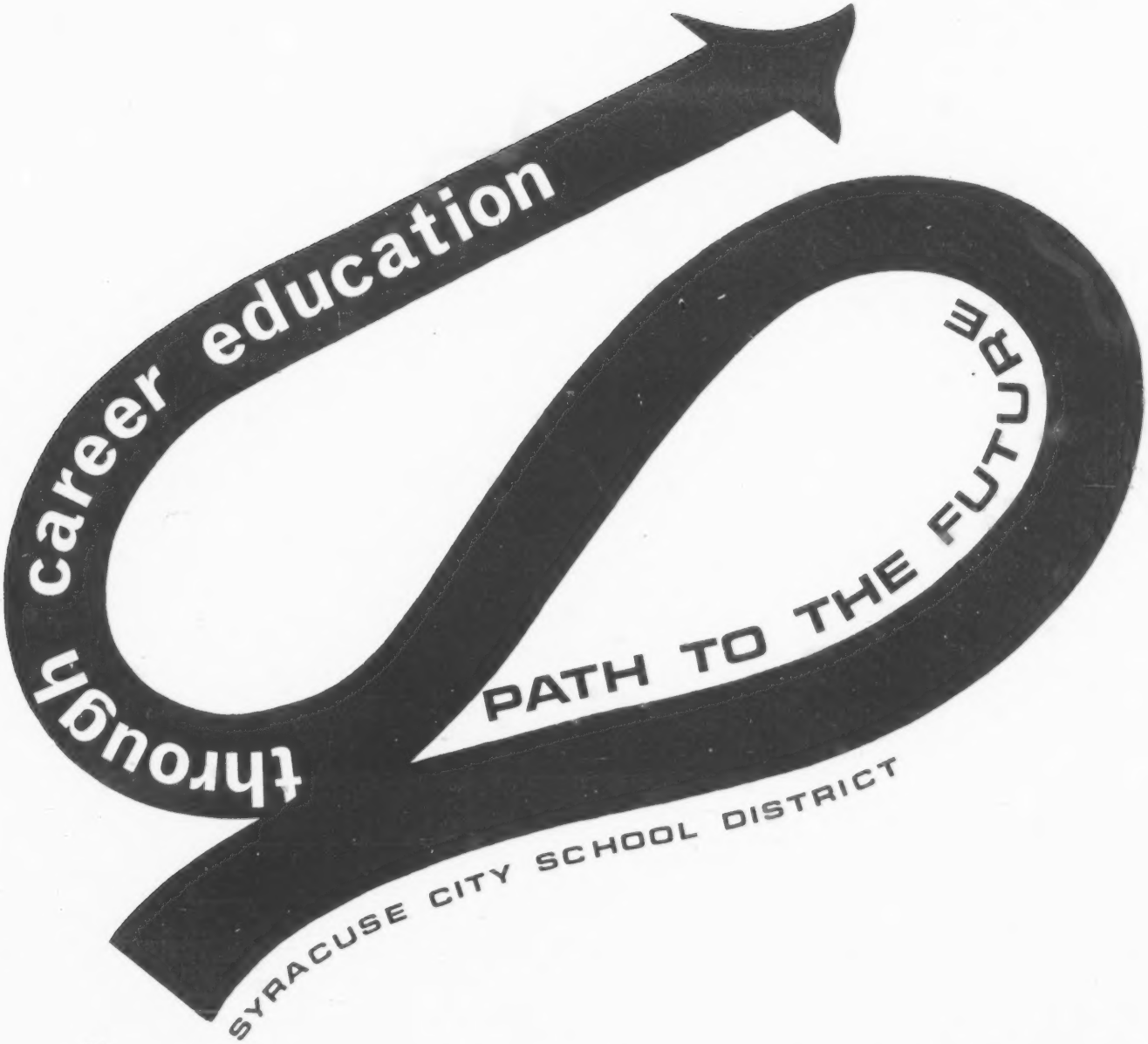
ABSTRACT - THIS DOCUMENT IS THE 1972 REPORT
OF AN EXEMPLARY PROGRAM DESIGNED TO PROVIDE
MEANINGFUL OCCUPATIONAL EDUCATION AND CAREER
PLANNING OPPORTUNITIES FOR STUDENTS AT THREE
LEVELS: ELEMENTARY, JUNIOR HIGH, AND SENIOR
HIGH SCHOOL. TWENTY-SEVEN OF THE PROCEDURES
IDENTIFIED IN THE PROJECT ARE DESCRIBED IN
DETAIL, INCLUDING THE SELECTION OF STAFF AND
MATERIALS, THE CONTACTS MADE WITH LOCAL
BUSINESSES FOR INVOLVEMENT IN THE PROJECT,
INSERVICE TRAINING FOR TEACHERS, THE
ESTABLISHMENT OF A CAREER CENTER, AND
IMPLEMENTATION OF THE VARIOUS SUBJECT AREA
PROGRAMS. EVALUATION OF THE PROJECT INVOLVES
APPRAISAL OF STAFF MEMBER EFFECTIVENESS AND
STUDENT ACCOMPLISHMENTS AT EACH INSTRUCTIONAL
LEVEL. OUTSTANDING CONCLUSIONS AND
RECOMMENDATIONS RELATE TO THE FOLLOWING: (1)
THE NEED FOR TOTAL COMMITMENT OF
ADMINISTRATIVE STAFF MEMBERS, (2) THE
INVOLVEMENT OF TEACHING STAFF MEMBERS IN
DEVELOPING INSTRUCTIONAL MATERIALS, (3) THE
INCLUSION OF ALL SUBJECT AREAS IN THE CAREER
EDUCATION PROGRAM, AND (4) INVOLVEMENT OF THE
ENTIRE COMMUNITY AS A DESIRABLE PART OF THE
PROGRAM. RELATED DOCUMENTS ARE AVAILABLE IN
THIS ISSUE AS VT 017 153 AND VT 020 627 AND
IN ARM VOLUME 6, NUMBER 2 AS VT 017 154. (KH)

INTERIM REPORT

VOLUME I

G.O.O.P.

PROJECT NO. 0-361-0143



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INTERIM REPORT

PROJECT NO. 0-361-0143
CONTRACT NO. OEG-0-71-1028 [361]

GUIDED OCCUPATIONAL ORIENTATION PROGRAM

EXEMPLARY PROJECT IN VOCATIONAL EDUCATION
CONDUCTED UNDER
PART D OF PUBLIC LAW 90-576

VOLUME I

Mr. Hans Lang, Director
Syracuse City School District
409 West Genesee Street
Syracuse, New York 13202

February, 1972

INTERIM REPORT

PROJECT NO. 0-361-0143
CONTRACT NO. 0EG-0-71-1028 [361]

GUIDED OCCUPATIONAL ORIENTATION PROGRAM

EXEMPLARY PROJECT IN VOCATIONAL EDUCATION
CONDUCTED UNDER
PART D OF PUBLIC LAW 90-576

The project reported herein was performed pursuant to a grant with the Bureau of Adult, Vocational, and Technical Education, Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

VOLUME I

Mr. Hans Lang, Director
Syracuse City School District
409 West Genesee Street
Syracuse, New York 13202

February, 1972

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5. SUMMARY OF THE REPORT

5. SUMMARY OF THE REPORT

[a] Time period covered by this report -

February 1, 1971 - January 31, 1972

[b] Goals and objectives of the project -

1. To present to youths in an understandable way, the world of work and career planning.
2. To encourage youth to realistically aspire to job careers and job goals commensurate with their potential.
3. To establish in-service education programs for educators to present occupational information to students in a systematic procedure.
4. To adequately prepare low socio-economic disadvantaged and academically deprived youth for success in our complex social and economic society.
5. To provide greater understanding and information to educators, parents, students, employers of the dignity, worth, the satisfactions derived, the opportunities available and the contributions that can be made from all levels of occupations.
6. To develop a plan of cooperation between public education and manpower agencies to the end that both share responsibility for job preparation of all students.
7. To encourage and guide students to continue their secondary education - general and occupational.
8. To identify through school records and attract through elicitation in-school and out-of-school youth who need occupational education and successful on-the-job training.
9. To find meaningful job placements where a student will have an environment in which he can succeed and develop self-respect and dignity through cooperative efforts of the school district, New York State Employment Service, and the community at-large.
10. To provide occupational orientation and continuing information for career planning and advancement.

[c] Procedures followed -

The project is composed of three [3] components - elementary, junior high school, and senior high school. Certain common procedures were employed to make the project operational at all three levels. Among these were -

1. selection of staff for the program, e.g., criteria was set up for the hiring of an elementary project coordinator, interviews were held, and a selection was made
2. meetings were held with school staffs to orient them to the Guided Occupational Orientation Program
3. consultant assistance was provided to each of the schools which were committed to the project
4. contacts were made with local business and industries in order to involve them in the program.

Other procedures such as, 5. selecting a writing team to prepare individualized programmed learning materials and, 6. selection of resource materials and equipment were used at the elementary and junior high levels but not at the senior high level.

Still other procedures were employed for only one level. The 7. development of a Skill Trainer Van and Career Center was unique to the elementary level while the, 8. establishment of an Occupational Horticultural Program was applicable only to the senior high level.

In all, twenty-seven distinct procedures have been identified in the project. A breakdown of the twenty-seven procedures indicates that -

8 were common to all three levels
7 were common to the elementary and junior high level
2 were common to the junior high and senior high level
5 were unique to the elementary level
1 were unique to the junior high level
4 were unique to the senior high level

An important conclusion to be drawn from this is that different methods, materials, and implementation activities are needed when attempting such a wide program.

[d] Results, accomplishments

It is safe to say that the Guided Occupational Orientation has had a major impact on the curriculum program of the Syracuse school system. The program has managed to have elementary children become aware of the fact that career choices exist; it has involved over 4,500 junior high students in orientation programs, career study lessons, and field trips designed to make the world of work a reality; and it has been responsible for retaining approximately 250 potential dropouts in the regular school program and 105 dropouts at the Occupational Learning Center.

Business and industry has been directly involved in the program especially in the equipping of career booths, providing speakers for classes and making field trips possible.

One of the main goals of our school district is to further the individualization of instruction to better meet the needs of all students. The Guided Occupational Orientation Program has been quite influential in furthering this goal.

[e] Evaluation

The evaluation of the project has three distinct parts

- evaluation of project management
- evaluation of components of the three levels in the program
- evaluation performed by third party evaluator

Evaluation of Project Management

The Syracuse City School District has a system for performing the appraisal of its staff members. The Director of the Guided Occupational Programs employs this system with the staff of the program. This appraisal indicates how well the staff member has complied with the duties listed in his job description and how well he has carried out the objectives of the program.

Evaluation of the Components of the Three Levels in the Program

Each level [elementary, junior high, senior high] of the program consists of components. Each component is evaluated with various techniques. The elementary level student is evaluated by pre and post testing of [a] level of awareness of the world of work, [b] attitudes concerning the world of work and occupations, [c] awareness of skills used in occupations, and [d] level of actual experience with tasks and tools used in the occupational world.

The junior high level student is evaluated by pre and post testing of his awareness of [a] alternative career choices, [b] resources available for vocational guidance and career planning, [c] ability to plan future education necessary for a career, and, [d] attitudes towards necessity for career planning.

Specific instruments have not been developed for the senior high level students in regard to the project per se. Each of the components of the senior high program is designed with its own built-in evaluation, e.g., the Occupational Learning Center keeps track of the number of days a student is absent relative to the number of possible days of attendance.

Additional evaluation instruments are used to appraise teachers, business and industry, and parental involvement in the program.

Evaluation Performed by Third Party Evaluator

A third party evaluator is mandated by the guidelines of the Office of Education, Exemplary Programs and Service Branch. Our third party evaluator is Educational Services, Incorporated of

Waco, Texas. Their services included: 1. structuring the objectives of the proposal in such a way that they could be evaluated, 2. aided and assisted in the development of the evaluation instruments, and 3. made suggestions and recommendations in regard to program management.

[f] Conclusions and Recommendations

After one year's experience with the Guided Occupational Orientation Program we have come to a number of conclusions and as a result of these conclusions, we are able to make a number of recommendations which may be of value to others who do not wish to "re-invent the wheel."

Some of the most outstanding conclusions and recommendations are as follows:

CONCLUSIONS	RECOMMENDATIONS
The success of a career education project depends largely upon the total commitment of the administrative staff of the district and participating schools.	Secure support of the district administrative staff and of the administrators of the participating schools prior to implementation of a project.
The teaching staff must be involved in the planning and development of any materials or programs which affect the total curriculum.	Involve the teaching staff in all the planning and development tasks related to preparing materials and programs.
A career education project must involve all the areas of study in which the child has the opportunity to participate.	In structuring a career education program equal emphasis should be given to every subject area.
Career education is the responsibility of the entire community - schools, parents, business, industry, and government.	All planning, implementation, and evaluation of career education projects should be designed to incorporate participation of representatives of the total community.

6 [a] PROBLEM AREA TOWARD WHICH THE PROJECT WAS DIRECTED

PROBLEM AREA

1. The school district recognizes that many youth, particularly those from the low socio-economic and academically disadvantaged groups, aspire unrealistically in terms of their own potential to job careers and job goals. They view life as offering two alternatives: a welfare existence or a plush world resulting from a college education. They are unaware of the fact that one can have a good life even if he does not attend college; that the bulk of available job opportunities lies in the semi-skilled and skilled job areas.

2. All too often, academic failure and the resulting frustration to the student lead him to believe that future achievement in life is as unattainable to him as his success in his present role - that of a student in a college oriented curriculum.

This "failure pattern" is well in evidence by the intermediate [grades 4-6] years in school. Many children by that time are several years below grade level in the academic skill areas necessary in today's curriculum. This is the seed bed for the future drop out, the behavioral misfit - planted by academic failure in the primary grades.

By junior high age then, the child has patterned himself into the life of a non-achiever; the pattern of his future life. If steps are to be taken to adequately prepare this youngster for life, they must be taken early. This is a preventive program, aimed at developing an in-depth awareness of requirements, training and responsibilities necessary for success in the world of work. Beginning with the 6th grade and intensifying through the 9th grade, the curriculum will be modified to include occupational information and skill attainment as inseparable parts of the learning process.

The Guided Occupational Orientation Program seeks to help students make realistic plans and decisions about future career preparation, largely by exposing them to extensive study of careers and pre-requisites for careers. Statistics point up that less than 15% of the students currently enrolled in high school will graduate from 4-year colleges, while Syracuse's high schools have approximately 70% of their students enrolled in general academic, college preparatory curricula; these statistics point up a need for intensive counseling and study of realistic career alternatives. Secondly, given the interest of students in employment, such interest can be tapped and channeled into basic skill areas by approaching science, social studies, English, and mathematics through career exploration.

6. [b] GOALS AND OBJECTIVES OF THE PROJECT

SPECIFIC OBJECTIVES FOR 5TH AND 6TH GRADES

1. Given an array of career choices [via Career Center Class Room presentations] students will select vocations to study in depth.

2. Upon selection of vocations to study, students will participate in interviews for information regarding job opportunities, training needed, renumeration, opportunities for advancement and desirable personal characteristics.

3. Given opportunities to conduct interviews, students will take notes and organize data derived from interviews, as well as learning about the occupation itself.

4. Given identity of students interested in similar vocations, students will join groups in quest for and sharing of information, allowing for group participation, as well as occupational career information.

5. Given printed and non-printed resource material, students will gather additional information, allowing for individual learning and self-motivation.

6. Given general outline for career information quest, student or students in groups will organize scrapbook of data collected, to be used as a reference source for himself and other students.

7. Given opportunity to collect background information, students will be able to discuss merits of one career as compared with another in group situations [based on information rather than emotion or off-the-cuff opinion] to provide better knowledge re careers.

8. Given task of making some career options, student will consult resource people to get additional information and to help him make some tentative decisions.

9. Given exhibits to view and opportunities to take field trips, students will ask questions other than those suggested in the ICS.

SPECIFIC METHODS OF EVALUATING OBJECTIVES

1. Checklist of Careers studies, checklist of instructional methods used by each student and Career Study Achievement Test. [See Appendix II-1]

2. The teacher will maintain a checklist regarding the kinds and number of interviews the student has participated in.

3. Students will use Standard Interview Sheets during the conduct of each interview. The sheets are turned over to the teacher for checking. [See Appendix II-2]

4. Teacher observation to ensure that children are grouped by career interest.

5. Completion of student Individualized Career Study [ICS] packet. Completion of the packet indicates that the student has used printed and non-printed materials. [See Appendix II-3]

6. The completion of scrapbook according to teacher designed standards.

7. Teacher observation and teacher checklist of student activities.

8. Record will be maintained of completed interview sheets, field trips and school visits by resource people.

9. Teacher observation

10. Given opportunities to take field trips, student will help in planning the trip, i.e. deciding what information he needs, which people or department upon which he might concentrate.

11. Given opportunities for field trip or interview, student will prepare a report to share information received.

12. Given set of basic questions relating to various careers, students can answer questions regarding three career choices.

13. Given a choice of seven [7] skill-experience labs the student will select and participate in the three [3] skill-experience labs. [NOTE: A skill-experienced lab is a small area wherein materials and equipment relating to a specific occupation are located. The labs are housed within a Skill Trainer Van, which is a mobile occupational center which travels from school to school.]

14. The teacher will increase the level of individualized instruction in the classroom.

15. Business and Industry will become involved in the elementary program in a designed and measurable fashion.

16. The parents will increase their level of interest and amount of participation in classrooms, as a result of the program.

10. Completion of teacher checklist of student activities.

11. Completion of teacher checklist of student activities.

12. Pre and post test. [See Appendix II-4]

13. Completion of three [3] Student Skill Activity Packets. These packets include a pre-test, "hands-on" activities [e.g. operating an adding machine], and a post-test. [See Appendix II-5]

14. The mean level of Individualized Career Study Packets per child will be at least 2.0.

15. The percentage of business and industry contacted which:
    [a] developed or participated in one or more of the 17 Career Center Exhibit Booths available.
    [b] Carried out school room visits.
    [c] Allowed field trips by students where allowable by law will be recorded.

16. Number of classroom visits per parent, listings of contributions, and percent of parents visiting per classroom as part of the project will be recorded and reported by classroom teachers.

Following are the objectives which were included in the original proposal for the junior high school program:

17. Provided with the total junior high school occupational orientation, the student will show a desire and be able to make a tentative selection of career education that he will pursue in senior high school.

18. Given the opportunity to learn about and discuss occupational information in all classes, student will become inquisitive and develop the habit of asking questions and seeking more assistance in making career decisions.

19. Provided with introductory occupational experiences, the student will approach the related occupational simulation in the classroom with increased attention and proficiency.

20. Provided with individual and group counselling, the student will better understand himself and how he can prepare for the world of work in line with his interests and abilities.

21. Given related occupational education in each subject area [English, Social Studies, Science and Mathematics], the student will show improvement especially in communication, computation and citizenship.

22. Provided with integrated occupational learning [fusion of occupational instruction with general academics], student will become involved in doing reports, projects and other activities that are meaningful for career planning.

23. Provided with school occupational orientation - parents will encourage and support their children's involvement in the program.

After consultation with the third party evaluator [Education Services Incorporated, Waco, Texas] it was decided that the following specific objectives based on foregoing proposed objectives would be used to evaluate the seventh [7th] grade program.

OBJECTIVES FOR 7TH GRADE	EVALUATION
24. Students will be aware of more alternative career choices.	24. Listings of alternative career choices and interest intensity score on a five point scale. [See Appendix II-6]
25. Students will be aware of more resources for vocational guidance and career planning.	25. Increased resource awareness as indicated by a statistically significant difference for sources which students listed as being familiar with and/or having utilized. [See Appendix II-7]
26. Students will demonstrate improved attitudes toward school and toward necessity for career planning.	26. Scores on five point attitude test will be recorded and statistically significant difference will be determined. [See Appendix II-8]
27. Teachers will increase offerings in individualized instruction, small-group instruction, pupil-teacher planning.	27. The percentage of time spent in individualizing instruction, small group instruction, and pupil-teacher planning will be recorded.
28. Teachers will demonstrate increased cooperation in school curriculum-planning.	28. The time spent in meeting with other teachers will be recorded, as well as the number of meetings held.
29. Teachers will become knowledgeable about the role of the City School District in preparing its students for vocational goals.	29. A questionnaire will be designed to measure teacher knowledgeability concerning, student vocational goals.
30. Parent-school communications relative to students' vocational planning will increase.	30. A questionnaire will be designed to measure extent of parents awareness relative to student's vocational planning.
31. Community and business will become directly involved in the role of the Syracuse School District in preparing its students for vocational goals.	31. The number of acceptances of students or class inquiry by business and industry will be recorded on an instrument to be developed.

The third party evaluator [Educational Services Incorporated, Waco, Texas] and the project administrators have a confirmed date; February 19, 1972, to meet and discuss specific objectives for the 8th and 9th grade program. And outline general objectives for the senior high schools. The specific objectives for the 8th and 9th grade program will be based on original proposal objectives for the junior high program. [See page 10]

SENIOR HIGH SCHOOL OBJECTIVES

32. At least 75 per cent of the contracted students will have at least 80 per cent attendance per month.

33. At least 80 per cent of the employed students will report a satisfying work experience and at least 95 per sent job attendance per student per month.

34. Students will improve in academic achievement in at least three subject areas.

35. Students will develop a positive self concept.

36. The vocational sophistication level of students will improve significantly.

37. Teachers' level of vocational interest and outlook will improve significantly.

38. The level of vocational interest for guidance counselors will improve significantly.

39. The level of vocational interest for high school administrators will improve significantly.

EVALUATION

32. The number of attendance days per month will be recorded for each student.

33. Counselor Interview - An instrument will be developed which will provide a rating of personal satisfaction with the job. Job attendance per month will be recorded.

34. Pre and post test - Achievement scores will be compared to determine statistical significance.

35. A profile will be constructed for each student based on a self-concept inventory. Scores upon entry into the program will be compared to those at the end of the school year to determine statistical significance. Counselor Interview.

36. The Vocational Interest and Sophistication Assessment [VISA] mean sophistication scores will be used to measure statistical significance.

37. The Vocational Interest from Teachers Assessment [VITA] will be used to determine statistical significance by comparing first of year and end of year scores.

38. First of year and end of year scores on the VITA will be compared to determine statistical significance.

39. First and end of year scores on the VITA will be compared to determine statistical significance.

6. (c) DESCRIPTION OF THE GENERAL PROJECT DESIGN AND THE PROCEDURES FOLLOWED

This project is designed to modify a school system so the resulting program will recognize occupational information and skill attainment as inseparable components of learning stages and exercises from pre-school and kindergarten through senior high.

This project is designed to begin in Grade 5. However, there is presently included in grades K through 4 an occupational orientation program.

On the kindergarten level, students engage in role playing, simulations and discussions about various workers. They learn about "helpers" in the neighborhood, people who work in the school, jobs their parents hold. Much of the equipment used in the kindergarten is geared for this program - trucks, wheelbarrows, traffic lights, toy stoves, toy stores, etc. Vocabulary developed in the reading readiness program is also related to a great extent to the world of vocations.

In the upper primary grades, an extensive social studies unit is used throughout the district revolving around Community Helpers; social studies books, files, filmstrips, tapes, trade and library books are used relating to this unit. Community resource people are utilized in the classrooms - firemen, policemen, druggists,etc.

A portion of the 4th grade social studies curriculum includes a study of Syracuse from earliest days to the present. [A general overall view of the historical, industrial and scenic phases of the community, with a brief exposure to such places as the newspaper office, a supermarket warehouse, the police department and the public utilities.

Now let's look at the child in the 5th and 6th grade. Ages 10 and 11. For most children this seems to be a resting period before the beginning of the adolescent growth spurt which a few girls have already begun. Sex differences in interest and behavior become more noticeable. Sex antagonism is acute and fueds occur frequently. Boys show their affection by wrestling, punching, and shoving each other, girls by dancing and putting their arms around other girls. Children at this age are still self-centered and inconsiderate. It should be easy to appeal to their reason. These children are capable of and therefore need opportunities to develop skills of communication, of research and of problem solving. They need opportunities to work together and develop loyalty and responsibility.

Children at this age show great interest in science; they want to know what things are made of, how they work and why. This indicates a need for units dealing with man's intellectual and technical control over his environment and his use of natural resources. Opportunities are needed to experiment, to construct, to find solutions to problems, to read widely and to observe in search of their many questions.

Group work is needed too, in order that children have opportunities to work and play with their peers so to develop an appreciation of them as persons as to their worth and contributions.

Understanding the child and the specific objectives of the program, let us now review the 5th and 6th grade program.

PROCEDURE NO. 1 - MEETING WITH ELEMENTARY PRINCIPALS TO EXPLAIN AND DISCUSS PROPOSAL

A meeting was held with the elementary school principals to explain and discuss the Guided Occupational Orientation Program. The meeting was conducted by the Project Director and the Supervisor of Elementary Education. Highlights of the meeting were as follows:

- The concept of career education was explained, discussed, and reactions were sought.
- The impact of Career education on the total school program was explained.
- The preferred use of individualized methods of instruction in career education was emphasized.
- The proposed career education for Syracuse would have two phases - a career awareness phase and a skill phase.
- Review of career information and skills which children were already receiving and how such information and skills were to be interwoven into a more formalized career education program.
- The response on the part of the people attending the meeting was enthusiastic and implementation of the project was recommended.

Student Population - None involved at this time

Instructional Staff Involved - Project Director, Supervisor of Elementary Education, Elementary Principals

Methods - Joint meeting to involve staff.

Materials - Copies of proposal were distributed

Instruments - None

Techniques - Involvement

PROCEDURE NO. 2 - SOLICITATION OF COMMITMENT FROM THE SCHOOLS TO THE PROJECT

The intent of the project director was to secure commitment to the project from seventeen schools.

Criteria was established for school selection which included:

[a] large number of students identified as being in the disadvantaged economic group.

[b] large number of students identified as being educationally disadvantaged.

[c] willingness on the part of the school staff to make a commitment to individualized instruction.

[d] willingness of the staff to make a commitment to the concept and implementation of career education as part of the total school curriculum.

[e] willingness of the principal to make this project a vital part of the total school curriculum.

Of thirty [30] elementary schools which showed an interest, both public and non-public, in the project, seventeen [17] elementary schools including twelve [12] public and five [5] non-public schools were selected.

Student Population - None involved at this time

Instructional Staff Involved - Project Director, Supervisor of Elementary Education, Elementary School Principals and Staffs.

Methods - Joint meeting; individual school meetings

Materials - Outline of proposal was distributed.

Instruments - Selection criteria

Techniques - Staff involvement

PROCEDURE NO. 3 - PROJECT STAFF WAS SELECTED

The proposal project called for the following positions: elementary coordinator, and one [1] helping teacher.

The elementary coordinator had to possess the following qualifications:

- certification in Industrial Arts
- teaching experience in the elementary school
- work experience in business or industry
- abilities to administer, develop, design, implement, and evaluate the project.

Approximately ten [10] candidates were interviewed, five met the qualifications, and final selection was made.

The helping teacher had to possess the following qualifications:

- Elementary Teaching Certification
- Teaching experience in elementary school
- Background in curriculum development
- Experience in conducting in-service workshops for teachers especially in the area of individualized instruction.

Approximately eight [8] candidates were interviewed and final selection was made.

At this point the staff was hired and the project was ready to move forward to actual implementation in the seventeen [17] elementary schools.

Duties - Coordinator

a. Make contacts with business and industry for contributions of displays for Career Center.

b. Make contacts with business and industry for field trips for students.

c. Equip skill lab van and careers information center.

d. Assist in developing career study units. [Laps]

e. Develop Skills Lab Curriculum [hands-on exposure to skills necessary in the areas of distribution, health, home economics, office, trade, industrial, and technical careers].

f. Assist classroom teachers in choosing projects and models, to be constructed in the Skills Lab, to be used back in classrooms in the related social studies, math, and science curriculum.

g. Conduct [with help of classroom teachers and teacher assistant]

h. Survey available materials for selection for use in Career Study Units and Skill Trainer Van unit.

i. Purchase materials and equipment needed.

j. Coordinate production of Career Study Units and Skill Lab Curriculum.

PROCEDURE NO. 3 - [continued]

Duties - Teacher Assistant

Help coordinate implementation of program [see duties and responsibilities of coordinator].

Duties - Skill Teacher

Upon implementation of the program in the schools, the project director and coordinator identified that the project required an additional staff member.

The logestical and administrative requirements of the project were such, that the coordinator could not perform his administrative duties effectively and fulfill his teaching responsibilities. A decision was reached to hire a skill teacher, to perform those teaching duties as previously described as coordinators duties.

Student Population - None involved

Instructional Staff Involved - Project Director, Supervisor of Elementary Education, Superintendent of Schools

Methods - Advertisement of Positions

Materials - None

Instruments - Administrative Bulletin, Local Newspapers

Techniques - Interviews

PROCEDURE NO. 4 - MEETINGS WITH PARTICIPATING SCHOOL STAFF (ELEMENTARY)

A series of three meetings were held, each consisting of elements of total elementary staff involved in the project, for further orientation to the program. Each participant was given a copy of the proposal and its specific parts were discussed and questions answered. Time was spent in discussing the implications of the project in respect to the present curriculum and the general philosophy of career education. The project staff was introduced and their function explained.

Student Population - None involved at this time

Instructional Staff Involved - Project Director, Supervisor of Elementary Education, Coordinator, and Helping Teacher

Methods - Groups of individual school staffs

Materials - Overhead presentation and proposals

Instruments - General orientation

Techniques - Staff involvement

PROCEDURE NO. 5 - SELECTION OF SAMPLE MULTI-MEDIA MATERIALS AND EQUIPMENT RELATED TO CAREER EDUCATION

It was anticipated, that many of the children who would benefit from the project, would have reading difficulties - therefore, the staff made a search of multi-media materials. Approximately $10,000 was invested in materials and equipment.

Examples of books concerning trades which were purchased:
- Voice of Tools and Machines
- How People Earn and Use Money
- How People Live in the Big City
- The Jobs You Get
- The Person You Are
- The Newspaper You Read

Examples of filmstrips which were purchased:
- The Job Interview
- The Nurse's Aide
- The School Cafeteria Worker

Examples of films which were purchased:
- Just a Secretary
- Just a Teller
- Looking for a Job
- Big City Workers

Other types of materials purchased:
- Transparencies such as "Everyday Economics"
- SRA Lab - "Widening Occupational Roles Kit"
- Guidance Materials - "A Book About Me", "What Could I Be?"

Examples of Audio-Visual Equipment which were purchased:
- Tape recorders and head sets
- Filmstrip previewers
- Filmstrip projector
- Listening Centers
- Movie projector

Examples of Miscellaneous Materials and Equipment which were purchased for the Career Information Booth in the Mobile Skill Trainer Van:
- General Mechanics Tool Sets
- Instructional Supplies [lumber, nails, metal, glue, solder, etc.]
- Shop Tools [hammers, saws, electric drill, etc.]

Student Population - None

Instructional Staff Involved - Coordinator, Helping Teacher, Supervisor of Elementary Education

Methods - Joint Meetings

Materials - Catalogues of Career Education Materials

Instruments - Not applicable

Techniques - Not applicable

PROCEDURE NO. 6 - SELECTION OF WRITING TEAM STAFF AND THE DEVELOPMENT OF CURRICULUM MATERIALS FOR CLASSROOM ACTIVITIES AND SKILL-TRAINER VAN ACTIVITIES

In the preparation of the proposal, it was recognized, that educators were not adequately prepared to present occupational information to students in a systematic procedure. Rather than enter into an extensive re-education of the school districts teaching staff, curriculum materials were to be prepared in the form of individualized instruction. A policy, to move in this direction in all subject areas, had been previously adopted by the district.

Criteria for selection of writing team:

[a] Preference would be given to 5th and 6th grade teachers from the schools selected for participation in the project.

[b] Teachers selected were to have had experience in development of curriculum materials [not necessarily individualized instruction].

[c] Teachers selected were to have been observed as having displayed an imaginative approach to their lesson presentations.

[d] Preference would be given to teachers who had indicated flexibility in their approach to curriculum structure.

A team of ten teachers were selected and notified of the forth coming curriculum writing workshops.

The ten elementary teachers [5th and 6th grade level] that were selected to write materials, which would be used for classroom activities met for a period of two weeks.

Using the previously purchased multi-media materials the team wrote twelve [12] Learning Activity Packages*, and a general orientation unit.

For example, a non-reader may be exposed to a particular content by listening to a tape. A student of average reading ability may read the material as written. A better student may be given the material in greater depth and at a higher level of sophistication. Films, filmstrips, records, tapes, library books and all types of materials which will be utilized in LAPS. The LAPS include pre and post tests.

The titles of the Learning Activity Packages were -

1. Policeman
2. School Workers
3. Dentistry
4. Post Office Worker
5. Secretary
6. Telephone Worker**
7. Civil Engineering and Jobs Related to That Field
8. Newspaperman
9. Restaurant Workers
10. Forestry Workers
11. Auto Workers
12. Nursing
13. Orientation to The World of Work

*A learning activity package is a unit of work written for students to pursue individually. The content is written on three different reading levels. Reading level, time and style are varied to suit individuals, utilizing a multi-media approach.

**A sample of this L.A.P. is included in the appendix. [See Appendix II-9]

PROCEDURE NO. 6 - [continued]

The Learning Activity Packages were used for the Classroom Activities.

Following the development of the LAPS, three members of the writing team and the project staff, edited and printed fifty copies of each LAP for use in a summer workshop. Additionally, classroom management and evaluation, instruments were designed and printed. These included a teacher's manual, a schedule, LAP progress sheets, teacher control sheets, career program information manual, and bibliographies. [See Appendix II-10, II-11, II-12]

This completed the classroom curriculum package as far as printed materials were concerned.

Student Population - None

Instructional Staff Involved - Ten elementary teachers, Coordinator, two elementary Helping Teachers, Project Helping Teacher and LAP Consultants.

Methods - Workshops for two weeks for teachers. Instructional materials, books, papers, etc.

Instruments - LAP progress sheets, teacher control sheets.

Techniques - Substitute teachers to release classroom teachers.

PROCEDURE NO. 7 - RESOURCE KITS WERE DESIGNED AND PREPARED FOR L.A.P. IMPLEMENTATION

As stated in the proposal, under general design, the learning approach is highly individualized in terms of the pupil's career interest as well as his ability to find and assimilate information. The LAP directs the student, to a specific piece of resource material, in a quest for information. Some children can easily complete their quest thru the media of written material, while others require visual and audio stimuli.

A survey of the elementary schools, involved in the project, disclosed that each was lacking in both the equipment and resources necessary to pursue the LAPs. In order to make it possible for the student to accomplish this self directed type of study. Career Study Kits were designed. Twelve career study kits, contained in foot lockers for mobility and transportation purposes, were constructed. Three cassette recorders, three head sets, one multiple outlet extension cord, and two rearview filmstrip viewers made up the equipment for each kit. The resource materials consisted of 50 hard cover books, 37 filmstrips, 60 prerecorded cassette tapes and various folders, and pamphlets in each kit. The 12 Career Study Kits were to be scheduled on a rotating basis, spending a period of approximately three weeks in each classroom.

All kits contained inventory lists and classroom management instructions so that they could be managed by the students. [See Appendix II-13]

Student Population - None

Instructional Staff Involved - Elementary Teachers, Coordinator, Helping Teachers, and LAP Consultants.

Methods - Survey - Writing Sessions

Instruments - Not Applicable

Techniques - None

PROCEDURE NO. 8 - DESIGNED, A SKILL-TRAINER VAN AND CAREER CENTER

In planning and writing the proposal for the project, it was determined that in order to create student interest in the area of career studies, the student needed -

1. Exposure to a variety of occupations
2. "Hands On" experience related to those occupations.

A technique used to ensure exposure to a variety of occupations was to have a Career Van.

Another experience needed was "Hands On" activities related to certain occupations. [NOTE: "Hands on" activities refers to e.g. using an adding machine] There were no facilities or equipment to give the child this "hands on" experience existing in the elementary schools. The secondary schools could not offer the facilities or equipment to service the elementary children, due to space and time limitations. Even if the time and space problems were overcome, the types of shops and equipment were not suitable to elementary children.

Three alternatives were discussed as to how to meet this situation.

Alternative	Decision
1. Locate a facility in each elementary school for "hands on"	1. Too costly
2. Bus children from many schools to one facility for "hands on" activities	2. Time limitations
3. Bring the "hands on" facility to the school by means of locating it in a movable van.	3. This alternative was selected.

Upon investigation of the availability of vans, it was felt that converted mobile home units would be sufficient to fill our needs. Upon further investigation it was found that the conventional mobile home type units were not structurally suited to the program. The main reason was the units could only be moved three times. Our plans called for them to be moved a minimum of twenty [20] times per school year. Because the conventional mobile home type units were found to be unsuitable, an alternate type van was sought.

Canvassing rental trailer suppliers, we found a locally based designer and builder - Carpenter Northeast Inc. who had available units requiring little change in needed structural design. Quotation from Carpenter Northeast indicated the cost factor for two units to be prohibitive based on the allocation in the proposed budget.

A decision was made to allocate the funds intended for the two units to the construction and equipping of a single van to provide the needed "hands on" experiences [referred to from here on as the Skill-Trainer Van]. This van would take approximately six months to be designed and built. A detailed description of the van will be given in Section B of this procedure.

A. Career Center

The alternative to the Career Van was to have a school based Career Center. The purpose of the Career Center was to provide students with a first-hand exposure to business and industry in the greater Syracuse area. The Career Center was designed to house displays - both pictorial and narrative. The design by which the displays were presented was in the form of study carrels capable of servicing two to three students at a time.

In addition to the pictorial and narrative materials, some related equipment, filmstrips, and listening media were included in the carrels. The intent was to secure the cooperation of business and industry in helping to equip the carrels. e.g. New York Telephone Company would supply installer's tools, a disassembled telephone, and operator headsets, for one carrel.

In addition to the materials and equipment to be supplied by business and industry, the project would equip each booth with electrical outlets, cassette tape recorders, filmstrip viewers, and head sets with dual adapters. [For floorplan and photo of typical carrel - see Appendix II-14]

A total of twelve [12] carrels were to be constructed by the project representing job opportunities in the areas of -

1. Police Occupations
2. Electronics Occupations
3. Dentistry
4. Business Occupations
5. Schoolworkers
6. Postal Occupations
7. Construction Occupations
8. Restaurant Occupations
9. Hospital Career
10. Fireman Occupations
11. Telephone Careers
12. Health Careers

In addition to the study carrels, space would be provided for the presentation of filmstrips and movies as well as project office facilities.

B. Skill-Trainer Van [STV]

The original plan of the proposed Skill-Trainer Van was that it be equipped as an elementary Industrial Arts shop. Upon request of the State Education Department, following their review of the project, the concept of the Skill-Trainer Van was changed to provide a pre-vocational laboratory experience. This change required that each student now be exposed to the following skill areas:

1. Agriculture
2. Sales and Distribution
3. Health
4. Home Economics
5. Office
6. Trade
7. Industrial/Technical Careers

The specifications for the design of the Skill-Trainer Van and an accompanying scale model were drawn up by the Elementary Coordinator. In turn, Carpenter Northeast Inc. drew up the formal proposal containing all specifications and costs for submission to the Board of Education and the Common Council for approval. Once approval was granted, a delivery date was established.

The original proposal indicated that the electrical power was to be provided by the participating school. Upon consultation with the local power company it was determined that this method was too costly. It was recommended that a gasoline powered generator be purchased. After consultation with the STV designer and a local power plant supplier, a generator unit was ordered through state contract. Upon delivery of the STV the installation of equipment, and the connecting of the motor generating unit, the generator was found to be under powered for the requirements of the unit. This necessitated the ordering of a larger unit. During the period of the design of the STV, the types and quantities of the equipment needed to give the students the skill experiences in the previously mentioned seven skill areas were purchased.

Skill Area	Equipment
1. Agriculture	1. Flourescent fixtures and grow lamps.
2. Sales and Distribution	2. Three cash registers [grocery store, restaurant and department store].
3. Health	3. Complete hospital bed, chase doll [sexless], 2 stethoscopes, 2 anaroid blood pressure units.
4. Home Economics	4. Complete miniature short-order restaurant [tools and utensils, rotisserie oven broiler, food service table, water container, 2 large sewing machines with tables.
5. Office	5. 2 selectric typewriters with tables, and various typing elements.
6-7. Trade, Industrial/Technical	6-7. Miniature Industrial Arts Shop, miscellaneous hand tools, moto jig-saw, hand electric drill, saber saw, portable tool panel, moveable work benches, electric soldering guns, polaroid land camera.

All equipment was designed to be initially portable in order to implement the skill program while the STV was being constructed. During the period of construction the equipment was trucked from school to school and set up in any available school space.

Specifications and floor plan for the installation of the equipment upon delivery of the STV drawn up by the coordinator. [See Appendix II-15, STV photo and print] Special attention had to be given to the securing of all equipment and materials to render them stationary during transit. This was accomplished by the location and installation of D-rings and stretch cables in the floor and walls. NOTE: In the design of the STV unit and power generator, special consideration must be given to state and local building codes and ordinances. The unit is classified as a motor vehicle and must be insured as such. Additionally, state regulations recommend registration and licensing of the vehicle. The unit is designed for minimal vandalism opportunities by the elimination of all windows and/or access points other than steel entry/exit doors. Emergency lighting units are necessary in the event of power failure. Insurance coverage for this unit is less restrictive than that of a school building classroom because it is classified as a motor vehicle.

The relocation of the STV is contracted out to the STV supplier who is responsible for the meeting of all regulations and requirements pertinent to the transporting of this over-sized vehicle. The estimated relocation costs were determined to be between $50 and $100 per move based on weather and traffic conditions. [See Appendix II-16 for specifications.]

Student Population - none involved at this time.

Instructional Staff Involved - Project Director, Coordinator

Methods - Exposure to variety of occupations, "hands on" activities.

Materials - Printed, pictorial, audio-visual materials, listening center.

Instruments - None

Techniques - Career Day - Mobile Skill-Trainer Van

PROCEDURE NO. 9 - CONTACTS MADE WITH BUSINESS AND INDUSTRY FOR ACTIVE INVOLVEMENT IN THE PROJECT

Upon the designing of the Career Center study carrels, we began making contacts with local business and industry in regards to their active participation in the program. Participation requested of business and industry contacted included their furnishing visual and audio material for Career Center Displays, making available resource people for both the Career Center and in classroom activities and establishing cooperatively planned field trips. The following is a list of cooperating local concerns:

General Electric
Niagara Mohawk
Mutual of New York
Allied Chemical
Carrier Corporation
Manufacturers Association of Syracuse
Bristol Labs
Building Trades Association
WHEN-TV
WSYR-TV
WCNY-TV
Syracuse Auto Dealers Association
Fischer Body
Lipe Rollaway
Onondaga Health Association
Police Department
Fire Department
Post Office
Careerco
Upstate Medical Center
Community General Hospital
Mechanical Contractors Association
Herald Journal
Crouse-Hinds
Pass & Seymour
New Process Gear
New York Telephone Company
College of Forestry
Sanford Fire Apparatus
Library Careers
The Post Standard

Twelve study carrels were built and set up at the Career Center at George Washington Elementary School. The project staff assisted the local business and industry in the installation of the materials and equipment supplied by them.

Student Population - None involved at this time

Instructional Staff Involved - Coordinator

Methods - Telephone calls, letters, personal contacts

Materials - Telephone, paper

Instruments - Not applicable

Techniques - Not applicable

PROCEDURE NO. 10 - SUMMER WORKSHOP INVOLVING FORTY-SIX TEACHERS AND ADMINISTRATORS FROM THE SEVENTEEN SELECTED SCHOOLS

During the summer a workshop was held to prepare the staff of the seventeen selected schools to implement the Guided Occupational Orientation Program in their respective schools.

The objectives were -

1. The inservicing of the teachers to the philosophy and objectives of the project.
2. To inservice teachers in the use of individualized instructional materials [LAPS] and media
3. To develop classroom implementation techniques
4. To have the teachers, through role-playing and simulation, experience the actual use of the curriculum materials which children would be using. Each teacher was expected to complete each of the 12 LAPS.
5. To have the teachers evaluate the individualized instructional materials [LAPS]

Workshop Highlights [duration one week]

First day
Introduction of project staff and attending administrative personnel to attending participants.
Presentation of workshop formal.
Overview of the program objectives
Inservice of participants to the elements of a LAP
Discussion of alternatives considered by writing team
Orientation of skills program and STV

Second day
Presentation of elementary program elements:
a] Pre-program activities
b] Orientation LAPS
c] Career Center Visit
d] Career Study LAPS
e] Skills Program
Discussion of classroom management techniques.
Review of career information manual.
Teachers began actual performance of Orientation LAPS and Career Study LAPS

Third day
Continued working on LAPS
Each teacher prepared a list of identified problems encountered during activities

Fourth day
Panel discussion dealing with, teacher identified, problems.

Fifth day
Teachers completed classroom activities
Suggested outline for classroom implementation was presented and discussed
Teachers made an overall evaluation of workshop
Weeks work summarized and workshop closed.

The results of the workshop were generally favorable [See evaluation Appendix II-17] and two of the twelve LAPS were identified for rewriting. This was accomplished prior to the opening of school in September.

Student Population - None

Instructional Staff Involved - Coordinator, Project Director, Supervisor of Elementary Education, Helping Teachers, 46 Elementary Teachers, School Administrators.

Methods - Small group discussion and writing. Panel discussions, general presentation.

Materials - Workshop materials

Techniques - Overhead presentation, filmstrip presentation

PROCEDURE NO. 11 - EDITED AND PRINTED MATERIALS RESULTING FROM THE WORKSHOP

After the conclusion of the workshop, the project staff and reading consultants edited and drew final drafts for printing. Special attention was paid to re-structing languages to fit reading levels and to correct any errors in content.

Of the twelve LAPS, two were completely re-done. [Civil Engineering and Post Office Worker] This was because they didn't follow the format and generally referred to resource material judged to be above grade level.

Answer keys were developed for each of the LAPS and LAP progress sheets were developed at this time. All materials were typed and mimeoed. At this point there was a problem - by using mimeographing, the possibility of adding art work to the stencils was limited. It was decided that future printing of materials would be done by the off-set method.

A total of 20,000 LAPS were printed. Total cost including paper, stencils, and labor was approximately $5,000 [$.25 each].

Other activities included development and printing of suggested pre-program classroom activities, e.g. bulletin board displays, the design and preparation of series of overhead transparencies for teaching staff orientation to be used prior to program implementation.

NOTE: LAPS will be referred to from here on in as Individualized Career Studies [ICS]

Student Population - None

Instructional Staff Involved - Project Staff, Reading Consultants

Methods/Materials - Work sessions, paper, stencils, transparencies

Instruments/Techniques - Answer Keys, Progress Sheets

PROCEDURE NO. 12 - ORIENTATION OF SPECIFIC SCHOOL'S STAFFS FOR THE PURPOSE OF IMPLEMENTING THE WORKSHOP

On November 2, 1970 the first participating school began its two week orientation into the World of Work. The Career Center officially opened on November 4, in conjunction with the open house of American Education Week and received its first class of students on November 16.

Prior to the orientation phase of the program, principal conferences and teacher reorientation workshops were held at each of the schools. These workshops covered all changes in and additions to the program following the summer workshop and orientation of any personnel not having attended same.

At this time, the format of the Elementary Guided Occupational Orientation Program was ready to be presented. The format and implementation of the program is as follows. Two phases are included - Career Information Phase and a Skill Development Phase.

PROGRAM IMPLEMENTATION

The program is presented in two phases. the career information phase and the skill activities phase.

Career Information Phase

1. A two week orientation period, involving the orientation study entitled, "An Introduction to the World of Work", serves as an introduction for teachers and students to this individualized type of instruction. Rather than a total group presentation, this instruction is designed for independent learning, written for different ability levels. This two week period allows for thorough development of the purpose of the program as defined in earlier paragraphs.

2. As a kick-off to the next part of the program, each class has a "Career Day", the purpose of which is to provide students with a first hand exposure to business and industry in the greater Syracuse area by means of a field trip to the Career Center. The purpose of the Center is two-fold:

a- to create interest in the Career Studies
b- to house displays designed to give students a glimpse into various job categories in existence. Each job category has a general display [pictorial and narrative], some equipment used, a listening center, filmstrip, filmstrip previewer, and other resource materials from business and industry, based on their availability. These displays are equipped through the cooperation of local business and industry.

The student's visit to the Career Center is of about one-half day duration. During this visit, the Career Center Teacher relates the Orientation Study to the in-depth Career Studies which the children undertake after they have returned to their home school. While at the Center, his activities will be in the form of a treasure hunt taking him through the exhibits on a quest for information. His directed activities might include handling tools and equipment, viewing a filmstrip, finding and writing answers to questions from display materials, consultations with the Career Center Teacher, etc.

3. After the visit to the Center, students proceed on an in-depth study of careers by means of ICS's [Individualized Career Studies]. These instructional materials are written and revised on a continuing basis by a team of teachers from the schools involved in the program. During this phase, the child selects several career areas to study, his choice being guided by the Orientation Study and the trip to the Career Center. The program continues back in the classroom for approximately one month.

Each Individualized Career Study is a unit of work written for students to pursue individually to meet the four specified objectives. i.e. - Nature of Work, Requirements, Conditions, and Advantages. The content is prepared on three reading levels: All three having been written to meet the objectives. Reading level time and style are varied to suit individuals, utilizing a multi-media approach. For example: A non-reader may be exposed to a particular content by listening to a tape. A better student may be given material in greater depth and at a higher level of sophistication.

It is during this period that business and industry play a most important role. Each student has an assignment to interview at least one person who holds a job related to the Career Area he has chosen. The child has a standard interview sheet which aids him in finding out more about the job and opens the door

for personal questions he may have on his mind. Also during this period, the students have an opportunity to take field trips to a place of business and see first hand, people actually at work in the jobs he has been studying about. Later, in the class, each child has an opportunity to report to the class, as a whole, as to what they have seen and heard.

These studies are highly multi-modal.

Filmstrips, tapes, books, pamphlets and all types of material are utilized.

Each Career Study includes a fairly comprehensive study of the complete job area, in terms of the four objectives. Included in each is the Career Ladder approach, showing job opportunities from the unskilled up through the professional level. For example, the school workers study includes jobs from the custodial staff up through paraprofessional to the level of superintendent.

The teacher prescribes the correct ability level for each child's selection of careers. All levels are multi-modal and encompass many types of instructional techniques, such as role playing, interviews, field trips, large and small group discussion, oral reports, etc., as well as research work from the Career Study Kit.

SKILL DEVELOPMENT PHASE

Throughout the student's in-depth study of career and job opportunities, he will find that most require skills and knowledge other than reading, writing and arithmetic. These skills involve the use of tools and machines in the performance of his everyday responsibilities as an employee. Due to the fact that business, industry, and society are technically oriented, the student cannot obtain a true picture of any job or career without experiencing the use of the tools and equipment related to it. Thus, our aim is not only to make the student aware of jobs and careers, but also to give him opportunities to handle tools and equipment, and to learn to use them correctly. Skill experiences are presented to the student through the use of the "Skill Trainer", a 12' X 50' mobile van with experience labs set up in the areas of Distribution, Health, Home Economics, Office, Trade and Industrial, and Technical. Provisions are made for experiences in Agriculture within each school. The experience labs make use of such equipment as a Polaroid camera, cash registers, calculators, Selectric typewriters, sewing machines, as well as a complete hospital room and a short order restaurant.

In the implementation of the industrial skill phase, the teacher writing team identified and described models or projects that students can develop to be used in social studies, science, math, health and language arts programs. These models can be taken directly into the classroom for instructional use, while at the same time they serve to identify various jobs and careers.

A small Industrial Arts Shop serves as the experience lab for this phase, with opportunities for exposure to the areas of woodworking, metal, electricity, ceramics, and graphic arts.

Each class has two days of intensive activity in the Skills Trainer, under the direction of a Skills Teacher and the Classroom Teacher.

Student Population - None

Instructional Staff Involved - Elementary Teachers, Project Staff

Methods/Techniques - Workshops

Materials - Handout of Programs

Instruments - None

PROCEDURE NO. 13 - ON-GOING ACTIVITIES AND EVALUATION OF THE PROJECT ELEMENTARY SCHOOL'S THAT HAD STARTED THE PROJECT

The main coordination activities [1] and evaluation outcomes [2] of the elementary project have been.

1. COORDINATION ACTIVITIES	2. EVALUATION OUTCOME
a] Entertained the supervisory staff of the New York State Employment Services Department at the Career Center.	a] They expressed their indorsement of the program and offered us their complete support. Support included materials and consultation services.
b] Administered ½ day workshop for the Syracuse Police Department Secondary School. Liasion Team [these police officers work in our secondary schools]. The purpose of the workshop was to acquaint the police with what the school system was doing regarding better meeting the needs of the students and show a more positive purpose for their education.	b] Police personnel participation in relationship to their duties resulted in the children showing more positive interest in police work.
c] Due to the project's contacts with local business and industry, the coordinator was notified that the project had been chosen by the Syracuse Chamber of Commerce Education Commission to receive the Chamber's complete endorsement and support.	c] Project Coordinator was invited to speak before this commission to acquaint its members with both the elementary project and plans for expansion into the secondary schools. The Chamber confirmed their endorsement, and offered whatever support and publicity which they could give.
d] Coordinator conducted a ½ day workshop for all Junior High Industrial Arts teachers. The purpose of the workshop was to acquaint them with the project and exposure their future students would have had.	d] Teachers indicated the need to identify their role when project expanded into secondary schools.
e] Based upon the evaluation by student's and teachers of the LAP format of ICS (Individualized Career Studies - two one-week workshops were held. The workshops were composed of teachers that had completed the program in their own schools. A LAP is basically a curriculum vehicle used to instruct a student in a single concept. The purpose of the ICS was coceptually too broad to function as a true LAP.	e] Teachers spent time outlining a new format for the 12 existing ICS'S [LAP'S]. In addition they prepared 10 new ICS'S [See Appendix II-18 for sample of ICS and listing of titles].
f] Completed purchase of STV [Skill Trainer Van] and supervised installation of all equipment.	f] STV was actually put "on the road". The setting up of temporary Skill Centers in each school was no longer needed.
g] Coordinator Assisted project director in selection of think party evaluator team.	g] Evaluator Team was selected [Educational Services Inc. of Waco, Texas]

Student Population - Classroom Students

Instructional Staff Involved - Project Director, Coordinator, Industrial Arts Junior High Teachers, Classroom Teachers

Methods/Materials - Workshops, Paper, Dittos

Instruments/Techniques - LAP'S [ICS]

PROCEDURE NO. 14 - THE PROJECT WAS EXPANDED INTO JUNIOR HIGHS - SELECTION OF A WRITING TEAM

Procedures No. 1 and No. 2 were repeated at this time.

The Project Director received consultant services from the Assistant for English in the secondary schools. His consultation services consisted of - -

[a] Selected a secondary curriculum writing team.
[b] Selected a curriculum design for the secondary schools covering the areas of English, science, social studies and math. This curriculum design was based upon a learning program which involved objectives and alternate learning activities.
[c] The establishment of Saturday workshops during the spring and a workshop during the summer. The staff surveyed the material and curriculum resources available in the area of career education.
[d] Coordination of the writing of the curriculum based upon the development of idea booklets applicable to students and teachers.
The idea booklets designed were as follows:

1. Teacher Manual for all junior high teachers. The title given to this program is Careers Unlimited.
2. Orientation idea booklet for social studies and English teachers to be used during the introductory period.
3. A planning guide per job family based on seven selected occupational area's [a separate set for each discipline geared to its particular skills].
4. Development of a model "student-teacher contract" for classroom use.
5. Teachers' Guide to resources on Careers Unlimited.

Student Population - None

Instructional Staff Involved - Junior High School Principals, Project Director, Assistant in English for Secondary Schools, Secondary Teachers

Methods/Techniques - Meetings, Workshops

Materials - Workshop Materials [Dittos, paper]

Instruments - None

PROCEDURE NO. 15 - ACCOMPLISHMENTS OF SECONDARY WRITING TEAM

The secondary writing team was composed of two teachers of English, two teachers of social studies, one teacher of mathematics, and one teacher of science. The chairman of the team was the Assistant in English for the secondary schools.

The writing team adopted a "pyramidal" design for its curriculum: in the seventh grade, students will be exposed to broad career areas; in the eighth grade, students will be encouraged to investigate, in greater detail, one career area and the job ladders within that field; in the ninth grade, students should be involved in detailed, in-depth study of their particular career choice.

In implementing this design, the team accomplished the production of:

1. Orientation Idea Booklet - reviews components of the elementary program and continues their orientation toward the world of work, including such aspects of employment as wages, on-the-job personal relations, and considerations a person must make in choosing a career.

   The Orientation Idea Booklet [See Appendix II-19] is used by the English and social studies teachers to orient students to the program through extensive study of all occupational areas. As a result of this orientation students make preliminary decisions about one or two areas for extensive study. Areas they choose from are:
   a. clerical and sales
   b. services - people oriented
   c. services - things oriented
   d. working on the land
   e. manufacturing
   f. structural work
   g. entertainment and communications [See Appendix]

   After the student makes his preliminary choices, he meets with each of his four subject area teachers [English, social studies, mathematics, science] to negotiate contracts. Contracts represent the amount of study about occupations to be done in each of these four subjects.

2. Planning Guides for the Job Family - [See Appendix II-20] Each of the four basic disciplines of the junior high school [English, social studies, science, and mathematics] has contributed seven studies. First, each school discipline asks the student to explore the career field from the perspective of that particular discipline: how, for example, does history relate to performing arts? Second, the student is asked to consider the relationship between the skills of the particular discipline and the job field: what type of mathematics, for example, must a construction worker know? Both skill development and content-mastery in the discipline are thus incorporated into the study.

   The seven study areas that were developed were:
   a. Clerical and Sales
   b. Services - People Oriented
   c. Services - Things Oriented
   d. Working on the Land
   e. Manufacturing
   f. Structural Work
   g. Entertainment and Communications

   One booklet, per job family, was organized as follows:
   Booklet title: Construction Occupations Introductory Activities
   1. English
   2. social studies
   3. science
   4. mathematics

   Development activities
   1. English
   2. social studies
   3. science
   4. mathematics

NOTE: "activities" will be keyed to "objectives", so that students are able to make selection of objectives and activities for each of the four course-areas.

3. Teacher's Guide to Resources on Careers Unlimited [See Appendix II-21]
   a. Introduction to the Program
   b. Strategies for teaching the Program
   c. Sample student-teacher contracts
   d. Bibliography of materials for classroom use

Student Population - None

Instruction Staff Involved - Secondary Writing Team

Methods/Techniques - Workshops

Materials - Booklets

Instruments - None

PROCEDURE NO. 16 - SELECTION OF OCCUPATIONAL RESOURCE SPECIALISTS

In order to implement the project in the junior high schools, it was decided that three [3] Occupational Resource Specialists were needed:

These specialists needed the following qualifications:

[a] Strong work experience in business and/or industry.
[b] Educational preparation which emphasized vocational and occupational counseling skills.
[c] Working knowledge of secondary education.

We interviewed at least fifteen [15] people for the positions and three were hired.

The duties of the Occupational Resource Specialist are:

1. Determine what occupational information teachers and counselors need in order to make instruction and counseling more relevant to the world of work.
2. Identifies entry-level jobs in the community.
3. Serves as a liason between school and business and industry.
4. Develops opportunities for students to obtain career information.
5. Maintains a library of materials on careers and employment opportunities.
6. Provides teachers with career information to incorporate in their course content.
7. Assists the guidance staff in organizing and conducting career guidance activities.
8. Organizes and prepares research studies relating to student's career choices and placement.
9. Develops and implements effective ways of publicizing occupational information to all students.
10. Be responsible for serving each student identified as a potential dropout as well as those who have left school but have not completed their high school education. These are usually those who qualify as disadvantaged or disaffective.
11. Interest and involve students in the General Work Experience Program or an alternate Work Study Program. Work experience seems to be the best means of involving most disaffective youth.
12. Act as a liason between the student and his teachers in order to insure that instruction is related to work experience.
13. Work closely with counselors and administrators in helping to make occupational education an integral and important part of general education.

Student Population - none

Instructional Staff Involved - Project Director, Director of Continuing Education, Guidance Associate.

Methods/Techniques - Interviews

Materials - None

Instruments - Standard school interview sheets.

PROCEDURE NO. 17 - ORIENTATION OF OCCUPATIONAL RESOURCE SPECIALISTS (ORS)

Prior to the official opening of school, September 1, 1971, the Occupational Resources Specialists (ORS) were to devote their time to the following activities:

1. Orientation to the Syracuse City School System
2. Familiarization with the occupational and vocational offerings in the curriculum.
3. Visits and orientation to community agencies and businesses directly related to the school program.

PROGRAM ACTIVITIES TO BE ACCOMPLISHED

Program	Place
Guided Occupational Orientation-Training & Job Placement Program	Syracuse Board of Education
Technical, Industrial & Occupational Programs	Central Tech
Work Study Programs	Central Tech
Occupational Learning Center	Central Tech
Occupational Extension Program	Central Tech
Special Education Work-Study Programs	Special Projects
Adult Basic Education Program	Washington Irving
Manpower Development & Training Program	Madison School
Manufacturers' Association of Syracuse	770 James St.
Inventory of Available Occupational Information and Related Materials	Syracuse Board of Education
Introduction to School Personnel - Principals,	Secondary Schools School Counselors, etc.
Guided Occupation Orientation-Training & Job Placement Program - Elementary Program	
Occupational Curriculum Developmeent	Syracuse Board of Education
New York State Employment Service	677 So. Salina

Student Population - None

Instructional Staff Involved - Occupational Resource Specialists, Project Director, Coordinators, Counselors, Associates, Secondary Principals

Methods/Techniques - Field Trips, Visitations, Discussions, Presentations

Materials - Hand out sheets of individual programs.

Instruments - Continuum to rate effectiveness of orientation

PROCEDURE NO. 18 - IMPLEMENTATION OF PROGRAM IN JUNIOR HIGH SCHOOL: SCHOOL STAFFS

The Syracuse School District contains four high schools. Each high school has two to three feeder junior highs. One high school and its feeder junior high is identified as a quadrant. Each of the Occupational Resource Specialists [ORS] was assigned a quadrant.

Each ORS met with the principals, counselors, department heads, and all English and social studies teachers to discuss the goals and methods of the project. Involvement of the staff as well as the role of the ORS were discussed at this time. Distribution of curriculum materials took place at the meetings. In all there was seven meetings in each school.

It was the responsibility of each building administrator to develop plans for implementing the project in his school. At least one day per week in each discipline [English, social studies, mathematics, science] was mandated to be devoted to the project.

As the project was implemented in each school, the role of the ORS as an implementer lessened and the ORS became more of a resource person. This role included securing films, filmstrips, speakers, consultants, and occupational materials. As part of the implementation of the project in the junior highs, one [1] teacher in each junior high was asked to serve as a liaison person to the Occupational Resource Specialist. There were five reasons why such a person was needed.

1. Occupational Resource Specialists were not able to attend all the meetings at each school in their quadrant so liaison services were needed.
2. It was felt that a school staff member could better interpret the goals and objectives of the program to their fellow staff members.
3. Constant direct communication was needed with the teachers in the building and an in-building teacher could best do this.
4. Orientation was needed to the program on a continuing basis for teachers and students.
5. Due to teaching schedules, teachers were not always available for conferences with the Occupational Resource Specialists.

During this implementation period a number of problems arose. The major problem was lack of familiarization of the program by the classroom teachers. Lesser problems were: confusion over the role of the ORS [e.g. was he a resource person?, classroom teacher?, or a supervisor?]; resistance by the classroom teachers toward the one day mandated period for dealing with career education, separate and distinct from the regular classroom offerings; many instructional materials listed as a resource materials by the curriculum writing team were not available to the classroom teacher when needed to implement the program [e.g. Dictionary of Occupational Titles not available to the teachers in sufficient numbers].

In retrospect if we were to implement the program again the above cited problems would be resolved in the following manner:

Problem	Solution
1. Lack of familiarization of the program by the classroom teachers.	1. Implement a summer workshop with selected representative teachers from each of the secondary schools.
2. Role of the O.R.S.	2. Continuous on-going in-service programs throughout the year in the area of Career Education.
3. Resistance by classroom teachers to Career Education	3. Application of skills of the subject areas must be related to everyday life and this must be re-emphasized through continuous in-service programs.
4. Insufficient resource materials	4. Only available materials would be used by the writing team in planning student/teacher activities.

PROCEDURE NO. 18 - (continued)

Student Population - Classroom Students

Instructional Staff Involved - ORS, Principals, Counselors, Department Heads, English and Social Studies Teachers.

Methods/Techniques - School Meetings

Materials - Curriculum Material Handouts

Instruments - None

PROCEDURE NO. 19 - IMPLEMENTATION OF PROGRAM IN JUNIOR HIGH SCHOOL STUDENTS

Based on the recommendations of the third party evaluator, the ORS staff was charged with the responsibility of selecting a control group for pretesting. The control group was determined by random sampling with grade and academic achievement levels being considerations.

NOTE: This random sample control group crossed 7th, 8th, and 9th grade lines. The materials on which the group was pretested was designed for 7th grade.

The ORS staff administered the pretests on the program objectives to 450 students [approximately 10% of the total junior high school student population.] After completion of the testing, the students and the teachers began working with the Orientation Idea Booklet. It took approximately 20 class periods per subject [English, social studies] to complete the orientation and classroom activities.

One of the objectives of the program is that the community and business will become directly involved in the role of the Syracuse School District in preparing its students for vocational goals. An outstanding example of how this objective is being accomplished is a program held at the Upstate Medical Center [a teaching hospital having at least 400 types of job categories in actual operation].

The objectives of this program are:

1. To determine aptitude, interest and potential abilities through systematic and supervised sampling in a variety of occupations;
2. Stimulate interest in preparing for career work and the needs to develop work habits and attitudes necessary for career training;
3. Help each student to have a better self concept and make assessment of his aptitudes for career planning;
4. Develop vocational alternatives for school programming including work study.
5. Provide learning experiences that will help students make educational decisions in line with what is best for them.
6. To make initial assessments of the student's work readiness.

During the school year 1971-72, the Syracuse Board of Education instituted a new program that will hopefully decrease the number of dropouts and increase the revelant aspects of academic work for individual students. The Guided Occupational Information Program implemented in the junior and senior high schools focuses on prevocational knowledge, skills, attitudes and habits which are prerequisites to good vocational adjustment and will involve each student as he begins to make choices offered to him within the educational system.

One segment of this program is extremely unusual and innovative. The Department of Rehabilitation Medicine of the Upstate Medical Center and the Syracuse City School District have joined together to offer students a realistic work orientation and information program within an industrial complex - that of the Medical Center itself. A pilot project run the year before indicated that certain disadvantaged students who were identified as potential dropouts, having demonstrated an inability to benefit from school programs available to them, did gain vocational skills and appropriate social goals when involved in a specially tailored program at the Medical Center. The current plan will involve approximately 100 selected ninth grade students and expose these students to a variety of occupations on all levels and first hand information regarding training, hours, entrance and advancement steps for these positions. The wide scope of occupations found within the micro city which is the Medical Center range from plumbing and carpentry, to cancer research and administration. Students participating broaden their own knowledge of the world of work and necessarily expand their own knowledge of the world of work and necessarily expand their own vocational choices beyond the general "teacher - nurse - auto mechanic" package.

Selection of students rest with the guidance counselors and occupational specialists in the seven schools participating. A field trip to Upstate familiarizes the students to the program and give them an opportunity to react with the guidance personnel before selection. The program is set up in such a way that the culturally deprived, the under achiever, the "problem child" or the excel student can benefit and often all

PROCEDURE NO. 19 - [continued]

of these may be involved. Groups of 10-12 students are chosen in each school and attend the program half-days for a period of three weeks. Transportation to and from the Medical Center and school is arranged by the Board of Education.

Once in the program each student experiences a series of tests to determine his aptitude, interest and potential ability and once an area begins to emerge counseling and discussion assist the student to identify areas that might be appealing to him. Although some of the program deals with the pen and pencil type testing, the general emphasis is upon actual experiences within individual departments of the hospital. During work assignments students are given the opportunity to see an employee performing his job in an actual setting. Students are encouraged to "rap" with these employees in an effort to determine what qualifications or aptitudes are necessary for that particular job, the monetary renumeration and training required. On some work stations the students actually have a chance to "dig in" and assist the Upstate employees. Placements on the Receiving Dock, Escort Service, Centrex Telephone System, Dietary Department and the Volunteer Office as well as the Billing Department and Medical Records Division are examples of this type of placement. Where the job being performed requires specific training, some supervisor from that department speaks to our students explaining the department and its function, training and equipment and then allows the students observation time. The experiences in Inhalation Therapy, Radiology, Clinical Pathology, Security and Physical Therapy are examples of this type of placement. Each day each student has a different assignment so that he may actually have seen as many as fifteen different occupational skill areas during his stay. Through discussions with the other students further exchange of information results in even widening horizons.

In addition to exploring various skills and visiting work settings, some time is spent in a group situation dealing with attitudes, goals, the availability of "success" and the tools needed to cope with school and the world of work. Role playing is used to show proper interviewing techniques and students are shown how to fill out job applications as well. Towards the end of the three week program the occupational resource specialist from the school is invited to discuss with the students the avenues open to them that will enable them to pursue their goals in the high school programs.

Close liaison with the guidance personnel is important during the program as it keeps the home school up to date on how the individual student is progressing. A meeting is generally held at least once during the three weeks period and a written report is sent at the conclusion of the program.

It is interesting to note that attendance at the Upstate Occupational Information Program is generally much better than the students general school attendance record. Indeed some students have come into "work" on holidays and during vacation time. It is also true that the students considered to be "problems" to the classroom teachers are much more manageable at the Medical Center and to date we have not had any discipline problems to mention.

Having already worked with forty-eight students from four junior high schools it is not too early to say that the program is indeed favorably affecting students recognition of alternatives of occupational planning. If programs of this type could be expanded and backed by occupational specialists in the schools perhaps more students could recognize the importance of school training when viewed from vocational goals. Students, teachers and society all stand to benefit from an educational system that seems more relevant and dynamic. Syracuse City Board of Education and the Upstate Medical Center are working together today to provide what cannot be offered in regular school programs, especially for those young people who will leave school if we do not help them find themselves and a place for them in society.

PROCEDURE NO. 20 - IMPLEMENTATION OF PROGRAM IN JUNIOR HIGH SCHOOL: CONTINUING STUDENT AND STAFF ACTIVITIES

In addition to activities such as the program at Upstate Medical Center described in detail in Procedure No. 19, other important on-going activities are operating. These activities include:

1. Field Trips -
   Opportunities for students to meet with prospective employers and see jobs of which they have become aware, in their natural environment. Trips included visits to such places as Pepsi Cola Bottling Company, Pass & Seymour Electrical Manufacturing Company, Herald-Journal Newspaper Building, Taroson Construction Company, Dey Brothers Department Store, and the Marine Midland Bank.

2. Resource People -
   Speakers are brought into the classrooms to talk about the traits and characteristics of a successful employee. We have had employment counselors from the New York State Employment Service, Personnel Managers from IBM, Bristol Laboratories, and Merchants Bank.

3. Contributions of Materials to the Program -
   Pamphlets, brochures, fact sheets, free filmstrips, labor forecasts, job descriptions, application blanks, tax forms, and social security forms - are just some examples of the many materials contributed to the junior high school program.

4. Career Planner -
   The specific goals and objectives of the junior high school programs are designed to assist each student in making a career choice.

   At the 9th grade level, the student will:

   a] Take the OVIS
   b] Meet with school counselor to discuss the results of the OVIS
   c] Complete a Career Planner. [See Appendix II-22]
   d] Along with his parents, meet with the school counselor to set up a tentative schedule for 10th, 11th, and 12th grade based on the student's post secondary goal.

Student Population - Junior high school students

Instructional Staff Involved - Classroom Teachers, Counselors

Methods/Techniques - Field trips, resource people

Materials - Classroom materials

Instruments - OVIS

PROCEDURE NO. 21 - JUNIOR HIGH SCHOOL WORK EXPERIENCES - OPPORTUNITIES FOR POTENTIAL DROPOUTS

We have a city school district funded sub-program entitled the Cooperative Occupational Program [C.O.P.] which functions as a part of the Guided Occupational Orientation Program.

C.O.P., a work study program for potential school dropouts 15 years of age and older, is designed to enable these students to eventually return to the normal school program and graduate, or to obtain satisfactory full time employment if they should leave school. The program combines work experience and daily orientation session under the supervision of a coordinator. It is expected that the opportunity to become familiar with the demands of the working world and to explore the appropriate adjustments to these demands under the supervision of a trained coordinator will develop in these students those habits, attitudes, and skills necessary for success in school and on the job.

C.O.P. students most often attend school in the morning and are employed in the afternoon. In addition to the required daily orientation class, pupils attend other classes appropriate to their ability and needs in the regular school curriculum in the morning hours.

Students are placed in tax supported agencies, e.g. the school system itself where stipends are paid from local school district funds. Work for private employers is not so reimbursed, but is paid for by the private employer. When possible, a student is transferred to private employment which allows another student to take his place in the funded program.

One-hundred eleven [111] students have been involved in the C.O.P. program - sixty-four [64] students are still active in the program and forty-seven [47] have terminated. Two students are recorded as dropouts, however, in both cases they have been placed in private appointment. An attempt will be made this coming fall to involve the two individuals in attending night school. The terminations indicated means that the students are not getting any further experience at a "work site" but are still attending school and continuing their education.

Student Population - 111 junior high school students.

Instructional Staff Involved - Coordinator/Teacher

Methods/Techniques - Individual and group counseling - classroom participation - on-the-job training

Materials - Classroom materials

Instruments - [None]

PROCEDURE NO. 22 - EXEMPLARY PROGRAM: SENIOR HIGH SCHOOL PRE PROGRAM ACTIVITIES IMPLEMENTED

1. The Role of the Occupational Resource Teachers

The thrust of emphasis on the senior high school level was to prevent youth from dropping out of school before they were employable and to provide an attractive program for youth out of school who are unemployed or underemployed. This large segment of our youth usually fall into the category of disadvantaged or disaffected.

The proposal states that the need for identifying such students and providing educational experiences to improve their self concept, scholastic interest and occupational competence is most vital. This problem demands top priority in action in finding ways in reaching these students and providing them with individual counsel and help. The work experience concept in education has been proven to offer a challenging and effective means of providing stimulus for youth in or out of school to continue their education.

The Occupational Resource Specialists were initially identified as being responsible for the counseling and job placement of the target population mentioned above.

Upon review of the junior and senior high school objectives, the third party evaluator [Educational Services, Inc., Waco, Texas] stated that they felt our concepts were too narrow at the senior high school level.

Further discussion led us to a re-definition of the role of the Occupational Resource Specialist and is described in Procedure No. 16 - duties of the Occupational Resource Specialist.

The objectives as outlined in the proposal regarding the target population are being met through Occupational Resource Teachers. These teachers are funded from sources other than this project but are fulfilling job duties as described and outlined by the project staff. Under the direction of the director of Occupational and Continuing Education [Project Director] the Occupational Resource Teachers will:

a. Interview potential dropouts as referred by school and dropouts invited in for interview, and explore with each student alternative ways of involving students' interest and participation in an acceptable vocational program.

b. Continuously help each student meet his individual needs through the use of all available school and community resources.

c. Interest and involve students in the General Work Experience Program or an alternate Work Study Program. Work experience seems to be the best means of involving most dissaffected youth.

d. Conduct vocational readiness classes and career planning guidance for work study students.

e. Be an influencial liaison between student, school, home and employer.

f. Provide continuous support and follow-up as needed for each student served.

g. Provide personal and group guidance leading to improved self concept, orientation and information relating to the world of work.

h. Act as a liaison between the student and his teachers in order to insure that instruction is related to work experience.

i. Communicate with the parents of youth who have identified as needing a work related program. Parents must be informed of the nature and purpose of the program, and encouraged to support their child's involvement in the program.

PROCEDURE NO. 22 - [continued]

2. Activities of the Occupational Resource Specialist at the Senior High Level

a. Personal meeting was held with the principals and counselors at our four [4] high schools. The objectives of the meetings were to -

-introduce themselves
-identify their roles and responsibilities
-initiate pre-program activities

b. Initiation of pre-program activities included dissemination of OVIS results to the students at the 10th, 11th, and 12th grades [the previous semester, in anticipation of the Occupational Resource Specialist involvement at the high school level, the OVIS was administered at the 9th, 10th, and 11th grades].

The OVIS dissemination activity involved small group and individual meetings with upwards of 1,200 students by each of the Occupational Resource Specialists. The high school counselors had been previously oriented to this activity, so they would understand the reasons why some students requested program changes.

It is anticipated that future OVIS dissemination will become a regular duty of the high school counselors.

One of the outcomes of working in the schools was the development of a monthly newsletter by the O.R.S. directed toward students, entitled "The Career Scene." [Appendix II-22] The contents of the newsletter consisted of information dealing with the introduction and description of the role and function of the O.R.S., role and use of the OVIS, highlights regarding the employment situation in the greater Syracuse area, statistics relative to students who have graduated and dropped-out, work-experience opportunities available for students at the high school level, work opportunities for students who have not completed a college program, monthly highlights of a particular job or career, and information to students as to what was available in their schools in the area of career education.

Student Population - 10th, 11th, and 12th grade students. [7,000 students]

Instructional Staff Involved - Occupational Resource Specialists, Occupational Resource Teachers, Principals, Counselors, Teachers

Methods/Techniques - Meetings [small group and individuals]

Material - "Career Service" newsletter

Instruments - OVIS

PROCEDURE NO. 23 - ORGANIZING JOINT ACTIVITIES WITH BUSINESS, INDUSTRY AND GOVERNMENT, AT THE SENIOR HIGH SCHOOL LEVEL

An important part of the initial implementation of career education at the Senior High School level is to involve local business and industry.

The first program involves IBM. Following is a description of this activity:

1. a] IBM contracted the counseling staff of one of our high schools concerning the possibility of holding a six [6] week program on career orientation for minority group business - education students.

   b] A meeting was held with the Occupational Resource Specialists and the counseling staff of the high school. It was decided to accept the opportunity from IBM. Student selection and program implementation would be coordinated by the Occupational Resource Specialist.

   c] Recognition of the program value by the school administration led to ¼ unit of credit being granted for completion by the students of the program. The program was recognized as a bonafide mini course.

   d] The main activities of the program [course] which was held at the IBM facilities included -
      1. Exposure to machines and business forms
      2. Opportunities to talk with IBM office and field workers
      3. Oral presentations by members of the business profession
      4. Resource people were brought in from allied area [e.g. banks, large industries, retail outlets, New York State Employment Services] to give presentation and answer questions

   e] Funding of the program and student transportation to the IBM facility was assured by IBM. Seventeen [17] students participated in the program.

   f] Outcomes:
      1] IBM indicated it would continue the program following a period of evaluation concerning the activities and accomplishments.
      2] Based on recommendations of an on-site evaluation team from the U.S. Office of Education, it was recommended that participants not be limited to those pursuing a business education program.
      3] The students appear to respond more readily to a program of this type when it is held at the business facility as opposed to holding it at a school.
      4] IBM identified that the concept was too narrow regarding curriculum content and agreed to broaden it especially in the area of student involvement, i.e. opportunities for "hands-on" activities.

2. The second business contact involved the Shell Oil Company which offered to our district a pre-packaged program entitled, Automotive Professional Training.

   a. Automotive Professional Training is an occupational education program designed to provide training and work experience for disadvantaged high school juniors and seniors who are interested in careers in the automotive professions. The Shell Oil Company has made available numerous pieces of equipment, training aids, and personnel. The school district is providing the facility and an instructor. Students are receiving a variety of learning experiences in the use of tools and equipment, product knowledge, and sales techniques commonly found in the service station industry.

   b. The Shell Oil Company, through its regional manager, will provide work experience and job placement of graduates in its service stations within Syracuse and Onondaga County. The program provides an opportunity for a few disadvantaged senior high school students to explore and receive training in a vocational area not offered in the regular school.

It is hoped that some students will become interested in making a career in some phase of automotive sales and service or advanced post-secondary training at a technical institute or college.

The program consists of instructional training in the following general areas:

1. Island Sales -
   Techniques used in providing the customer with the most efficient services and products relating to his vehicle.
2. Motor Oils and Lubricants -
   Information on the formulation, application and installation of oils and lubricants.
3. Air, Oil, and Fuel Filters -
   The design, construction and applications of the various types of filters.
4. Batteries -
   The function, design and construction of batteries and methods of testing and charging.
5. Salesmanship -
   Customer relations as they apply toward product and service sales.
6. Accounting - The E.K. Williams approach to records, inventories, profit and loss statements as they relate to service station management.
7. Credit Cards -
   Procedures related to credit and credit sales.
8. Car Care -
   Tire repairs and mounting, wheel balancing, brakes and basic engine tune-up.

Due to the size and scope of the automotive service and related industries, a brief list of occupational opportunities available to participating students follows:

1. Island Sales
2. Mechanic
3. Service Station Manager
4. Sales Representative: parts, equipment, accessories
5. Automotive Sales
6. Auxiliary repairs and services

Instructional materials provided by the Shell Oil Company's Dealer Management Development Program will be followed with supplementary materials made available by other firms involved in the automotive industry.

3. The New York State Employment Service has assigned two [2] full time counselors to the Syracuse City School District for counseling and job placement of graduating seniors in the four [4] high schools.

   The employment service counselors, the sixteen [16] high school counselors, the Occupational Resource Specialists, Occupational Resource Teachers work as a team to provide to the students information regarding job opportunities and job placement. Some of the activities engaged in by the team are:

   1. Setting up field trips to places of business and industry.
   2. Bring resource people to the schools - e.g. personnel managers to inform students of business and industries expectations for their employees.
   3. Provide resource materials to school libraries for student in-depth exploration of specific careers.
   4. Provide to the classroom teacher instructional materials pertaining to career education that will be incorporated into the curriculum.
   5. Provide individualized and group counseling to high school students in the area of career education.

PROCEDURE NO. 23 - [continued]

Student Population - Interested junior and senior high students

Instructional Staff Involved - Occupational Resource Specialists, Counselors, Teachers

Methods/Techniques - Field trips, on-site work experiences, individual and small group counseling

Materials - Instructional and classroom materials, on the job materials

Instruments - [None]

PROCEDURE NO. 24 -IMPLEMENTATION OF OCCUPATIONAL HORTICULTURE PROGRAM FOR SENIOR HIGH SCHOOL STUDENTS

Previous to the Guided Occupational Orientation Program, no recognition had been given to the Agricultural Area by our urban school system. In giving consideration to the fifteen [15] "Occupational Clusters," outlined as a result of the U.S. Office of Education's Career Education guidelines, an occupational horticulture program was designed as follows:

Occupational Horticulture Program

The objectives of this program are:

- to develop an ability to work safely with equipment and hand tools
- to develop an understanding of the educational and occupational opportunities in the field and to provide information relative to the nature of the occupation and qualifications needed for entrance.
- to develop those traits necessary to become successful in the field.

Place - Meet at Central Tech morning or noon, and then proceed to work or study site - Onondaga Greenhouse or one of the many city parks.

Requirements - A genuine interest in horticulture or landscaping
Grades 10-11 - a.m. tentative
Grade 12 - p.m. tentative

Credits - 2 credits

TOPIC	CONTENT
A. Orientation to Horticulture [1 week]	
1. Job classifications	-types of jobs available
2. Job qualifications	-schooling -physical requirements
3. Advance education	-time requirements
B. Leadership and personality development [1 week]	
1. Personality traits that produce success	-getting along with others -developing good work habits -interest in work performed
2. The role of a member in an organization	-types of organizations -duties and responsibilities -membership -leadership
C. Soil Science [3 weeks]	
1. Formulation of soils	-materials involved -processes -soil profiles
2. Physical composition	-properties -types -soil temperatures -soil water -organic matter
3. Characteristics of soils	-texture -depth -permeability -slope

PROCEDURE NO. 24 - [continued]

TOPIC	CONTENT
4. Soil Analysis	-chemical composition of soil -soil sampling and testing -effect of organic matter -liming
5. Fertilizers	-forms of nutrients -time of application
D. Mechanics [5 weeks]	
1. Hand tools	-identification -use and operation -maintenance -storage
2. Small engines	-types and uses -cleaning and adjusting -maintaining -operating -using safety precautions
3. Safety	-in the shop or laboratory -machinery and equipment
E. Equipment - Operation [3 weeks]	
1. Defining hazardous occupations	-hazards involved -violation of safety rules -Federal list of hazardous occupations
2. Training for occupational safety	-shields -operating instructions -proper speed -safety equipment and clothing
3. Correct procedure for equipment operation and maintenance	-owner's manual -experience -decals on equipment
4. First aid treatment	-first aid treatment course -what to do in an emergency -coordinating with first aid courses
F. Careers in ornamental horticulture [1 week]	
1. Landscaping and nursery trades	-developing plans -transplanting -layering sod -identification of common plant materials
2. Greenhouse crop production	-methods -flowers frequently produced -common structures used

PROCEDURE NO. 24 - [continued]

TOPIC	CONTENT
3. Floral design and retailing	-various types of arrangements -techniques essential to basic arrangement construction
G. Flowers and shrubs [20 weeks]	
1. Identification	-names -uses -growth characteristics
2. Planting	-kinds to plant -when to plant -how to plant -design layouts
3. Protection	-common insects -common diseases -uses of insecticides -use of fungicides -equipment to use -safety involved
4. Care	-pruning -thinning -fertilizing
H. Greenhouse [4 weeks]	-planting -transplanting -pinching -temperature control -humidity control -watering -feeding

I. Work Experience Opportunities

In cooperation with the Syracuse Parks and Recreation Department the students use city greenhouse facilities and have the responsibility for the maintenance and beautification of at least six [6] small parks, and various other public funded properties.

Expected First-Year Outcomes

1. Thirty students will complete program
2. Following counseling students will:
   [a] Enter directly into local employment situations
   [b] Continue education at a selected two year school followed by employment
   [c] Choose to enter either two [2] year Ranger school program offered by the State University of New York or enter four [4] year forestry program offered by the State University of New York - and then enter the employment field.

PROCEDURE NO. 24 - [continued]

Student Population - Thirty [30] students

Instructional Staff Involved - One [1] classroom teacher

Methods/Techniques - Explanation, application of classroom skills

Materials - On the job materials

Instruments - None

PROCEDURE No.25 - IMPLEMENTATION OF THE OCCUPATIONAL LEARNING CENTERS

The City of Syracuse, like other urban centers encounters the problems of serving the needs of inner-city youth. Many of these students do not accept or respond to conventional educational methods and programs. The reasons for this critical situation are well known but the solutions to these problems are challenging and difficult to implement. We must find ways of reaching and serving these disaffected youth. The number of dropouts, the number of failures students experience in school, behavioral patterns which are disruptive and apathetic, and the large number of youthful offenders - all of these demand immediate and direct action. Society cannot afford to have youth drop out of school or even remain in school for social reasons only as mental dropouts, because they are unprepared to adjust to today's complex social and economic life. The Occupational Learning Centers were established as an alternate school program designed to serve the unmet needs of these most deprived secondary youth.

We decided to reach some students before they went to high school, and to offer them a program in which they could begin to succeed. In the summer of 1970, contingent upon the funding of the GOOP, an Occupational Readiness Program was offered to 30 very disadvantaged students entering senior high school in September. All these students desperately needed help with basic academic skills and needed occupational guidance and information to make even the most basic decisions about career choices. Everyone of these students continued their education in the fall and most of them entered the Occupational Learning Center program.

The center staff consisted of two interdisciplinary teachers [CORE] and a vocational counselor responsible for a group of thirty-five students. The interdisciplinary teacher was responsible for instruction in the basic academic skills using an individualized approach. Much of the commercial curriculum materials were found to be unsuitable. The skill was appropriate but the content was inappropriate. e.g. available reading material for 16 year olds, working at a third grade reading level contained stories and pictures that would appeal to only a third grade child. This identification necessitated the employment of a curriculum writer. The writer spent one month at the center acquainting himself with the students and their interests. Based on his experience in the center he was able to write occupationally oriented skill materials which were interesting to the students. The need for interesting curriculum materials is on going, necessitating continuous writing.

The Learning Center was conducted as an Annex Program for Central Tech High School in a business building across the street. The student continued to be considered members of their original high school for vocational training and extra-curricular activities. This brings about greater student and parent acceptance of our program because it enables the student to take part in athletics, graduation and other related activities with his peer group. Students received an individualized program of instruction that was occupational oriented rather than academic. Emphasis was concentrated on the basic skills of communication, computation, citizenship and scientific awareness. Each student contracted for a minimum program of eight hours of core instruction and twenty hours of work or training experience each week. Each student began learning at his present level of achievement. His level was established by a thorough program of pre-testing. Throughout the program, the students were allowed to advance as rapidly as his abilities allowed; or as slowly as they necessitated. The curriculum thus embodied continuous progress approach.

Due to the wide variety of student schedules that arose from such a program, the Center was open for instruction form 8:00 a.m. until 9:00 p.m. This allowed for flexibility in scheduling or work experiences and also allowed the students to receive instruction when most convenient to him, enlarging the likelihood that he would attend. The students who found a significant work experience were encouraged to work full time and attend the Center in the evenings.

OCCUPATIONAL COUNSELING

The objectives of this part of the program are essentially threefold:

1. To guide students through the necessary career development stages.
2. To assist students in growing psychologically and socially.
3. To prepare students for the world of work.

PROCEDURE NO. 25 - [continued]

Vocational guidance and intensive personal counseling combined with work experience and/or vocational training help students better understand themselves and all that is involved in working and in career choices. We have learned that the job itself or vocational training is not sufficient in preparing deprived youth for the world of work. This preparation is a developmental process requiring weeks, months and in some cases two or three years of guidance and support. Most students must have a job at least to earn money and to give them a high level status within their own peer group. The job serves as a real encounter with the adult world giving the student the feeling that he is contributing something worthwhile, that he is using his time constructively. Carefully selected jobs offer the kind of experiences which initiate learning and social development. When problems develop on the job the student receives the support needed to handle himself intelligently. He receives daily intensive counseling necessary to help him discover what kind of person he is and what kind of work will fulfill his personal needs.

Occupational information is planned as an integral part of the interdisciplinary curriculum so that instruction is related and relevant. Field trips to local businesses and industry provide the opportunity for discussion about particular job families and specific kinds of jobs. Students are exposed to as many different occupations as possible through discussion and group sessions.

We recognize the contribution made by many people in busines, industry and community agencies in sharing with us the responsibility of helping to educate our youth. Their understanding and cooperation made it possible for students to be realistically involved in the world of work through training, work experience and occupational orientation.

There are presently three Occupational Learning Centers in operation. Two centers are located in office buildings and one at a church.

Student Population - 105 senior high school students

Instructional Staff Involved - 9 Teachers and Counselors

Methods/Techniques - Individual and small group, counseling and teaching, job placement

Materials - Classroom instructional materials

Instruments - [None]

PROCEDURE NO. 26 - UTILIZATION OF THE RELATED WORK STUDY PROGRAM IN THE SYRACUSE CITY SCHOOL DISTRICT

Any career education program should include a practical work experience. At present the school district provides eight [8] senior high work-study programs.

They are described as follows:

1. VOCATIONAL INDUSTRIAL COOPERATIVE DIVERSIFIED OCCUPATIONS PROGRAM - All High Schools

Total number of students participating*	53
Number of students who successfully completed**	44
Number of employers involved	30
Total amount of money earned by group	$76,103.00

This program provides on-the-job training in areas of interest not provided by the school in its shops or laboratories, especially for juniors and seniors. An outline covering the skills and other information to be included in training is developed in cooperation with the employer. Two students may fill one full time job or individual students may be scheduled on a half day basis.

2. OFFICE OCCUPATIONS WORK EXPERIENCE PROGRAM - OFFICE CO-OP PROGRAM - Central High

Total number of students participating*	138
Number of students who successfully completed**	92
Number of employers involved	52
Total amount of money earned by group	$79,457.00

The main objective of this program is vocational training and application of skills learned in school. This program provides related on-the-job office experience for juniors and seniors enrolled in shorthand, bookkeeping and office practice. Students are usually placed on a half day basis.

3. PROGRAM IN OFFICE SKILLS - Central Tech

Total number of students participating*	32
Number of students who successfully completed**	27
Number of employers involved [MONY-Niagara Mohawk]	2
Total amount of money earned by group	$40,829.00

Two companies, MONY and Niagara Mohawk, are committed to take 30 disadvantaged senior students each year. Students receive special business training in school. While one group is working, the other group is in school on a half day basis. All seniors are offered full time employment after graduation.

4. WORK-A-WEEK [OFFICE OCCUPATIONS] - Corcoran High School

Total number of students participating*	21
Number of students who successfully completed**	17
Number of employers involved	5
Total amount of money earned by group	$22,508.00

This is a special business program where half the students work a full week and the other half are in school. Then the schedule is alternated.

5. SALES OCCUPATIONS WORK EXPERIENCE PROGRAM [DISTRIBUTIVE EDUCATION CO-OP] - Central Tech, Corcoran, Henninger and Nottingham High Schools

Total number of students participating*	161
Number of students who successfully completed**	149
Number of employers involved	131
Total amount of money earned by group	$169,857.00

The main objective in this program is on vocational training and application of distributive education skills. This program provides related on-the-job experience in sales and merchandising for juniors and seniors enrolled in these business courses. Students are usually placed on a half day basis.

6. GENERAL WORK EXPERIENCE PROGRAM

Total number of students participating*	198
Number of students who successfully completed**	155
Number of employers involved	45
Total amount of money earned by group	$70,650.00

This program is primarily for disadvantaged students and/or those who are identified as potential dropouts. Students may be placed on any basis with their school program modified accordingly. This is a basic program for students 16 years of age and up.

7. SPECIAL EDUCATION WORK STUDY PROGRAM - All Secondary Schools

Total number of students participating*	131
Number of students who successfully completed**	97
Number of employers involved	76
Total amount of money earned by group	$55,490.00

Students are in Special Education Program and need experience in the world of work.

8. VOCATIONAL EDUCATION WORK STUDY PROGRAM

1970 Summer Program number of youth served	132
Feb.-June 1971 number of youth served	259

This is a vocational work experience program funded under the 1968 Vocational Education Act Amendments. The purpose of this program is to provide financial assistance for vocational students who need this support to continue in school or for clothes, lunches, school activities and recreation. Student workers may be placed in our City School District departments or any fully taxed supported public institution of the City, State or Federal Government. Workers are limited during the school year to 15 hours per week or a maximum of $45.00 a month, and a total of $350.00 in any school year.

This is a very beneficial program because it provides sheltered work experience opportunities to supplement what is available in the private sector of local business and industry. This program also helps to develop student's work habits and skills before they are placed in part time jobs with private employers.

PROCEDURE NO. 26 - [continued]

Our City School District received sufficient funding in the last school year to serve almost 400 secondary youth. It should be emphasized many of these students received encouragement and support to remain in school as well as become more interested in developing themselves socially and educationally. We hope our Vocational Education leaders will encourage Congress to give more consideration and support to this particular Vocational Program which can do so much for so many who need this type of educational service.

* Each student is supervised by a coordinator or vocational counselor who is the liaison between the employer and school.

** To clarify this statement whenever used: This means students who qualified for school credit. Students who do not work the required number of hours whether due to lack of employment, school schedule and other reasons, are not included.

Summary of All Programs - 1970-71

VOCATIONAL INDUSTRIAL COOPERATIVE DIVERSIFIED OCCUPATIONAL PROGRAM
OFFICE OCCUPATIONS WORK EXPERIENCE PROGRAM
SALES OCCUPATIONS WORK EXPERIENCE PROGRAM
GENERAL WORK EXPERIENCE PROGRAM
SPECIAL EDUCATION WORK STUDY PROGRAM
VOCATIONAL EDUCATION WORK STUDY PROGRAM

Total students who participated*	988
Number of students who successfully completed**	575
Number of employers involved	372
Total Amount of money earned by students	$589.136.16.

Student Population - 988 students

Instructional Staff Involved - Classroom teachers, counselors

Methods/Techniques - Individual and small group

Materials - On-the-job and classroom materials

Instruments - [None]

PROCEDURE NO. 27 - CONTINUATION OF CAREER EDUCATION PROGRAMS INTO POST SECONDARY INSTITUTIONS

A method of utilizing community educational agencies to develop articulation between high school and post secondary programs is being attempted through project P.A.C.E. [Programs for the Advancement of Career Education].

The Onondaga P.A.C.E. Project is a cooperative education project jointly sponsored by Onondaga Community College and the Syracuse City School District, for the preparation of students for eventual careers in engineering technologies, medically related fields, executive secretarial services and retail business management.

P.A.C.E. is aimed at high school students of average or better than average ability capable of at least a two-year college program. Many of these students may not be college bound because of lack of interest in a college education [or presently indecisive], poor motivation or underachievement. These students may be found in the middle or lower third of regents classes or in the upper third of non-regents sections. They may have unrealistic goals, inconsistent class work and sporadic attendance. P.A.C.E. offers students of college ability but whose prospects for college are dim, special attention to motivate and prepare for career programs at the two-year college level.

The following P.A.C.E. programs are now in operation at the listed schools:

1. Paramedical Services — Henninger, Nottingham, and Central Tech
2. Pre-Engineering Technology — Henninger
3. Executive Secretarial — Henninger, Corcoran
4. Retail Business Management — Nottingham

1. Paramedical Services
   The Paramedical Program centers around an interdisciplinary presentation of science [biology, physics and chemistry] and three years of applied math and English. The teachers work as a team, utilizing a project's approach focused on the various sciences. The remainder of the students' high school schedule is determined by the usual requirements and elective subjects.

   Successful completion of the high school paramedical program leads directly to admission to one of the following three degree programs at O.C.C.: Dental Hygiene, Registered Nursing, Medical Technology. Other medically related programs available to high school graduates in the Syracuse area include 2 year hospital programs in Inhalation Therapy, Physical Therapy, and X-ray Technology or private school courses in medical or dental assisting.

2. Pre-Engineering Technology
   The engineering technology program leads to admission to a specially constructed electro-mechanical program at O.C.C. The type of student who may be interested in this program may show strong interest in electricity, mechanics, industrial arts, and physical sciences. The three year high school portion of the technology program centers around an interdisciplinary presentation of science, math, English and industrial arts.

3. Executive Secretarial
   The Executive Secretarial program is a two year high school program preparing students for one of three options within the executive secretary curriculum at O.C.C. The three options are legal, medical and technical secretarial. The executive secretarial program centers around an interdisciplinary presentation of shorthand, typing, English, and office practices.

4. Retail Business Management
   The Retail Business Management program is likewise a two year high school program. The first year of the program centers around retailing plus applied English, math, and some studies. The second year is comprised of merchandizing plus English, accounting, and business law. This program leads to a two year college curriculum preparing mid-management personnel in the retail business field.

PROCEDURE NO. 97 - (continued)

Student Population - 200 senior high school students

Instructional Staff Involved - Classroom teachers

Methods/Techniques - Interdisciplinary approach

Materials - Classroom materials

Instruments - None

SUMMARY OF PROCEDURES

The guided Occupational Orientation Program was implemented at various educational levels: elementary, junior high school, senior high school and post-secondary. In effecting the implementation of the program a number of procedures were found to be common to all educational levels, common to more than one level, and/or unique to one level.

PROCEDURES COMMON TO ALL LEVELS

Some of the procedures that were found to be common to all levels were:

1. Selection of Project Staff
2. Meeting with selected school staff to orient them to the program.
3. Providing consultative assistance to the committed schools.
4. Contacts with business and industry to involve them in the program.

PROCEDURES COMMON TO SEVERAL LEVELS

Some of the procedures that were found to be common to more than one level were:

1. Selection of writing team to develop curriculum (elementary and junior high).
2. Selection of resource materials and equipment (elementary and junior high).
3. Selection of Occupational Resource Specialists (junior and senior high).
4. Making available work-experience opportunities for potential dropouts (junior and senior high).
5. Participation in F.A.C.E. program (senior high and post-secondary).

PROCEDURES UNIQUE TO ONE LEVEL

1. Development of Skill Trainer Van and Career Center (elementary)
2. Summer Workshop (elementary)
3. Establishment of Occupational Learning Centers (senior high).
4. Implementation of Occupational Horticulture Program (senior high).
5. Selection of Occupational Resource Teachers (senior high).

STATISTICAL SUMMARY

Schools	Grades	No. of Students	No. of Classroom Teachers	School District Supportive Personnel	Non-School District Supportive Personnel
23	6-8	1750	60	38	1
7	7-9	4500	45	42	1
4	10-12	7000[1]	0	40	8
34		11,250	105	120	10

[1] 2,000 Non-public school students, 5,000 public school students

6. [d] RESULTS AND ACCOMPLISHMENTS OF THE PROJECT

6. [d] RESULTS AND ACCOMPLISHMENTS OF THE PROJECT

Following is a list of the major results and/or accomplishments of the project. They are listed by levels, i.e., Kindergarten through 5th grade, 6th grade, 7th through 9th grade, and senior high.

Kindergarten to 5th Grade Level

Initial thrust of the project for the first funded year was the implementation of curriculum and program activities beginning at the 6th grade level. No formal thrust was made in the kindergarten [K] through five [5] level.

6th Grade Level

Program Components To Meet Project Objectives	Major Results/Accomplishments
1. Pre-Program Classroom Activities	a. Students developed bulletin board displays. b. Students designed and made objects related to career fields in which they had an interest, e.g., posters, collages, book reports c. Students obtained Social Security cards d. A number of students not previously motivated to imaginative and/or creative activities reacted favorably, e.g., they made models, set up bulletin boards
2. Teacher Orientation-Program Activities	53 teachers, 13 principals, and 6 instructional specialists at the 23 participating schools took part in project orientation sessions
3. First Formal Classroom Activity	1,750 students took part in a two-week orientation program which introduced them to the "World of Work", e.g., vocabulary, labor, Social Security.
4. First-Hand Exposure to a Variety of Occupations	All 1,750 students participated in two consecutive field trips to the Career Center.
5. Career Exploration Activities	All 1,750 students completed a minimum of two [2] Individualized Career Studies [ICS]. Student could choose from twenty-three [23] ICS'S written on three [3] reading levels. During this period students took an average of two [2] field trips related to their career interests. They also interviewed people from business and industry in the classroom. The students developed scrapbooks, made independent and/or group reports, and were involved in group activities related to common career interests.
6. "Hands-On" Experiences Related to the Student's Occupational Interests	The opportunity for this activity was made available by vocational experience skill labs located in the Skill Trainer Van [STV]. All 1,750 students have participated in six [6] hours of intense "hands-on" experiences in activities involving manipulative skills, e.g., operated calculators, took blood pressure, and built a telegraph.

[6th Grade Level Continued]

Program Components To Meet Project Objectives	Major Results/Accomplishments
7. Active Involvement of Syracuse Area	Forty-seven [47] local businesses and industries are participating in the project. Twenty-six [55%] of these developed or assisted in developing booths at the Career Center. [See Procedure No. 8] Twenty-four [51%] visited school classrooms as part of the program. Fifteen [32%] allowed field visits by classes to their business or industry.

Other specifically identified results of the philosophy and activities of the project are:

a. Successful implementation of individualized instruction in classrooms where formerly little or no individualization took place.

b. Teachers and principals observed students, previously identified as under-motivated, taking an enthusiastic attitude toward school. e.g., attendance increased in many cases.

c. Students who previously did very little reading were observed by the teachers taking a renewed interest in reading, e.g., they read books and pamphlets about careers in their quest for information concerning their career interest.

Junior High Level [7th-9th Grade]

Program Components to Meet Project Objectives	Major Results/Accomplishments
1. Introduction of Career Education Into the Curriculum	Ninety-five [95] English and social studies teachers at the junior high level introduced career education as part of their courses of study. In varying degrees, they used the curriculum materials developed by the junior high school writing team during the summer of 1971.
2. Field Trips to Business and Industry	At least 1,500 students participated in field trips related to the exploration of careers.
3. Opportunities For Out-of-School Experiences Related to Occupational Orientation	All seven [7] participating junior high schools have students involved in the Upstate Medical Center Occupational Orientation Program.
4. Career Planning Preparation	Indications are that, through the implementation of the program the students are better able to relate the skills of the subject areas [English, social studies] to their career plans.

The Board of Education upon receiving orientation to the project philosophy and proposal, recognized the merits of career education at the junior high level.

As a result of the early success of the Elementary Guided Occupational Orientation Program and the curriculum materials produced by the junior high writing team the Board of Education has granted course approval to the Guided Occupational Orientation Program at the junior high level. Every student from grade 7 through 9 is to study career orientation and should spend approximately as much time on career study as he does in any one of his other courses. The student has to study career orientation in all of the four [4] areas to which he is assigned. One unit of credit will be granted 9th graders for the career study course. Regular school credit will be granted to 7th and 8th graders.

Senior High Level [10th-12th Grade]

Program Components to Meet Project Objectives	Major Results/Accomplishments
1. Preliminary Coordination of Work Experience Programs	Through individual and group counseling by the Occupational Resource Teacher as well as the publication of the Career Scene, students are more aware of work experience programs.
2. Occupational Horticultural Program	The project identified the lack of an occupational education program in the field of agriculture. The project filled this need by developing and establishing an Occupational Horticultural Program at the senior high level.
3. Activities of the Occupational Resource Teachers	a. Identified 250 dropouts or potential dropouts. The Occupational Resource Teachers- - interviewed them regarding their needs - reviewed their schedules with counselors, teachers, and principals - prepared students for employment by giving students orientation to the world-of-work - secured part time employment for all of them - continued supervision and counseling while the students were on the job. As a result of these activities, the students are continuing their high school education with some changes in schedules to allow them to work part time.
4. Activities at the Occupational Learning Centers	One hundred five [105] students are continuing their education at these centers. These students would otherwise never have completed high school or received job training.
5. Continuation of the Career Education Programs Into Post-Secondary Institutions	Two hundred [200] senior high students are participating in a five year program three years of which are in high school. The remaining two, in the local community college. Students successful completion of high school programs guarantees entrance into the community college.

6. [e] EVALUATION OF THE PROJECT

PLEASE SEE VOLUME II WHICH HAS
BEEN PREPARED BY THE THIRD PARTY EVALUATOR,
EDUCATIONAL SERVICES, INCORPORATED, WACO, TEXAS

6. [f] CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

ACTIVITY	CONCLUSION	IMPLICATION	RECOMMENDATION
ELEMENTARY			
A. Commitment of school administrators to the project.	A. The success of a project depends on whether school administrator is committed to it.	A. If you do not have support of administrators, you will not get the support of the teachers.	A. Secure support of each school administrator prior to attempting implementation of project.
B. Criteria for selection of staff, e.g., project coordinator	B. The staff must be made up of people with background and experiences which meet the objectives of the program.	B. Do not hire people for program of this nature whose backgrounds are limited to educational training and	B. Hire people for career education program who have demonstrated success in both business and education.
C. Dissemination of the philosophy of the project to administrators and teachers	C. When the program was implemented in the schools, the teachers were more responsive to it because they had had a part in its development.	C. Teachers who are not brought in on planning of programs generally do not favor the programs.	C. Involve teachers in planning any career education program.
D. Materials were developed which the student could use with an absolute minimum of teacher guidance.	D. We found that many teachers had limited business and industrial experiences. Therefore materials had to be developed which the student could use with a limited amount of teacher help.	D. Cost of teacher workshops to train teachers in career education is much more expensive than developing the materials.	D. Select teacher writing teams to develop individualized instructional materials for career education programs.
E. Development of facilities to provide for - 1. exposure to a variety of occupations and - 2. "hands-on" experiences related to those occupations	E. Utilizing separate facilities e.g., Skill Trainer Van, proved the validity of the original concept as outlined in the proposal.		E. Programs of this type need separate facilities because of the unique activities in which the students engage
F. Involvement of business and industry	F. Involvement of business and industry afforded the program and the students facilities, materials, and opportunities that might otherwise not be available.	F. To make career education successful, students must have personal contact with the personnel and facilities of business and industry.	F. Every effort possible must be made to involve business and industry directly in programs of this type.

ACTIVITY	CONCLUSION	IMPLICATION	RECOMMENDATION
[Elementary continued]			
G. Teacher orientation and evaluation of curriculum [summer workshops]	G. Teachers should have opportunity to use, review, and evaluate curriculum materials prior to implementation.	G. Teachers should be familiar with material content and its utilization.	G. Teachers should be familiar with and have opportunity to evaluate all classroom materials they are expected to use.
H. Teacher orientation to program	H. The extent of teacher orientation allowed for implementation of program with minimum problems encountered. The procedure of orienting on an individual school basis proved most successful.	H. The teachers felt they were getting more individual attention at this type of orientation as opposed to a multi-school meeting.	H. Teachers should be oriented to career programs on an individual school basis. Every school has unique problems and it is too difficult to deal with these problems in a multi-school meeting.
I. On-going evaluation of curriculum materials by teachers and students	I. First efforts of the writing team, e.g., L.A.P.'s, proved to be inadequate. Upon teacher recommendations a new format was developed, e.g., I.C.S. I.C.S. has proven to be most successful.	I. There was willingness on the part of the project staff to respond to teacher-student suggestions.	I. After materials are developed and piloted it is necessary to reassess their effectiveness and make whatever changes are deemed necessary by staff and students.
J. Dissemination of information regarding the program	J. The extent of the use of available news media, and presentations before school and community agencies generates positive support and involvement toward the program.	J. When cooperation and assistance from the community is solicited a more positive response is forthcoming.	J. Every opportunity to disseminate information of what is going on in the program should be used to advantage.
JUNIOR HIGH SCHOOL [Activities A and B alone are applicable to the junior high school]			
K. Dissemination of Philosophy of the project to administrators and teachers by the O.R.S. personnel.	K. Dissemination, orientation and implementation were concurrent. Therefore, teachers at the junior high school level did not receive prior opportunities for in-servicing or participation in program planning. The result was teacher reluctance to accept	K. Teachers who are not brought in initially in the planning of the program do not favor the program.	K. Involve the teachers in planning of any career education program.

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ACTIVITY	CONCLUSION	IMPLICATION	RECOMMENDATION
[Junior High continued]	K. [continued] curriculum materials and the philosophy and criterion of the program.		
L. Selection and accomplishments of the secondary writing team	L. A total of 7 teachers representing the participating junior high schools in the subject areas of English, social studies, science and math developed an Orientation Idea Booklet, 28 Planning Guides, [covering 7 occupational areas], a Teacher Guide to Resources and a Teacher Manual. The title given to these materials was "Careers Unlimited."	L. If membership on the writing team does not include representatives of each of the subject areas, the materials developed will not be reflective of a wide area of study	L. That teachers from each of the subject areas be represented on the curriculum writing team.
M. Materials were developed that the teacher and student could use in formulating a contractural agreement for the exploration of careers.	M. It was found that many teachers either failed to use or refused to use the curriculum materials.	M. Failure to allow opportunity and time for teacher orientation and in-servicing resulted in teacher resistance in the adoption of new curriculum ideas.	M. To follow the implementation sequence used in the elementary program, e.g., initial teacher involvement in planning, orientation and in-servicing.
N. Orientation of new project staff to the district, e.g., Occupational Resource Specialists [O.R.S.]	N. In order for the O.R.S. to operate efficiently at the secondary level he/she should be fully oriented to all ongoing vocational and work-experience programs in the district, be acquainted with program personnel and personnel representing community agencies.	N. There are many occupationally oriented programs in the district and the community of which the regular classroom teacher is not aware.	N. There should be available at the junior high level a person[s] fully informed of all career education possibilities that could be used as a resource person for the classroom teacher[s].
O. Implementation of program at junior high school level	O. It was expected that all the participating junior high schools would implement the program at approximately the same time. However, less	O. The attempt was made to implement the program in too many schools at the same time.	O. New Curriculum approaches at the junior high level should be initially implemented on a pilot basis. Direction and evaluation should be

ACTIVITY	CONCLUSION	IMPLICATION	RECOMMENDATION
[Junior High continued]			
	O. [continued] than half of the schools implemented the curriculum as it was intended.		O. [continued] required.
P. Joint City School District Community Occupational Orientation Program, e.g., Upstate Medical Center Project.	P. Students identified as underachievers in the classroom react most favorably in a learning atmosphere directly related to the world of work	P. While not a specific objective of the Upstate Medical Center Occupational Orientation Program, the students displayed a marked change in their attitudes towards personal grooming, attentiveness, cooperation and positive group interaction which carried over into the regular classroom.	P. Similar programs be developed in other business/industrial environments so as to increase opportunities for students.
SENIOR HIGH SCHOOL [Activity N is applicable]			
Q. Publication of a career-oriented newsletter, "Career Scene".	Q. Making students aware, of the special educational opportunities available to them in an informal manner proved to be more successful than the standard formal course listings.	Q. Many of the most unique and most meaningful course offerings available to high school students became lost when lumped into a large course offer listing	Q. A newsletter or paper should be considered as a vehicle for career education dissemination
R. O.V.I.S. Testing and dissemination through small group counseling methods.	R. There was increased student activities with counselors in regard to career planning.	R. When the results of aptitude and interest surveys are explained to small groups more students show positive reactions.	R. Counselors should explain survey scores and results to small groups and allow for student responses.
S. Organizing joint activities with business, industry and government at the senior high level	S. Students showed exceptional interest and participation in activities related to career education when held at on-site locations.	S. Students appear to be more motivated when confronted with real life situations.	S. Make more programs of this type available where students can observe and participate in first hand learning experiences.

ACTIVITY	CONCLUSION	IMPLICATION	RECOMMENDATION
[Senior High continued] T. Implementation of the Occupational Learning Centers	T. Some students who did not show educational success or maintain acceptable attendance in the regular school setting, did so in the "Occupational Learning Center."	T. There are certain students that neither relate or are able to succeed in a normal school setting.	T. School systems who do not have such centers should consider implementing them and those who have centers should increase them.

VT 017 153

VT 017 153
GUIDED OCCUPATIONAL ORIENTATION PROGRAM.
INTERIM REPORT, VOLUME II.

SYRACUSE CITY SCHOOL DISTRICT, N.Y.
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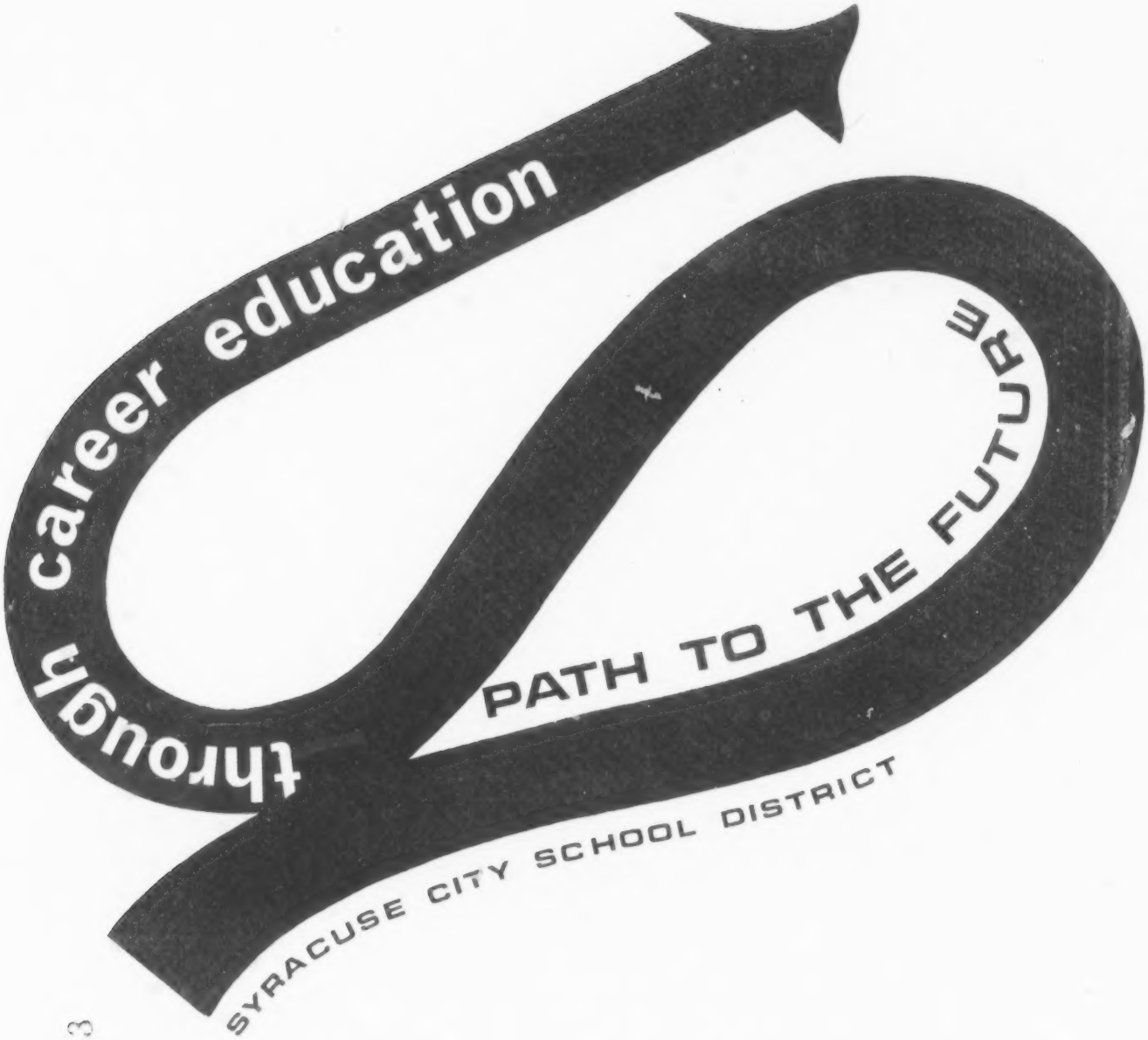
ABSTRACT - PREPARED BY AN INDEPENDENT EDUCATIONAL SERVICE, THIS INTERIM REPORT SUMMARIZES THE EVALUATION CONCEPTS TO BE USED FOR AN EXEMPLARY VOCATIONAL EDUCATION PROJECT. THE PROGRAM'S EFFECTIVENESS WAS RATED AT EACH OF ITS THREE LEVELS, ELEMENTARY, JUNIOR HIGH, AND SENIOR HIGH, BY AN EVALUATION SCHEME INVOLVING VARIABLES (CONCEPTS TO BE TAUGHT), INDICATORS (MEASUREMENT INSTRUMENTS FOR STUDENT RESPONSE), IDENTIFIED GOALS FOR STUDENTS AND TECHNIQUES USED IN ACHIEVING THESE GOALS. FINDINGS OF THE REPORT INDICATE INITIAL SUCCESS IN THE PROJECT'S FIRST YEAR, AND THE EVALUATOR RECOMMENDED THE FOLLOWING: (1) EMPLOYMENT OF A CENTRAL ADMINISTRATIVE PERSON TO DEVOTE FULL TIME TO THE PROJECT, (2) MORE CENTRALIZED PLANNING, INCLUDING DEVELOPMENT OF A PROJECT FLOW CHART TO COORDINATE CAREER CONCEPTS AMONG GRADE GROUPS, AND (3) PROVISIONS FOR PILOT TESTING NEW MATERIALS PRIOR TO FULL-SCALE IMPLEMENTATION INTO THE SCHOOL SYSTEM. RELATED DOCUMENTS ARE AVAILABLE IN THIS ISSUE AS VT 017 152 AND VT 020 627 AND IN ARM VOLUME 6, NUMBER 2 AS VT 017 154. (KH)

INTERIM REPORT

VOLUME II

G.O.O.P.

PROJECT NO. 0-361-0143



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INTERIM REPORT

PROJECT NO. 0-361-0143
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GUIDED OCCUPATIONAL ORIENTATION PROGRAM

EXEMPLARY PROJECT IN VOCATIONAL EDUCATION
CONDUCTED UNDER
PART D OF PUBLIC LAW 90-576

VOLUME II

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February, 1972

EVALUATION REPORT

OF THE

Guided Occupation Orientation Project

SYRACUSE CITY SCHOOL DISTRICT

SYRACUSE, NEW YORK

Prepared by

Educational Services, Incorporated

Waco, Texas

Feb. 1, 1972

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I.

Introduction and Statement of the Problem

The Guided Occupation Orientation-Training and Job Placement Project established by the Syracuse City School District (SCSD) of Syracuse, New York is funded under Part D of PL 90-576 for Exemplary Vocational Education projects. Under these regulations, SCSD is required to make provisions for an independent third party evaluation of the project.

In June, 1971, SCSD and Educational Services, Incorporated (ESI) of Waco, Texas entered into a memorandum of agreement whereby ESI agreed to provide such an evaluation. ESI conducted an interim evaluation in June, 1971, at the end of the school year and another evaluation in January, 1972, at the end of the federal funding year. Consequently, this report contains data summaries and observations from both evaluation efforts. Data used for the interim phase of the evaluation, covering the period from February 1, 1971 to June 18, 1971, came from research instruments and testing procedures initiated and conducted by the project staff prior to the association of ESI with the endeavor. Instruments and procedures being utilized during the 1971-72 school year reflect careful planning between project staff members and ESI personnel.

It is impossible to present traditional pre-test and post-test analysis at the mid-point in the school year. This problem has been overcome to some extent in this report by drawing samplings, when appropriate, and the extensive interviewing of project staff members.

The project, as funded and operated, involves all three grade-group populations -- elementary, junior high school, and senior high school.

The elementary school program is designed to orient and to sensatize elementary students to occupations (The World of Work), tasks demanded of various occupations, and the skills required for performance of such tasks. This program was implemented during the 1970-71 school year and initially used local funds. In February, 1971, support was transferred to federal funds. From November 4, 1970 through June 18, 1971, a total of 1,260 sixth grade students representing 17 schools (12 public and 5 private non-public) participated in project activities. During the 1971-72 school year, 1,750 fifth and sixth grade students representing 23 schools (18 public and five private non-public) are participating.

The junior high school program as described in the original project proposal for 1970-71 was not implemented in classrooms due to delayed funding schedules. Efforts were focused on curriculum developement and teacher training in order to begin classroom activities in the fall of 1971. During the summer of 1971, writing teams of teachers designed and developed course outlines for study of seven career fields. Each course outline was presented for adoption into traditional English, mathematics, science, and social studies classrooms. In addition, a general orientation course outline and teacher's guide was developed. Presently, approximately 5,300 students in seven junior high schools are involved in various project phases. This represents 84 percent of the total junior high population.

The senior high school program was devoted primarily to planning during 1970-71 with the exception of the one Occupational Learning Center which began operation under local fund arrangement and private foundation support. During the 1971-72 school year, the senior high program will operate at three levels. A specific target population of drop-outs will receive special counselling, intensive support services, and specialized job placement through three Occupational Learning Centers. Approximately 100 students will be involved. Another target population, identified as potential drop-outs of about 200 students, are receiving specialized and personalized attention and job placement through the services of two Occupational Resource Teachers.

High school students in three of the four schools are receiving career choice information and guidance through a regular series of newsletters from the Occupational Resource Specialists. These staff members are also administering the OVIS and interpreting results for students in three public and four non-public private senior high schools. Parents are being appraised of test results, as well as students.

This report summarizes the evaluation concepts to be used for the entire project, the results of the interim evaluation conducted in June, 1971; the evaluation scheme for the 1971-72 school year; and results of mid-year evaluation in January, 1972.

II.

Evaluation Concepts for Project

Evaluation for this project is to serve the following two functions: to assist SCSD personnel during the school year to determine the progress of the program toward (or away from) stated goals in order that any necessary modifications can be made; and to provide an overall assessment of the project for each funding period. These two functions suggest a real need for SCSD to determine baselines of performance and to collect project performance data throughout each school year.

The evaluation scheme to serve the functions listed above is based on the sincere belief that administrators of an educational program must know the following: what the program is planning to accomplish, what will determine this accomplishment, and what techniques are necessary for this accomplishment.

The five major elements which compose the evaluation scheme are as follows:

A.	Variable --	that which is to be changed or altered by a program for the target population, whether students, teachers, parents, etc.
B.	Variable Indicator --	how to measure or describe the variable.
C.	Goal --	a statement of the desired change in a variable which a program is to effect.
D.	Program Techniques --	the activities to be carried out in order to accoumplish a specific goal.

E. Techniques Indicator -- indication or evidence that the technique has been carried out but not an indicator that the goal has been accomplished.

(An illustration of the use of these five elements is shown in Chart I.)

Evaluation must concentrate on the results of educational activities rather than on the activities themselves. The final mettle of any educational activity must be measured against the results it was designed to produce.

In the evaluation of SCSD, we will deal with only the first three elements. Variables will be grouped according to target populations such as students, teachers, parents, etc.

Chart I

EVALUATION SCHEME ILLUSTRATION

Variable	Variable Indicator	Goal	Program Technique(s)	Technique Indicator
Level of reading ability	Scores on a standarized reading test	Increase the reading abilities for 200 fourth grade students, who are identified as "slow readers" as indicated by improvements in reading scores	- carry out a special in-service training program for 10 selected fourth grade teachers in assisting "slow readers"	Number of teachers completing the program
			- carry out a 10-month program of individualized reading instruction for 200 fourth grade students	Number of students involved in an individualized reading program

III.

Evaluation of the Elementary Program of SCSD 1970-71 and 1971-72 (In Progress)

The elementary program, while initially planned for fifth and sixth grade students, only involved sixth grade students during the 1970-71 school year. During the period from November 4, 1970 to June 18, 1971, 1,260 sixth grade students representing 17 schools participated in the program, the general mission of which was to increase student awareness of occupations. Forty classes of sixth graders participated.

The program basically included the following components:

-- Two weeks orientation to The World of Work.

-- Two field trips to the Career Center located in the George Washington School to visit and use display booths explaining a variety of vocational and industrial areas.

-- Three weeks of individualized study of selected careers coupled with class activities.

-- Two days of a skill program to enable students to experience occupational tasks and role playing.

Since September, 1971, 11 classes involving 390 students from seven schools have completed the elementary program. While these schools cannot be considered as representative of elementary classes, a sample of these classes is used here to indicate trends in student progress. In some instances, a sampling of approximately 20 percent of the students was used and in other cases, a total count was used.

Goals for this program included variables relating to students, teachers, business and industry, and parents. Variables, variable indicators, and goals for 1970-71 and 1971-72 are summarized in Chart 2 on the following pages.

A. Goals for Students

1. Increase the level of awareness of fifth and sixth grade concerning occupational alternatives.
   a. Variable -- level of world of work awareness
   b. Indicator -- 1970-71: number of career alternatives and number of non-career alternatives named before and after program participation; number of correct answers to a career concept matching tests; number of correct completions of a Career Ladder test.

For the 1,000 students in 1970-71 who, when asked to name the career jobs they had thought about after finishing school, the mean number of careers they were able to list increased by 31 percent and the mean number of non-careers they named decreased by 81 percent. Results are shown in Table 1.

Table 1

CAREERS NAMED BY SIXTH GRADE STUDENTS

	Mean Number of Non-Careers Named	Mean Number of Careers Named
Before Program	1.47	2.59
After Program	.28	3.39

Total students responding before: 937

Total students responding after: 921

Students were administered a test to determine their ability to match concepts related to working and careers with possible definitions. For the 783 students taking both a pre and post-program test, there was an average of 7.57 errors for students before the program and an average of 4.67 errors after the program or a 38 percent decrease in total errors. See Table 2.

Chart 2

EVALUATION OF ELEMENTARY PROGRAMS

VARIABLE	VARIABLE INDICATOR 1970-71	VARIABLE INDICATOR 1971-72	GOALS
1. Students a. level of awareness of the world of work	number of career opportunities able to identify Number of correct answers to career concept and career ladder tests	Same variable at 70-71 plus scores on a Career Study Achievement Test (proposed test to be developed)	Increase the level of occupational awareness for 6th grade students as indicated by: a. higher mean number of careers identified b. higher class mean scores on CSAT before and following program
b. attitudes concerning world of work and occupations	observations by teachers and principals concerning the success of the program in motivating students as given on "anecdotal summary" plus student responses concerning importance of school work to career developement on "Attitudinal Survey".	scores on attitude scale concerning the world of work (instrument to be developed)	Increase positive attitudes toward world of work (occupations and careers) as indicated by statistically significant mean scores for students (pre and post test) on an attitude test. Use of T-test for statistical significance.

EVALUATION OF ELEMENTARY PROGRAMS

VARIABLE	VARIABLE INDICATOR 1970-71	VARIABLE INDICATOR 1971-72	GOALS
c. awareness of skills used in occupations	number of correct career skill identifications for selected careers	same	Increase awareness of occupational skills for at least three occupations as indicated by statistically significant differences on pre and post listing.
d. level of actual experience with tasks and tools used in occupational world	observations of skill and class room teachers concerning level of interest of students	number of tasks completed during a six and one half hour skill session per child as shown on task check list	The mean number of tasks completed per child will be at least ten for a minimum of two skill areas
2. Teachers level of implementation of individualized instruction in classrooms	mean number of completed Career Study packets per child	Ration of Individual Career Study packets per child	The mean ratio for ICS packets completed per child will be at least 2.0

EVALUATION OF ELEMENTARY PROGRAMS

VARIABLE	VARIABLE INDICATOR 1970-71	VARIABLE INDICATOR 1971-72	GOALS
3. Business and Industry level of involment of business and industry in the elementary occupational orientation program	percentage of business and industry contacted which: a. developed or participated in a booth b. carried out school room visits c. allowed field visits by students	same as for 1970-71	For business and industry previously contacted or previously participating to: a. maintain 17 career exhibit booths b. each classroom visited by at least four career representatives c. At least 80 percent of those able to allow field visits by students and classrooms do so.
4. Parents Level of interest and amount of participation in class room programs	no systematic observations or descriptions	number of classroom visits per parent, listings of contributions, and percent of parents visiting per classroom as part of the project	At least 10 percent of parents per classroom participate in the careers orientation program in some way.

Table 2

STUDENT ERRORS ON CAREERS CONCEPT MATCHING TEST

	Mean Number of Errors	Total Errors	Total Respondents
Before Program	7.75	5,927	783
After Program	4.67	3,657	783

In addition, students were asked to complete a Career Ladder Test to determine their ability to match jobs with the level of education most often required. The average number of errors for students before the program was 2.83. After the program, the average number of errors was 1.58 or a 44 percent decrease in total errors. See Table 3.

Table 3

STUDENT ERRORS ON A CAREER LADDER TEST

	Mean Number of Errors	Total Errors	Total Respondents
Before Program	2.83	2,254	796
After Program	1.58	1,261	796

Indicator -- 1971-72: mean number of career alternatives before and after the program; mean scores on the Career Study Achievement Test; and mean scores for Orientation Test.

For 1971-72, students were able to list on a pre-test an average of five legitimate career alternatives. On a post-test, students were able to list an average of 40 legitimate career alternatives.

A sample of student scores on the Career Study Achievement Test are shown in Table 4. The test was designed to measure student gains in learning about the World of Work.

Table 4

RESULTS ON CAREER STUDY ACHIEVEMENT TESTS

Students Sampled	Pre-Test Mean	Post-Test Mean
55	7.35	8.67

The increase in mean scores is in the desired direction. Tests for significant differences were not conducted.

A sample of student scores on the Orientation Test are shown in Table 5. The test was designed to measure student orientation to careers.

Table 5

RESULTS ON ORIENTATION TEST

Students Sampled	Pre-Test Mean	Post-Test Mean
55	19.67	23.41

2. Increase positive attitudes toward occupations and careers.

   a. Variable -- attitudes concerning World of Work and Occupations.

   b. Indicator -- 1970-71 and 1971-72: attitudes of students concerning importance of school work to jobs; observations of teachers and principals concerning student motivation as a result of the program.

Students indicated a high belief in the value of a formal education in preparation for work. This belief was manifest both before and after the program. Consequently, little attitudinal change occured. See Table 6 for results in 1970-71.

Table 6

STUDENT RESPONSES TO QUESTION: "DO YOU THINK SCHOOL WORK IS IMPORTANT TO THE KIND OF JOB YOU WILL HAVE SOME DAY?"

	Percent "Yes"	Percent "No"	Percent No Response	Total Respondents
Before Program	92.0	5.0	3.0	940
After Program	97.0	2.7	0.3	920

An attitude test was designed to measure student perceptions toward the World of Work and administered first during 1971-72. From the statements, five were chosen by the project staff as those best measuring a generalized "perception" of the World of Work by students. A composite mean score was derived for each student based on assessment of these five statements. Pre- and post-test results are shown in Table 7.

Table 7

Students Sampled	Pre-Test Mean	Post-Test Mean
56	4.06	4.32

Since the highest possible score for a positive attitude is 5.0 and a 1.0 score is the most negative attitude, students already had a highly positive attitude as measured by these statements upon entry into the program.

Of 25 teachers responding to an assessment of the program, 15 said program acitivities "hold the students' interest," five said they did not, and five had no response or were undcided. Twenty-four said the goals were "worthwhile". Selected teachers and principals comments concerning student motivation provided to the evaluators by staff members of the elementary program are listed below:

Teachers

"I found children that did not read before, looking through the books and actually reading, without being directed."

"I sincerely believe they (taped materials) opened a new way of learning information material on specific subjects to my students."

"The program was a success in our classroom, especially in changing the attitude of slower students toward school. Children who had previously been frustrated by work too hard for them took an interest in their own Career Studies and worked with enthusiasm and delight."

"I felt this was the kind of project our students needed to become interested in and motivated for the world of work. They need to know there's a place they might fit."

"The students were very enthusiastic. It broadened their world by getting outside the school community into the business world - to observe the world of work. The interaction of the children working on projects was very worthwhile."

Principals

"A great amount of enthusiasm and interest was exhibited on the part of the student. It was encouraging to watch the less interested students become involved in a project of their interest."

"It broadened their field of interest. Their enthusiasm for investigation outside ordinary classroom subject matter became particularly apparent when they developed a unit on the heart which followed subsequently."

"I believe that all students became aware that all fields of endeavor require training - a sense of responsibility and the ability to work with others."

Two variables which were not defined as specific facets of the elementary program goals for students in 1971-72 were "class work motivation" and "work habits". However, as an indication of the same general effects of the program on students participating, teachers in 1971-72 were asked to designate eight representative students from their classes as "improved", "stayed the same", or "deteriorated" on both variables following completion of the program. Teacher evaluations from ten classroom on class work motivation are shown in Table 8.

Table 8

STUDENT CHANGES IN CLASS WORK MOTIVATION

Number of Students	Improved	Stayed the Same	Deteriorated
80	60%	35%	5%

Teacher evaluations for the same students on work habits are shown in Table 9.

Table 9

STUDENT CHANGES IN WORK HABITS

Number of Students	Improved	Stayed the Same	Deteriorated
80	51.25%	38.75%	10%

For both variables according to teacher evaluations, over one-half the students improved. If the change can be attributed to the program and if the effect remains, participation in this program by elementary students could have substantial positive results for other subject areas. While these results are tentative and do not result from controlled investigation, they do suggest positive consequences for students from the program.

3. Increase student awareness of occupational skills
   a. Variable -- awareness of skills used in occupations
   b. Indicator -- 1970-71 and 1971-72: number of correct skill identifications for selected careers.

Learning Activity Packages for selected careers were developed for individualized study by students following a visit to the Careers Orientation Center. Students were tested, both before and after completing a learning package, concerning attitudes relating to a specific career, awareness of related occupations, and related occupational concepts. The post-test form differed from the pre-test form by having a dissimilar list of career-related concepts and including an occupations task listing which the

form did not contain.

Thus, pre and post-test error comparisons are impossible for specific careers. The results are shown in Table 10 on the following page. Even considering the problems presented by lack of continuity between test instruments, it is evident that total post-test forms, we ascertained the 47.1 percent of 871 students completing at least one career study package improved from pre to post-test. See Table 11.

Table 10

STUDENT ERROR ON OCCUPATIONAL KNOWLEDGE TEST

	Telephone	Auto	Forestry	Secretary	Newspaper	Post Office	Police-Fire	Construction	Nursing	Dentist	Restaurant	School Workers
Total Pre-Test Errors	367	369	269	436	447	347	1239	1421	1234	85	1032	518
Total Post-Test Errors	152	376	329	501	222	178	987	949	624	49	1359	746
Total Number of Students Taking Both Pre/Post Tests	154	217	122	271	83	80	201	178	248	107	190	196

Table 11

CHANGES IN STUDENT ERRORS FOR THOSE COMPLETING AT LEAST ONE INDIVIDUAL CAREER STUDY PACKET

	Improved	Unchanged	Regressed
Percent of Total	47.1	21.7	26
Number of Students	410	189	226

No pre-test scores are available for occupation skill awareness for students completing the program to date in 1971-72.

4. Students will have increased levels of actual experience with tasks and tools used in occupations.

   a. Variable -- level of actual experience with tasks and tools used in occupational world.

   b. Indicator -- 1970-71: observations of skill teacher concerning level of interest and participation of students in skill program.

The skill program consists of two days of student introduction to manipulative skills required for jobs within the career areas of study. Observations of the skills teacher concerning interest of students in the program are summarized below:

> "An exceptionally high level of interest is exhibited by all students in both the tools and tasks of the skills program. They attack various projects of their choice with the utmost enthusiasm and determination. I refer to an estimated 99% of the students involved in the program, regardless of their past success performance in the classroom. The normal under-achievers will generally complete tasks and often help other classmates, either by instruction or direct assistance to complete tasks. In many instances a student will mention to me that he or she has never done anything like this before and sincerely felt that at the onset, could not do it.

By the students own verbal and written testimony, they feel they have done very well, considering it was their first inroduction to this type of task and to the tools involved.

On the average, 2 to 3 tasks are completed or participated in by each student. I feel that this low ratio (things completed: things offered) is due to 2 factors: (1) the limited amount of time the students are exposed to the program, and (2) their interest in one particular area of the program.

Generally, the student, once self-started on a project regardless of the skill area, desires to stay with this project until it is either completed or the student's ability to complete the task is exhausted. Then he will move on to another area of interest. This area will have to be directed by the classroom teacher or the skill teacher."

(June 21, 1971)

Indicator -- 1971-72: The mean number of tasks completed per child.

For student skill development in 1971-72, the mean number of skill tasks completed per child was 12.7 for a sample of 50 students. The goal level for mean skill task completion was 10 per child. The skill tasks covered six skill clusters -- restaurant, health and hospital, store worker, postal, calculation and cash register operations, and construction. The skill center is now housed in a mobile trailer and is proving very popular with students and teachers.

B. Goals for Teachers

1. Teachers will permit and encourage individualized career study in classrooms. Specifically, the mean number of individual Career Study Packets will be at least 2.0 per child.

a. Variable -- level of implementation of individualized instructions in classrooms.

b. Indicators -- 1970-71 and 1971-72: average Individual Career Study Packets per student; amount of student participation in a variety of instructional approaches.

In 1970-71 a total of 2.119 ICS packets were completed during the program by 871 students for an average of 2.43 packets per student.

The amount of student participation in various instructional methods is shown in Table 12 on the following page. Relevant to this goal is the fact that the mean number of independent research events (projects) per student is 2.47 for the 871 students completing at least one ICS packet.

Table 12

STUDENT PARTICIPATION IN VARIOUS INSTRUCTIONAL METHODS

	Interview	Interview Report	Group Research	Independent Research	Scrap Book	Plan Field Trip	Field Trip	Field Trip Report	Panel Discussion	Display Project
Total Student Participation-Event*	1326	668	618	2152	218	211	619	382	154	367
Average Events Per Method	1.48	1.39	1.41	2.40	1.03	.74	1.29	1.80	.91	2.91
Number of Students Participating at Least Once in Method	894	478	438	893	211	285	480	212	169	126
Average Events/Method Based on 871 Students Who Did At Least One I. C. S.	1.52	.76	.71	2.47	.25	.24	.71	.44	.17	.42

* A "participation-event" is defined as completion of individual effort or involvement in specific group tasks or projects.

For 1971-72, the mean ICS packets completed per child for 55 students samples was 2.26. In some classes, teachers have used field trips extensively and decided to extend use of ICS packets over the remainder of the school year for individual projects. Thus the mean should increase for these students at the end of the year. In this instance, mid-year values are not complete.

C. Goals for Business and Industry

1. Business and industry in th Syracuse area will be involved in the Career Orientation. Specifically, for those contacted, they will maintain at least 17 career exhibit booths or carry out classroom visits; or allow field visits to at least 80 percent of those industries capable of admitting young children to their plants and offices.

a. Variable -- level of involvement of business and industry in program.

b. Indicator -- 1970-71 and 1971-72: percentage of business and industry contacted which developed or participated in a career booth: or made school and classroom visits; or allowed students to make field visits to plants and offices.

Percentages of the businesses and industries contacted for the various activities during both school years are shown in Table 13 on the following page.

D. Goals for Parents

1. Parents of students will participate and become interested in the elementary program.

   a. Variable -- level of interest and amount of participation of parents in classroom program.

   b. Indicator -- (none used in 1970-71) 1971-72: number of classroom visits for parents.

No systematic observations of this variable were collected during the school year 1970-71. While systematic collection of data concerning parental participation has to be obtained for the 1971-72 school year, no results were available at the time of this report.

Table 13

BUSINESS AND INDUSTRY PARTICIPATING IN PROGRAM

(1970-71 and 1971-72)

	Total Number of Businesses and Industires Contacted Concerning Participation In Careers Orientation	Developing A Booth Or Participating In A Booth	Visited Schools As Part Of Program	Allowed Field Visits By Classes Of Those Who Could Allow Visits
1970-71 Number	32	21	8	10
% Of Total	100%	65%	25%	31%
1971-72 Number	47	26	24	15
% Of Total	100%	55%	51%	32%

SUMMARIES AND OBSERVATIONS OF THE ELEMENTARY PROGRAM

The elementary program is accomplishing general goals of increasing student awareness of career alternatives and of occupations in general. Students demonstrated an increased awareness of concepts and definitions relevant to careers and increased ability to link occupations to educational levels.

Most elementary students believed (or responded in the way they felt they should respond) that school is relevant to any occupational future. Therefore, the program did little in the attitudinal area.

The selected oberservations of teachers and principals reinforce the goal that student motivation be increased.

All statistics used were provided by the elementary program staff based on instruments developed by the same staff. Problems in the design of these instruments obscured the picture of student change in several instances during the 1970-71 interim evaluation.

While the program has obtained the general effects desired, we could not determine the contributions or successes of any specific technique or procedure in producing the effects. We had no way to determine the merit of the occupational display booths at the Career Center or whether the two-week orientation program before such visits produced the desired changes. We recommend a closer examination of each procedure to determine the relative merits of each.

As previously mentioned, only the direction of change in variable indicators was examined as insufficient funds were available to test for statistical significance. Most variable indicators changed in the direction desired as expressed by the program goals.

Within the elementary program, we strongly recommend consideration of adoption of the following goals:

-- developing in students improved attitudes about the personal and social significance of work;

-- improving overall pupil performance by unifying and focusing basic subjects around the career development theme.

We find that the compartmentalized approach utilized with sixth graders during the 1970-71 academic year exhibited a degree of success. This leads us to recommend that efforts be made to integrate career education into standard curriculum offerings so that career education becomes part of the standard learning experience rather than a short-time exposure.

IV.

EVALUATION OF THE JUNIOR HIGH SCHOOL PROGRAM

1971-72

The junior high school program was formally implemented in September, 1971. Until that point in time, work involved planning, curriculum development, and staff recruitment. The variables, variable indicators, and goals for the current school year are summarized in Chart 2 on the following pages.

For this report, evaluation will be concerned with pre-test results for a sample of students in 7th and 8th grades and observations in progress and problems.

A. Goals for Students

1. Increase career choice awareness

a. Variable -- Awareness of alternative career choices

b. Indicator -- listings of alternative career choices and interest intensity on a five point scale.

Pre-test results for 405 junior high school students for alternative legitimate career listings during the early part of the school year are shown in Table 14 by school name and grade level.

Table 14

CAREER ALTERNATIVE IDENTIFIED BY JUNIOR HIGH SCHOOL STUDENTS

	7th Grade		8th Grade		9th Grade	
Schools	Total Students	Total Alternatives	Total Students	Total Alternatives	Total Students	Total Alternatives
Levy	20	385	26	629	21	527
Smith	27	155	22	135	23	135
Blodgett	23	139	20	120	15	74
Roosevelt	22	44	23	146	23	68
Grant	20	285	24	190	27	221
Eastwood	30	134	24	125	15	85
Totals	142	1,142	139	1,345	124	1,110
Means	8.04		9.67		8.95	

Chart 3

EVALUATION OF JUNIOR HIGH PROGRAMS

VARIABLE	VARIABLE INDICATOR	GOALS
1. Students		
a. awareness of alternative career choices	listings of alternative career choices and interest intensity score on five point scale (instrument to be developed)	Increase career choice awareness as indicated by statistically significant differences on pre and post-test listings of career alternatives. Career alternatives must score at least two on a five point interest intensity scale.
b. awareness of resources for vocational guidance and career planning	listing of resources for familiarity and use	Increase resource awareness as possibly indicated by a statistically significant difference for resources which students are: a. familiar b. have utilized
c. ability to plan future education necessary for career choice both vocational and general education	number of written plans for future educational programs developed by students themselves	At least 85 percent of students will complete a written future education plan by the end of the school year.

EVALUATION OF JUNIOR HIGH PROGRAMS

VARIABLE	VARIABLE INDICATOR	GOALS
d. attitudes toward necessity for career planning	scores on five point attitude tests (instruments to be developed)	Students will increase their positive attitudes toward career planning by a statistically significant difference between pre and post tests.
2. Teachers a. extent of independent study carried out in classrooms	percentage of time (while participating in Guided Occupational Orientation Program) spent carrying out independent study	At least 30 percent of time in the program will be spent in independent study on the average
b. extent of pupil planning	frequency with which pupils vs. teachers make decisions about the use of class time (instruments required for pupils and teachers)	At least 35 percent of the time the pupils will make decisions about how class time is spent
c. extent of cooperation with other teachers in planning students' educational activities related to the program	Reported time spent in working with other teachers: a. questioned whether teachers participated in planned orientation of math and science teachers by English and social studies teachers b. whether met in addition to planned orientation (yes or no) c. If so, how many times	At least 100 percent of teachers meet at least once and at least fifty percent meet more than once.

EVALUATION OF JUNIOR HIGH PROGRAMS

VARIABLE	VARIABLE INDICATOR	GOALS
3. Parents extent of awareness of vocational education programs available to students	Same as for teachers (2-d) (instrument for parental survey required)	Same as for teachers
4. Business and Industry extent of community openess to student career inquiry	number of acceptances of student or class inquiry by business and industry (instrument required for reporting students and classroom inquiry)	At least 75 percent of business and industry contacted by students and/or classes reacted favorably to inquiry.

The means are 8.04, 9.67 and 8.95 for 7th, 8th, and 9th grade students respectively. No interest intensity scales were administered.

2. Increase resource awareness

a. Variable -- awareness of resources for vocational guidance and career planning.

b. Indicator -- listings of resources used for information about careers and jobs.

Percentages of students indicating use of information sources by grades are shown in Table 15 which reveals that friends are consistently the most frequently used source of information, followed by relatives and school sources.

Table 15

CAREER INFORMATION SOURCES USED BY JUNIOR HIGH SCHOOL STUDENTS

Percentage of Sample Indicating Use

Information Source	7th Grade	8th Grade	9th Grade
1. Guidance Counselors	18.8	44.1	57.1
2. Teachers	48.6	41.2	36.5
3. Relatives	55.6	52.2	65.9
4. Friends	64.6	54.4	73.0
5. Field Trips	33.3	25.7	30.2
6. Ads and Wants Ads	30.6	42.6	50.0
7. Interviews with Employers	21.5	19.9	27.8
8. NY Employment Agency	12.5	23.5	22.2
9. Private Agencies	9.7	20.6	14.3
10. Chamber of Commerce	9.7	14.0	11.9
11. Civil Service	6.9	12.5	11.1
12. Labor Unions	9.0	12.5	13.5
13. Professional Societies	11.1	12.5	15.9
14. Colleges and Schools	23.6	21.3	27.0
15. Government Agencies	9.7	16.2	15.1
16. Libraries, Schools, Books,etc.	55.6	43.4	62.7
17. Military Recruiting	13.2	14.7	19.0
Total Students	144	136	126

3. At least 85 percent of students will complete a written future education plan by the end of the school year.
   a. Ability to plan future education
   b. Number of written plans

Results for this variable will not be available until the end of the year.

4. Students will increase their positive attitudes toward career planning.
   a. Attitudes toward necessity for career planning
   b. Scores on five point attitude tests

Attitude results for five attitude statements are shown in Table 16.

Table 16

ATTITUDE SCORES JUNIOR HIGH SCHOOL STUDENTS

	7th	8th	9th
Total Students	144	136	126
Mean	3.486	3.496	3.602

Career awareness, while not explicitly included in a goal, is a relevant variable. A 12 item awareness test was administered during the fall. Scores on this test are summarized by grade in Table 17. End of year results will indicate amount of change in career awareness.

Table 17

DISTRIBUTION OF CAREER AWARENESS SCORES FOR JUNIOR HIGH STUDENTS

Total Correct Items	7th Grade Percentage	8th Grade Percentage	9th Grade Percentage
0	0	0	0
1	.7	0	0
2	2.8	.7	.8
3	6.9	3.7	.8
4	5.6	5.1	3.2
5	9.7	12.5	7.1
6	20.8	17.6	23.8
7	22.2	22.1	21.4
8.	18.1	17.6	21.4
9.	10.4	14.7	13.5
10.	2.1	5.9	5.6
11.	.7	0	1.6
12.	0	0	0
Mean	3.321	3.355	3.534

Goals for teachers, parents, and business and industry are summarized in Chart 3. No data is currently available. The balance of the junior high school program is being evaluated through utilization of observations and interviews conducted by ESI staff members.

The junior high school portion of this project is headed by three Occupational Resource Specialists (ORS) whose tasks include introducing the program to administrative personnel and teaching staff in each of the seven junior high schools participating in the project. Unfortunately, the ORS joined the project after the beginning of the 1971-72 school year and thus were working with materials and concepts which had been developed by teacher writing teams during the previous months.

ESI has recommended that writing teams next summer include those persons who will be introducing materials to classroom teachers. Also, ESI has recommended that some administrative personnel, such as vice principals and counselors, be utilized on the writing teams. More efforts should be made to cross-check suggested activities for students so as to avoid some of the annoying mistakes contained in the original course outlines. Although these mistakes were not particularly signigicant, some teachers and students experienced problems.

At the mid-year point in the junior high school program, ORS staff members feel that course outlines developed for 7th grade students should be used for 8th grade students next year and new materials should be developed for 7th graders. Results of post-tests will be evaluated in June to test the authenticity of this theory.

Teachers have exhibited the expected degree of resistance to an new program and have been handicapped by lack of support materials.

The ORS staff has identified some source material and plans are being made to free more of their time for identification of additional resource materials.

The introduction of career education into the junior high school of SCSD has been plagued with the problem normally associated with new concept implementation and the project staff has at times experienced set-backs and discouragement. However, ESI feels that reasonable progress is being made. Although the day-to-day frustrations of implementing a program which was not pilot tested have been provoking to teachers, administrative personnel, and staff members involved, many obstacles have been overcome. Problem areas have been identified, strategy planned, and adjustments made so as to insure a more smoothly functioning project in the future.

V.

Evaluation of Senior High School Program

1971-72

The senior high school program contains two complimentary thrusts. First, drop-outs and potential drop-outs are a target population for individualized counseling, special instruction, and job placement where employment is desired. Second, all senior high school students are a target population for increasing awareness for career opportunities. The OVIS test is being administered to students in three of the four public high schools and four private non-public schools. This report will deal with each thrust separately.

Programs for the employment of drop-out students and potential drop-outs in Syracuse schools have at least a two and one half year history.[1] In September, 1970, one Occupational Learning Center (OLC) was launched to reach the target group.

The staff of the OLC completed a self evaluation during the summer of 1971 based on 29 students completing the school year with the OLC and these results are included in this report. During the 1971-72 school year, two additional centers were established. Evaluation results during the current year are primarily descriptive and trend setting. Students for two centers are included as the Nottingham Center was established only shortly before this report was compiled. Final results will be available for all three centers during the summer of 1972.

1. Bigsby, Hanes; Lehmann, Elizabeth; Meno Lionel; and Brennan, Vincent. "Occupational Learning Center Report, 1970-71", Syracuse City School District, 1971, p. 3.

A design for evaluation of Occupation Learning Centers is shown in Chart 3 on the following page.

A. Goal: At least 75 percent of the contracted students will have at least 80 percent attendance.

Average class attendance for 1970-71 students was 86 percent based on complete enrollment as compared to a range in class attendance for the majority of students during 1969-70 school year of 0 to 50 percent.

During 1969-70, average school attendance for these students was 60 percent.[2.]

Table 18

PERCENT OF ABSENCES OF STUDENTS AT OLCs

Number of Students	Percent of Days Absence vs. Possible Days of Attendance
57*	28.3%
* includes six students with perfect attendance	

B. Goal: At least 80 percent of employed students report a satisfying work experience and at least 95 percent job attendance per student per month.

No results on this variable are available for 1970-71 and 1971-72 results will be completed at the end of the school year. For the 61 students currently enrolled in two OLCs, the distribution of types of employment are shown in Table 19.

2. Bigsby, et al, 1971, p. 6.

Chart 4

EVALUATION OF SENIOR HIGH PROGRAM

VARIABLE	VARIABLE INDICATOR	GOALS
1. Student (drop-outs and potential drop-outs) a. level of interest (commitment) to continuing education following development of contract with resource teacher	Number of attendance days per month	At least 75 percent of the contracted students have at least 80 percent attendance per month.
b. level of satisfying work experience	rating of personal satisfaction with job (instrument to be developed) job attendance per month	At least 80 percent of employed students report a satisfying work experience and at least 95 percent job attendance per student per month.
c. achievement levels	achievement scores as reported by teachers on at least three subjects	Achievement scores increase by a statistically significant difference comparing scores of entry into program with those no less than two months later.
d. extent of positive self concept	profile of student on self concept inventory	Self concept improvement by a statistically signigicant difference comparing scores of entry into program with profile scores at the end of the school year (minimum of four months time required)
e. level of vocational sophistication	mean sophistication score over all job families on the Vocational Interest and Sophistication Assessment (VISA)	Vocational sophistication will increase by a statistically significant difference on mean sophistication scores on VISA.

Table 19

EMPLOYMENT DISTRIBUTION OF OLC STUDENTS

Type of Employment	Number of Students
Public	16
Private	28
Higher Education	1
Occupational Training	4
Funded	4
New Students	4
Total	61

Average work attendance for 50 students employed to date is 90.22 percent.

C. Goal: Achievement scores will increase

The average increase for the 29 students completing the 1970-71 school year with the one center was 1.4 grade levels in reading and 1.56 grade levels in mathematics based on pre and post-tests using standardized testing instruments. Maximum individual gains in reading were 4.2 grade levels and in mathematics, 3.6 grade levels.

End of the year scores are not available for students currently participating in the OLCs. At time of entry into the program, the average reading grade level was 6.13 based on 39 students and average mathematics grade level was 7.01 for 36 students. Comparison test results for all students will be available during the summer.

D. Information goals concerning goals for increasing level of positive self concept and level of vocational sophistication were not available at the time of this report.

Based on the end of year results for 1970-71 and trends for students in 1971-72, the attendance and achievement goals for the Occupational Learning Centers are being met.

Another target population involves identifiable potential drop-outs -- students who are experiencing reasonable success academically, but who need intensive counselling support and for whom job placement is imperative.

Two Occupational Resources Teachers (ORT) are working directly with this student group and have currently secured work positions for 200 students from this target population.

The general senior high school population is receiving a monthly newsletter, "The Career Scene". This well-written publication is designed to increase student awareness of career education available within the SCSD, to help them identify sources of part time jobs.

Also, the Ohio Vocational Interest Survey is being administered to senior high school students. Students are advised of results the information becomes a part of their file with guidance counselors, and parents are receiving letters telling them of their child's outcome on the OVIS.

The evaluation design for the general senior high school program is shown in Chart 5.

To date, no specific efforts are being directed toward achieving the goal statement related to teachers and counselors. Aside from this, the entire senior high school program for the drop-outs, potential drop-outs, and general school population is adhering to stated goals and time lines as well as can be determined at mid-year.

Chart 5

GENERAL SENIOR HIGH PROGRAM

VARIABLE	GOALS	VARIABLE INDICATOR	TECHNIQUES FOR AFFECTING VARIABLES
Level of teachers and counselors awareness of and interest in career education	Increase awareness of career educational program and positive value of career education for students for 50% of teachers and counselors contacted	Fall and Spring measures of a. awareness b. positive value based on personal contact and/or training program by (1) career education specialists for each professional contacted and (2) subject matter specialists for all teachers as a part of regular evaluation	Inservice training Information dissemination
. Information about interests and needs of students in career areas within specific schools and overall senior high	Increase project information about specific career interest and needs of students <u>sufficiently</u> to <u>plan</u> learning experiences for students in 1972-73 school year	Have specific plans for activities which can be justified based on student interest inventories	OVIS Scout interest profile special student questionnaire
. Role of program	Develop specific goals based on (2) by March 1972 and techniques and ideas for reaching these goals for 1972-73 by September 1, 1972	Have a set of goals directly derived from interest inventory and techniques which can be linked to each goal	

VI.

Project Administration

Minor, but significant, administrative problems have plagued the project throughout the first year of operation. However, the source of these problems has been identified and steps are being taken to insure a smoother administrative function in the future.

The problem area has centered around the lack of one central administrative person. From February through August, 1971, each grade level was handled as a separate entity, with grade level coordinators reporting either to the Assistant Superintendent of Schools or the Director of Adult and Continuing Education. These two men were coping with the administrative details of this entire project in addition to fulfilling their numerous regular duties.

In August, 1971, the coordinator of the elementary phase of the project was asked to serve as an assistant director for the Guided Occupation Orientation Project. However, he continued to office in the Career Center at George Washington School and to have numerous responsibilities for the day-to-day function of the elementary program.

After project review by ESI in January, it became apparent that a central administrative figure was necessary and plans were

made immediately to establish an office, separate and apart from actual classrooms, and to relieve the assistant director of all but administrative detail.

The assistant director will still report to the Director of Adult and Continuing Education, but he will have more time to assist the total project staff in planning and implementation work. He will also be in a better position to deal with other administrative personnel of SCSD in implementing desired changes.

We believe this adjustment will reflect favorably on the progress of the entire project.

VII.

Recommendations and Observations

In tracing the one-year history of the Guided Occupation Orientation Project within Syracuse City School District, it is evident that all persons involved with the project are making a sincere effort to implement the project according to the original proposal submitted to the United States Office of Education.

Generally, the goals of this proposal are being met and the project is being administered efficiently and effectively.

The lack of a central administrative person, devoting full-time to the project, has handicapped some portions of the program, but this situation will improve immediately.

There does exist a need for more centralized planning. A project flow chart should be developed so as to better maintain career concepts between grade groups and also to help staff members identify needs.

Some provisions should be made so that new materials developed by writing teams can be pilot tested on a small sampling of the appropriate student population prior to full-scale implementation into the school system.

A team of ESI evaluators plans to visit Syracuse in late February in order to assist with the design of an overall flow

chart and time line for the project.

It is almost impossible to describe the spirit of cooperation and willingness which surrounds this project among SCSD administrative personnel and personnel assigned directly to the project. The amount of work accomplished within the past year is almost staggering when measured against the usual first year results of a new exemplary project.

It is impossible in this report to name all those persons who have contributed significantly to the success of the project. However, ESI must make mention of the dedication and cooperation exhibited by Mr. Sidney Johnson, Mr. Hans Lang, and Mr. Richard Bannigan whose efforts have done much to guarantee long-range success. The various staff members associated with the project are to be commended for their productiveness and dedication which has resulted in accomplishments far above the norm for this type project.

VT 017 446

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ANTO, LOUIS G.
VOCATIONAL OPPORTUNITIES INTEGRATED IN
CURRENT EDUCATION. INTERIM REPORT.

SAN ANTONIO INDEPENDENT SCHOOL DISTRICT, TEX.
BUREAU OF ADULT, VOCATIONAL, AND TECHNICAL
EDUCATION (DHEW/OE), WASHINGTON, D.C.
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DEVELOPMENT; SCHOOL COMMUNITY PROGRAMS;
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ANTONIO

ABSTRACT - THIS INTERIM REPORT FOR SEPTEMBER
1, 1970 THROUGH AUGUST 31, 1971 DESCRIBES THE
VOCATIONAL OPPORTUNITIES INTEGRATED IN
CURRENT EDUCATION (VOICE) EXEMPLARY PROJECT
OF THE SAN ANTONIO INDEPENDENT SCHOOL
DISTRICT. THE PROJECT OBJECTIVES WERE TO: (1)
DEVELOP A VOCATIONAL GUIDANCE-COUNSELING-
PLACEMENT PROGRAM IN GRADES 1-12, WITH
OCCUPATIONAL AWARENESS MATERIALS INTEGRATED
IN ELEMENTARY GRADES, (2) DEVELOP AND
IMPLEMENT A VOCATIONAL OPPORTUNITIES
CURRICULUM FOR JUNIOR HIGH STUDENTS, (3)
PROVIDE ENTRY LEVEL SKILL TRAINING BEFORE
AND/OR AFTER SCHOOL EXIT FOR STUDENTS WHO
HAVE NOT RECEIVED VOCATIONAL TRAINING, AND TO
PROVIDE JOB ENTRY SKILL TRAINING TO SENIORS
BEFORE OR IMMEDIATELY AFTER GRADUATION, (4)
EXPAND THE YOUTH TUTORING YOUTH PROGRAM INTO
A VOCATIONAL AREA, AND (5) EXPAND THE
BILINGUAL VOCATIONAL OFFICE EDUCATION PROGRAM
INTO A 3-YEAR PROGRAM. THE REPORT PRESENTS
DETAILED OPERATIONS IN EACH AREA DURING THE
YEAR. EVALUATION INCLUDES RECOMMENDATIONS FOR
BUDGETARY CONTROL OF THE PROJECT, A SYSTEM
FOR FOLLOW-UP OF FORMER STUDENTS IN VOICE,
AND A MASTER CONTROL LOG TO RECORD ACTIVITIES
EFFECTING CHANGES IN THE PROJECT. (MF)

INTERIM REPORT

Project No. 0-361-0158
Contract No. OEC-0-71-0586 (361)

Vocational Opportunities Integrated in Current Education

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

Louis U. Antu
San Antonio Independent School District
141 Lavaca Street
San Antonio, Texas 78210

September 1, 1971

VT017845

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The Project reported herein was performed pursuant to a contract with the Bureau of Adult, Vocational, and Technical Education, office of Education, U. S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

Louis U. Antu
San Antonio Independent School District
141 Lavaca Street
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SUMMARY

From: September 1, 1970 to August 31, 1971

GOALS

* To increase students' awareness of the world of work.
* To introduce exploratory vocational trades.
* To increase the pupil's desire to continue education.
* To provide guidance for the college bound student.
* To tutor the academically deficient.
* To provide placement for students with terminal type training.
* To provide short-term intensive training for entry level job skills for students leaving school.

PROCESS OBJECTIVES

* To develop an intensive program of vocational guidance-counseling-placement in grades 1-12 in the target area.

* To develop and implement a Vocational Opportunities Curriculum for junior high students in the target area.

* To expand the Youth Tutoring Youth Program into the vocational area.

* To expand the Bilingual Office Education program into a three-year program.

PRODUCT OBJECTIVES

* To develop an awareness of occupations in elementary students by utilizing materials integrated into the elementary school curriculum.

* To bring about an awareness among elementary teachers of the value of integrating vocational materials into the elementary curriculum.

* To provide intensive and short-term entry level skill training prior to and/or after exit from the school for students who have not received vocational training.

* To provide short-term intensive job entry skill training to seniors prior to or immediately after graduation.

PROCEDURES FOLLOWED

The major activities and accomplishments of the VOICE Exemplary Project began September 1, 1970 with the hiring of Project Coordinator. A structure was then established providing purpose, objectives and procedural guidelines. The recruitment of a staff was initiated. Contact was made with Model Cities, Chamber of Commerce, Community Organizations and Federal and State Funded Organizations operating in the area. VOICE was introduced to all participating schools.

During the month of October a secretary for the project was acquired, confirmation of funding was established by Health, Education and Welfare Regional Office in Dallas, and one Occupational Orientation Specialist was hired.

A pilot program on the introduction of construction building trades was initiated at Cooper Junior High with thirty (30) students participating and Rhodes Junior High with twenty (20) students participating.

The structure of this pilot program was developed by the use of the existing Industrial Arts Curriculum Program's Materials, texts, study guides and using a coordinated Vocational Academic Instructor in self contained classes in 2 hour blocks at Rhodes Junior High and 3 hour blocks at Cooper Junior High.

In November three (3) part-time Vocational Instructors were hired for a series of lectures (November 14, 15, 21, 22) on Nursing and Physical Therapy to be presented at Tafolla, Irving, Cooper and Rhodes Junior High Schools.

Two additional Occupational Orientation Specialists were hired for developing materials and guidelines introducing concepts in the world of work. Schedules for film presentation, and visitors from business and industry were made in the Elementary schools. A detailed lecture on VOICE on basic occupations was presented at Grant Elementary School.

At this time a third Occupational Orientation Specialist was hired to continue the "world of work" concept conferences with the increased activities at the junior high level.

On January 1, 1971, seven (7) short term job entry level vocational courses were started at Lanier - engine tune-up, welding, furniture upholstery, nurse's aides, ward clerks and medical records, and two drafting classes. Seven (7) part-time vocational instructors and one part-time counselor were added to the VOICE staff.

A liaison Coordinator was assigned to the Youth Tutoring Project.

Twenty (20) Lanier High School tutors started the J. T. Brackenridge Elementary School tutoring program on January 25, 1971.

On February 3, 1971 another Occupational Orientation Specialist was hired and on February 9, 1971, six (6) additional tutors were involved with an after school project.

Other activities included thirty (30) Grant second grades interviewing an Architect; a Storm Elementary School student's visit and report of the Municipal Court session supervised by Attorney-at-Law, Miss Alma Lopez; a Storm Elementary School student's visit and report of O'Neal, Perez, Lanse Larcade Architect and Planning Consultants supervised by Mr. J. M. Perez. Thirty (30) students were escorted by Miss Alma Lopez to her law office at the Medical Arts Building.

Mrs. Judy Carson, St. Philips College Nurse instructor, sponsored thirty-two youngsters through their teaching labs. Twenty-five Storm Elementary School students, sponsored by Mr. Larry Wilkinson, visited Radio Station KCOR.

The project has directly involved over a thousand elementary school students in activities dealing with career development on the world of work.

Over a thousand junior high school students have benefited from lectures and visits by professionals, technical experts and tradesmen.

At Lanier High School, on a voluntary basis after school, 152 students enrolled in the program. The average attendance was kept well over 90%.

Lanier High School tutors averaged 6 students per tutor for a total of 220 students at 5 hours of tutoring per week.

Approximately 250 ninth grade students at Rhodes Junior High participated in the "Career Day" program in December 1970.

Expansion of vocational exploratory projects began March 16, 1971, when a course for over-aged, hard core, potential drop-outs selected by teachers, counselors, and the principal at J. T. Brackenridge Elementary, was initiated. Two Teacher Corps Interns volunteered for this project.

On April 5, 1971, eighteen over-aged, hard core, potential drop-out students selected by the counselor, the principal, and some teachers at Cooper Junior High School, started a small engine repair project. Technical instruction was handled by a nearby Youth Opportunity Center Volunteer Instructors.

On May 5, 1971, a commitment was made by Dr. G. M. Fleming, Santa Rosa Medical Center, for eighty hours on the job training for the Nurse's Aides and Ward Clerks.

Employment was offered for some of these trainees by the San Antonio State T.B. Hospital.

The Bexar County School for Para-Medical training at Robert B. Green invited VOICE to coordinate and standardize the Nurse's Aides curriculum on May 17, 1971.

Six field trips sponsored by VOICE were made for the elementary schools to WOAI Television Station, The Light Newspaper Company, KCOR Radio Station, H. B. Zachry Construction Company and Enchanted Rock.

VOICE sponsored 156 high school students to Lackland Air Force Base, Wilford Hall Hospital's para-medical demonstration.

Presentations to the National Pan-American Forum Convention, a Beaumont Independent School District touring group, and the San Antonio Chamber of Commerce was made on the VOICE project as part of community relations.

"Career Day" programs and occupational speakers were continued at a junior high level.

During this period a booklet on VOICE for the purpose fo information dissemination was completed and distributed.

The staff's cummer training commitment at Stephen F. Austin State University in compliance with Texas Education Agency was fulfilled by the Occupational Orientation Consultants.

By May 15, 1971, a definite commitment was made by the Deputy Superintendent to support VOICE for the next year and to provide for some in-service training for teachers and staff.

Some commitments were made for summer activities by the high school administration by May 15, 1971.

Courses proposed for the summer were: Drafting, Spanish typing, Wood-working, Nurse's Aide OJT, Ward Clerk OJT and a general course in Occupational Orientation for 10th grade students. Out of these courses the following were implemented:

Drafting - 16 students

Occupational Orientation - 35 students

Nurse's Aide OJT- 18 students

Wards Clerk OJT - 6 students

RESULTS AND ACCOMPLISHMENTS

The community, educators and businessmen were highly receptive and agreeable to the idea of occupational orientation and vocational training programs in the public schools especially for the elementary grades.

In the junior high students it was noted that the younger the lecturer presenting the occuptional lectures, the more participation received from students.

In planning for a vocational nursing course, it was required that students have all graduation requirements completed by the end of their eleventh grade. Out of 25 students that expressed interest in the program, one had the necessary requirements. Eighteen cases had one deficiency, a half unit in government.

It was desired that tutors be from vocational classes, however, these students either did not have the time or did not wish to become involved.

Lack of interest and poor attendance required change in the pilot program at Cooper while Rhodes Jr. High demonstrated noted success in the initial implementation.

It was difficult to involve teachers as to make them part of the program and still make them accountable. Standardizing activities by concepts created the impression in some teachers that the program was VOICE staff owned, rather than a teacher-pupil-community involved type.

Average grade students made the best tutors in the youth tutoring program.

The most successful of the short term after school course were the classes of Nurses Aids and Wards Clerks. An on-the-job project was implemented and every student was successfully placed either on the job or in a post training institution in the medical field.

A series of lectures for in-service training was initiated for school principals of the District starting August 4-18 which included information presentations on VOICE. Occupational Orientation as presented by VOICE was highly accepted by the local school administrators.

In-service for teachers was accomplished very successfully on August, 23, 24, and 25.

EVALUATION

On January 8, 1971 Mr. Bill Barnes, Texas Education Agency, made an on-site visit to Program VOICE.

Dr. Dana Davis and Dr. Len Trout from Sierra Planning/Research Associates, University of Nevada, as part of the team that has been contracted as the third party evaluators made an on-site visit February 3, 1971.

Dr. Jack Davis and Dr. Len Trout, Sierra Planning/Research Associates made an on-site visit March 22, 1971.

On April 15, 1971, Dr. Dana Davis made another on-site visit.

Mrs. Joyce Dechman, U.S. Office of Education, Mr. Bill Sands, U.S. Office of Education (Regional), Dallas, and Mr. Bill Barnes, Texas Education Agency, made an on-site evaluation visit April 19, 1971.

Dr. Dana Davis and Dr. Len Trout made their fouth visit on June 1, 1971.

INTRODUCTION

This project is a cooperative and comprehensive effort on the part of the San Antonio Independent School District, the community resources of the City of San Antonio and Model Cities Neighborhood Area to establish an exemplary guidance and counseling program for the youth in this area. The project has its major focus on providing in-school and community based guidance and counseling services to the elementary level which will reach thousands of students over a three-year period.

At the middle junior school level the effort will be directed to developing and implementing an occupational integrated curriculum - relateing it to the standard academic subjects.

Throughout the project there is a concerted effort to add dignity to the world of vocational occupations. A bilingual approach to vocational office education will be implemented. Short-term intensive training for entry level job skills is available for students leaving school and placement services for students upon exit from school.

Activities and services funded under this project shall be available through the public local educational agencies to students, whose educational needs may be met by the project, enrolled in non-profit private schools in the school area served by the project.

PROBLEMS

It has become apparent in the findings of educational research studies such as the Alamo Area Council of Governments, created by the Governor for comprehensive planning of utilization of Texas Researchers that major revisions are necessary within public education systems to more adequately meet the needs of students. Studies that have attempted to identify educational program deficiencies reveal an array of concerns that presently challenge public school administrators and teachers. A major problem has been identified to exist in urban areas where a high-incidence of disadvantaged students reside, such as the San Antonio Model Cities Neighborhood Area. In such areas, a common concern is that academic or college oriented programs have not related to the vocational aspects of the over-all curriculum, both elementary and secondary.

This program deals with the problem of developing the foundation or framework for a complete program of Occupational Education from elementary through the secondary levels that are articulated and oriented within a career development and occupational structure.

The students in this area have consistently been under-achieving due to many factors. Language difficulties correlated with socio-economic disadvantages have perpetuated a continuous cycle of drop-outs who in turn continue to reside and bear children influenced by their background. The cycle has not progressed to any noticeable degree where students think in terms of accomplishments. The percentage of students attending college from this area is negligible.

There has been a stigma attached to vocational occupations and trade schools.

Students not having college preparation courses develop inferior complexes and become frustrated, having a feeling of being left out.

Because of the drop-out cycle students do not receive proper guidance and counseling from parents who have suffered the same experiences. The few students who do achieve, do not return to the community to inspire others. They are unable to identify with peer groups.

V.O.I.C.E. OBJECTIVES

I. To develop an intensive program of vocational guidance-counseling-placement in grades 1-12 in the target area.

To develop an awareness of occupations in elementary students by utilizing materials integrated into the elementary school curriculum.

To bring about an awareness among elementary teachers of the value of integrating vocational materials into the elementary curriculum.

II. To develop and implement a Vocational Opportunities Curriculum for junior high students in the target area.

III. To provide intensive and short-term entry level skill training prior to and/or after exit from the school for students who have not received vocational training.

To provide short-term intensive job entry skill training to seniors prior to or immediately after graduation.

IV. To expand the Youth Tutoring Youth program into the vocational area.

V. To expand the Bilingual Vocational Office education program into a three-year program.

DESCRIPTION

The program's effort is directed toward expanding the student's self-awareness to an occupational structure, starting at the elementary level. This is done by establishing a comprehensive exemplary program in counseling and guidance.

San Antonio's on-going bilingual VOE program will be supplemented. Acquiring basic work habits of industry and identifying as a worker in the world-of-work is accented. Stress is placed on emphasizing the dignity related to people in all occupations and the importance of successful work accomplishment regardless of job title.

A work-education program for disadvantaged students with summer training and school year employment that will lead into a coop program for September is being planned and implemented in phases over the three year time span of this project.

Parental involvement of Model Neighborhood Area residents is incorporated in the project design. A primary aspect of this project will be to offer direction to the entire educational program as it relates to the total curriculum (academic and vocational). Vocational exposure and experience that is relevant to the other aspects of the school program has been built within the framework of the project.

Practical application of work and school will be evident to the student throughout this program. In this manner it will differ greatly from the traditional approach. The curriculum is designed to prepare youth to implement their vocational preferences, aptitudes, and capabilities.

GENERAL DESIGN

The concept in its entirety would direct itself to experiences aimed at vocational development. Starting at the elementary level the program is designed through counseling and guidance to orient the teachers so that the elementary student might gain informational exposure.

Through a sequential tie in with the beginning phases at the elementary level, the junior school would strengthen the approach in the exploratory area. The curriculum, through the occupational orientation approach, will provide a means to relate the academic and the vocational. It would be stressed here that there must be a vocational and academic integration. An occupational descriptive course would be offered, stressing subject matter in terms of the student's choice or preferred occupation. A pilot program introducing pupils to construction occupations has been introduced.

For the high school level, preparation and expansion of the existing vocational program has priority. The need for continuing education is an integral part of the on-going bilingual VOE program. Materials and courses for this program will start at the 9th grade level, with an emphasis on an office-type vocabulary in Spanish.

At the present time, these MCNA schools are staffed by seven counselors, the ratio being approximately one counselor to 2,000 students. The teacher-counselor ratio is one counselor to sixty teachers.

The schools served with their present enrollments are listed below:

SCHOOL	EN-ROLLMENT	PRESENT COUNSELOR STAFFING	PROJECTED COUNSELOR STAFFING
Brackenridge Ele.	1113		
Crockett Ele.	924		
Total	2037	1	2
Storm Ele.	908		
Johnson Ele.	516		
Total	1424	1	1
Grant Ele.	753		
Ogden Ele.	843		
Total	1596	1	1
TOTAL ELEMENTARY:	5057	3	4
Cooper Jr. Hi.	1053		
Irving Jr. Hi.	1181		
Rhodes Jr. Hi.	1051		
Tafolla Jr. Hi.	1360		
TOTAL JUNIOR HIGH:	4645	4	1
Lanier Sr. Hi.	1904		
TOTAL SENIOR HIGH:	1904	3	1
GRANT TOTAL	18056	10	6

These eight (8) elementary schools are in the hard core area of the Model Cities project. They feed into the four (4) junior schools listed above. The junior schools feed primarily into the one (1) senior school, Lanier Senior High School.

The entire concept is based on going from the general to the specific. In the elementary it is designed to open up the great vista of the world of work. During the junior high level the student explores occupational areas and will narrow his preferences in terms of job requirements.

In the secondary level the student is selecting an occupational level in most instances. However, the intensified training program is to fill the gap for those students who have not been prepared with a saleable skill. They will then, ultimately, be placed on the job.

Students during the regular school term already have access to training in the cooperative education field and are available in the present operation structure. These areas include: office education coop, industrial coop, agriculture coop, homemaking coop, and distributive education. This in addition to the areas outlined for the summer program.

Beginning September 1, 1970, the following activities were initiated: (1) the project coordinator was chosen, (2) the liaison committee with the assistance of the vocational advisory committee developed an outline for implementing the first year effort, (3) some in-service training was started for the elementary teachers and administrators in the Model Neighborhood Area who integrated the vocational materials during the school year. For this in-service training, occupational orientation was conducted by the coordinator of the program and the occupational orientation consultants.

On November 1, 1970, the following phases were covered: (1) teaching awareness of the myriad of options open in the world of work, grades 1-6, (2) the beginning of the guidance approach at the elementary level, (3) exposure to the occupational orientation courses and specific guidance, grades 7-8, (4) the intensive training and summer training program for seniors in high school started in January 1971, (this to provide job entry skills), (5) the placement of students was one of the local agencies long standing successful programs; this was coordinated and directed by the project coordinator.

Coop Program Component (junior and senior high level) Special intensive programs for pupils who were seniors and were not currently enrolled in vocational courses went into this phase. This part of the project is designed for the secondary level and will be part of the on-going vocational program in this District and will also pursue job placement planning. There is a great need for an intensive summer program and/or a senior year program for those students who have received no vocational training only to learn in their junior and senior years that they will not be able to afford this goal. Students are completing school with no saleable skill. Thus the need for intensive job-entry skill training. This intensive training program includes furniture repair, welding, health occupations, drafting, and engine tune-up. Instructors for this component are funded by the State Agency during the school year.

The cooperative effort with the school agency, industry and community participants should be the ultimate accomplishment to this exemplary project.

SPECIFIC OPERATIONS

Vocational Guidance Component (Emphasis in Elementary). This first phase is the key effort of the project. Four curriculum specialists in occupational orientation were assigned to an occupational team. An allocation for a vocational counselor to the secondary level was made. (This position was not filled). Their first priority was to relate the vocational materials to the academic curriculum through the vocational counselors and faculties, grades 1-12, with emphasis in grades 1-6. Special vocational materials, program needs, and related subject matter were implemented. Classroom activities and experiences were correlated by vocational resource people. The project provided recommendations on specific vocational materials and approaches to broaden the child's concept of the world-of-work and its options. The implementing of the materials into the elementary curriculum, committee involvement, State Agency workshops, and Model Cities participation are all part of the in-service design.

Vocational Opportunities Curriculum Component (Junior High). The staff, in the area involved developed a pilot course entitled "Vocational Opportunities" and used available programs to introduce pupils to occupational opportunities in construction and manufacturing. This is the typical IACP approach of Ohio State University for the exploratory area, modified to fit the need of the MCNA. Two (2) junior high schools in the MCNA were conducting the mock-up type experiences in vocational occupations. This involved the learning experiences, cognitive and motor skills, experiments and role playing activities.

To help implement this phase were the Project Coordinator, Vocational Counselors, Area Supervisors (curriculum), and teachers sensitive to student needs in this area. They have met with people in industry and are responsible for developing a course description with behavioral objectives, identifying materials and program needs.

Youth Tutoring Youth Component (junior and senior high level). This component served a two fold purpose. It offered financial assistance to those students in need as well as encouraging other students to participate in vocational and instructional programs. Learning by the youth to youth method has been proven to be highly successful. Numerous programs, as well as the National Commission on Resources for Youth, have validated the process of youth tutoring youth. One vocational counselor for the one senior school in the MCNA will direct this pilot component. It involved approximately 20 tutors for one hour each day. Approximately 150 to 200 students participated.

Lanier High School seniors scored lower than the national, state, and district averages in the composite scores of the American College Test. The perpetuation of the problem was attributed to various causes. One of the causes was found to be the lack of bilingual occupational training offered the students.

Over 95% of Lanier High School students are Mexican-Americans and possess a unique talent--bilingualism--that could be tapped and developed. The awareness of this talent and the need to improve vocational and technical training courses in this particular school is the basis for this component.

While this phase of the program will be developed next year, it is at the planning stage at the present time. An attempt to implement some summer classes in Spanish typing were not successfully executed because of the many commitments of the students in other supportive activities.

Priorities for 1971-72 are:

1. The establishment of a placement and employment follow-up program in the San Antonio Independent School District.

2. To establish programs in Vocational exploration and occupational information at junior high school level of the VOICE participating schools.

3. To increase occupational information teacher-student activities through a concept sequential approach at the elementary level of the VOICE participating schools.

4. To improve the short-term intensive vocational program at Lanier High School as to meet the need of the students and the demands of industry and its labor market.

The District is divided into three areas; Area I, II, and III. Each area is headed by a Deputy Superintendent and is directly subordinate to the Superintendent of SAISD.

Vocational Opportunities in Current Education is being implemented in eight schools of Area III and three schools in Area I. Highest priority is given to the concept that there is dignity in work.

The staffing of this Program consists of:

1 Coordinator
1 Vocational Counselor
6 Teacher Consultants
1 Secretary
20 Part-time Tutors
5 Part-time Teachers
1 Part-time Counselor
8 Part-time Vocational Instructors

In addition, the support and coordination of some thirty-two professional directors, counselors, supervisors, instructors and curriculum coordinators of the existing vocational and practical arts on-going programs in the district.

Elementary Schools - The occupational orientation specialists are assigned to work with students and teachers of the assigned elementary schools by providing them with highly motivated lectures, instructional films, workshops and demonstrations. All efforts are made by the occupational specialist to provide liaison between the educational systems and industry and the world of work.

Junior High Schools - A vocational trades pilot program is being implemented at Cooper and Rhodes Junior High. Vocational instructors are scheduled to introduce vocational trades by giving demonstrations, lecturing and providing with field trips and visitors from industry into the schools. Vocational counseling and guidance is provided on call.

High Schools - Guidance for the college bound will be provided by exploring the availability of grants, loans, and scholarships for students on an individual basis. Placement for terminal type students as well as testing and occupational evaluation will be provided. A concentrated vocational short term program has been established for those students who are not engaged in vocational education nor have chosen to continue their education in college.

Participating Schools:

J. T. Brackenridge Elementary
Brewer Elementary
Crockett Elementary
Grant Elementary
Johnson Elementary
King Elementary
Ogden Elementary
Storm Elementary
Cooper Junior High
Rhodes Junior High
Tafolla Junior High
Irving Junior High
Lanier High School

Career Development Program
Scope and Sequence

The concepts regarding career development are structured in an hierarchical system to provide scope and sequence in the program. Each concept is introduced at a given grade level, developed at one or more grade levels and emphasized in a subsequent grade or grades.

Concepts developed by Lee Laws-Guidance Coordinator-Region XIII Education Service Center and John Ridener-Guidance Consultant - Texas Education Agency.

Placement of concepts as to scope and sequence - Lee Laws, Verne Laws, Career Guidance Consultant, Texas Education Agency, Division of Guidance Services.

CAREERS OF THE MONTH

September	-	Introduction
October	-	Language Arts
November	-	Mathematics
December	-	Science
January	-	Social Studies
February	-	Fine Arts
March	-	Vocational
April	-	Health & Physical Education
May	-	Culmination

* I - Concept Introduced
** D - Concept Developed
*** E - Concept Emphasized

CAREER DEVELOPMENT PROGRAM

Scope and Sequence

Grades 1 through 6

Concept	1	2	3	4	5	6
						(Grade Levels)
1. Work has dignity.	I*	D**	E***			
2. Individuals work to meet personal and social needs.	I	D	D	D	D	E
3. People work for various rewards or satisfactions.	I	D	D	E		
4. School is part of the preparation for a career.	I	D	D	E	E	
5. Individuals need special training for most careers.	I	D	D	E		
6. Careers are of wide variety.	I	D	D	E	E	E
7. In many careers cooperation among workers is essential.		I	D	D	E	E
8. Some workers produce goods; others produce servies.		I	D	E	E	
9. Specialization leads to interdependency among people.		I	D	D	E	E
10. Positions are related within job families.		I	D	D	E	
11. Careers are grouped by job families.		I	I	D	D	E
12. Supply and demand help determine career choice.			I	D	D	E
13. Career choice affects the individuals' total life.			I	D	D	E
14. Individuals differ in their abilities, interests, attitudes, and values.				I	D	D

	1	2	3	4	5	6
15. Technological and sociological changes eliminate and create jobs.				I	D	D
16. Individuals are qualified to perform in many different occupations.				I	D	D
17. Geographical location determine kinds of work found therein.				I	D	D
18. Observation of people at work helps improve knowledge about careers.					I	D
19. Individuals live in a particular geographical location due to the nature of their work.					I	D
20. Information about careers is needed by all individuals.					I	D
21. Leisure time activities affect career choice, (hobbies, etc.)						I
22. Individuals' value systems affect career choices.						I

Classification of Concepts

1. Psychic Orientation and Self-Perceptions

   a. Individuals work to meet personal and social needs.

   b. People work for various rewards or satisfactions.

   c. Individuals are people, thing or idea oriented.

   d. Individuals are qualified to perform in many different occupations.

   e. Leisure time activities affect career choice.

   f. Individuals' value systems affect career choices.

   g. A satisfying career contributes to mental health.

   h. The individual's attitudes affect success in a career.

   i. Individuals are attracted to careers due to the relationship of the characteristics of the careers to the life styles of workers.

   j. Worthy use of leisure time is vital to mental health and happiness in a career.

   k. The individual should learn to be self-governing as he enters the world of work.

2. Social Forces and Career Choices

   a. Work has dignity.

   b. Individuals work to meet personal and social needs.

   c. School is part of the preparation for a career.

   d. In many careers cooperation among workers is essential.

   e. Technological and sociological changes eliminate and create jobs.

   f. Individuals need a good general education as preparation for a changing world.

   g. School subjects have significance for career exploration.

   h. Individuals' cultural and socio-economic backgrounds affect career choices.

3. Abilities, Aptitudes, Interests, and Skills

   a. Leisure time activities affect career choice.

   b. Individuals differ in their abilities, interests, attitudes, and values.

   c. Information about abilities, aptitudes, and achievement, and acceptance of this information, help individuals make more realistic career decisions.

   d. Relating attitudes and interests to characteristics of careers improves probability of satisfaction with career choice.

4. Discrimination of Information

   a. Individuals need special training for most careers.

   b. Careers are of wide variety.

   c. Positions are related within job families.

   d. Careers are grouped by job families.

   e. Individuals need a good general education as preparation for a changing world.

   f. School subjects have significance for career exploration.

   g. Exploratory work experience helps improve knowledge about careers.

   h. Young women as well as young men should prepare for a career.

   i. Interaction with workers help improve knowledge.

   j. Observation of people at work helps improve knowledge about careers.

   k. Workers of the future may have to re-train two or more times during a lifetime.

   l. Individuals live in a particular geographical location due to the nature of their work.

   m. Information about careers is needed by all individuals.

   n. Relating career possibilities to school subjects helps improve student motivation.

5. Economic Components

   a. Some workers produce goods; others produce services.

   b. Specialization leads to interdependency among people.

   c. Supply and demand help determine career choice.

   d. Technological and sociological changes eliminate and create jobs.

6. Decision Making

   a. Career choice affects the individual's total life.

   b. Relating attitudes and interests to characteristics of careers improves probability of satisfaction with career choice.

   c. The individual should learn to be self-governing as he enters the world of work.

7. Vocational Development of the Individual

   a. Career choice is a developmental process.

   b. Workers of the future may have to re-train two or more times during a lifetime.

   c. Individuals are attracted to careers due to the relationship of the characteristics of the careers to the life styles of workers.

CRITERIA FOR CONCEPT DEVELOPMENT

1. Generally experience with concrete objects seems the first requirement in developing concepts. As these sensory experiences are taking place there must also be an attempt to provide symbols for those concrete experiences, but again not too soon.

2. Brighter children can deal better with language symbols and use them to develop concepts and to think. Slower pupils probably need more exposure to sensory experiences.

3. The use of visual aids helps communication between teachers and pupils, for then the differences in concepts of adults and children do not get in the way of communication.

4. Combinations of abstract presentations and concrete examples probably are more effective than either alone.

5. The school will get better results if children's attention is called to the common elements in various learning situations.

6. Concepts are learned more readily and with more complex structure if the situation in which they are learned is one in which the child wants to learn <u>meaning</u> of the concepts as well as their names.

7. Concepts learned in some logical relationship to those preceding are remembered longer than concepts approached hit-or-miss.

8. Often the concept to be learned is so involved with other kinds of information that the child cannot pick it out; also the perceptions he is asked to make are not clearly indicated by the material or the procedure of the teacher.

9. A comparison of what a concept does mean with other things that it does <u>not</u> mean helps fill in the child's notion of the meaning of the concept.

10. Not all generalizations and concepts are capable of verbalization by the individual. When a child says, "I know it but I can't explain it," he may very well have an accurate concept that he cannot symbolize; the teacher's function at this point may be to furnish symbols that will help the child utilize the concept in communication, or to wait. Concepts may be visual, auditory, or motor, and their utilization in practical situations need not always require verbalization.

11. From each of the subject areas, the social studies, mathematics, science, art, language arts, music, and industrial arts, the student acquires many concepts that are useful in all areas. A deliberate attempt to build on these should be included in teaching; this argues for increasing attention to productive kinds of integration--but not miscellaneous throwing together of experiences.

VOCATIONAL OPPORTUNITIES

The structure of this program has been developed by the use of Industrial Arts Curriculum Program's materials, texts, study guides and using a Coordinated Vocational Academic Education instructor in self-contained classes in two and three hour blocks at Rhodes and Cooper Junior High Schools.

MISSION

Exploration in the building trades is the mission of this program as well as an attraction to the potential drop-out. All efforts should be made to increase the student's desire to stay in school. Close observation and continuous evaluation will be provided.

VOCATIONAL OPPORTUNITIES

A MINI - Pre-Vocational and Diagnostic Academic

Instructional Program

Cooper Junior High School
and
Rhodes Junior High School

Description of Student Population in the Program:

I. Affective
   A. Distorted Self Concept students have a marked feeling of inferiority, feel rejected, and have not acquired a realistic concept of their capabilities.

   B. Sociopathic Symtoms - students demonstrate the following inadequacies:
      - lack a personal social adjustment.
      - do no comprehend the value of positive social attitudes.
      - demonstrate a lack of esthetic experiences.
      - demonstrate an inability to work consistently for long term rewards.

II. Cognitive Deficiencies of Students
   A. Lack effective methods of thinking.
   B. Lack a speaking vocabulary.
   C. Lack a reading aptitude (students average two grades or more below grade level in reading achievement).
   D. Lack a realistic educational and vocational outlook.
   E. Lack a personal reserve of important basic information that would facilitate "transfer of training" of specific facts and generalities.

III. Description of Program
   A. The basic aim of this program is to rekindle the interest and receptiveness to instruction that these students have lost due to continuous failure in the traditional classroom situation. A modified version of the Industrial Arts Construction Program (IACP) approach along with the ACVE idea of using blocks of time (three hours in this case) would enable the students to receive:
      --experiences in completely new ideas in industrial arts.
      --immediate gratification through actual application of learned related academic instruction in concrete or realistic prevocational tasks.
      --lectures or lab portions geared to individual attention spans.

--the gratifying and stabilizing experience of small group cohesiveness (the three hour block of time) without total isolation from regular secondary schedule routine. The remaining three hours in regular classes would enable the students to relate to the whole student body activities and to practice their social aptitudes.

B. Program Invironment

All academic instruction and prevocational tasks will be in the same building. This provides facilitation for:

--immediate association of semi-concrete examples and concrete examples and experiences on the part of instructor and student.

--mobility of students according to their interest and attention span on any particular day.

--small group or individual planning, discussions, progress appraisal and comparisons on the part of students in both academic and lab tasks.

IV. Diagnostic Appraisal: Pre-testing - Continuous - Post-testing

A. Academic - Instruments

1. Records of previous performance.
2. Teacher's direct observation.
3. GATB - General Aptitude Test Battery.

B. Personality Inventories

1. Autobiographical sketches.
2. Sentence completions.
3. Attitude surveys.
4. Teacher observation and evaluation.
5. Sociograms.

V. Supportive Services and Personnel

A. Health and Nutrition: School nurse will supply records concerning previous and present state of health. Appropriate referrals will be made in cases where existing agencies or private funds are available for discerned ailments of students. All students in the program will participate in the Federal Lunch Program regardless of eligibility.

B. The school counselor, area vocational counselor, and area counselors will provide individual and group sessions in counseling, testing and general guidance. The existing Leadership Lab will be utilized for medication, group session, and familial liaison in dealing with students with negative behavior problems. The area community aids will be involved in spotlighting potential home-school problems and help coordinate solutions to these problems.

C. Area Curriculum Coordinators will assist the instructor in obtaining educational materials, equipment, and services to meet the needs of students.

VI. Recommended Attitudes and Activities to Correct Stated Affective Symptoms

A. The teacher should:

1. Recognize and deal with each pupil according to his needs.
2. Help the indivudual acquire the skills of effective group membership.
3. Provide effective and continuing motivation.
4. Arrange for differentiated assignments to meet the needs and abilities of the individual.
5. Provide a physical environment which facilitates learning.
6. Show an honest liking for each individual.
7. Provide opportunities for pupils to develop qualities of leadership and self-direction.
8. Provide respect for the child as an individual as well as a member of the group.

B. The great wrong a teacher can inflict upon a child is to treat him as an object and not as a subject, as a commodity instead of a person. Through our imagination we must put ourselves in the place of the child whom we hope to teach. (Taken from a Summer Institute for Teachers and Principals of the Educationally Disadvantaged).

VII. Recommended Academic Activities to Effect Impact Upon Cognitive Deficiencies

A. Language Arts: Related to Pre-Vocational Materials. Poor communication skills have been identified as one of the most important causes of lack of school success for disadvantaged students. A diagnostic appraisal of individual abilities is essential in determining the levels and types of instruction needed to meet the needs of individual students. This approach will enable each student to work at his own level and to advance as rapidly at his rate and capacity for learning will allow. Verbalizing in all forms is needed. Regular discussions, debates, and role playing with emphasis on word experience is essential if students are to extend their speaking vocabulary.

B. Reading: A varied selection of books will be provided along with multi-level material to spark the learners' interest in reading. The multi-level reading selections should preclude the necessity for grouping students according to ability. Students will have opportunities to share their reading experiences with their peers through oral participation. The teacher will categorize reading difficulties of students and formulate his instruction to alleviate each category of reading difficulty. Teacher and students will plan proper use of time on the part of students when the teacher is assisting other students on an individual basis. Students will keep attendance and progress charts for all activities in which they participate.

C. Writing: Writing experiences will be those that are of interest to the students. The teacher will confer with students on an individual basis when patterns of writing difficulties are established. Materials will be provided that will emphasize outlining, note-taking and organization of facts to enhance thinking skills.

D. Speaking and Listening: Motivation for learning standard English will be continuously provided for through the use of:
   1. Individual recordings that will afford an opportunity for self-diagnosis.
   2. Discussions that allow for constructive criticism of diction and presentation by peer critics.

VIII. Evaluation of Program and Students
   A. Holding power of the program.
   B. Standardized Tests.
   C. Oral and Written progress.
   D. Teacher Observation and Evaluation.

VOCATIONAL OPPORTUNITIES

COURSE OF OUTLINE

I. Introduction (Theory)

A. Man and Technology

1. Managing Construction
2. Projects & Site Selection
3. Buying Real Estate
4. Surveying, Mapping and Soil Testing
5. Developing and Refining Ideas

B. Planning

1. Drawing
2. Writing Specifications
3. Bidding and Contracting
4. Working

II. Management (Practice)

A. Construction Production

1. Getting Ready to Build
2. Setting Foundations
3. Building Forms
4. Setting Re-inforcements
5. Mixing Concrete
6. Placing and Finishing Concrete

B. Building a Super Structure

1. Building Wood Frames
2. Inspecting Wood Frames
3. Installing Utilities
   a. Electricity
   b. Plumbing
   c. Heating & Air Conditioning
4. Roofing
5. Enclosing Exterior Walls

C. Building Maintenance and Minor Repairs
1. The Piping Trades
2. Electrical Installations
3. Painting

THE HIGH SCHOOL PROGRAM

A meeting with all high school seniors was held prior to the selection of students for the short-term courses. They were separated into three categories. Those that were persuing a vocational program were categorized as Type I, the college prep students as Type II, and the students that were neither of these two categories were categorized as Type III.

For the Type I students, placement and follow-up was proposed; for Type II, intensive counseling to channel them into college was proposed; and for Type III, an intensive short-term course after school on voluntary basis was offered.

Out of this Type III student group the selection of students was made and instructors of Engine Tune-up, Welding, Drafting, Medical Wards Clerks, and Nurse's Aids developed their individual program.

The counselors of the on-going program availed themselves to the college bound students and arrangements were made to interview students in the vocational programs in an effort to coordinate placements.

The average enrollment for the after school short-term courses were:

Engine Tune-up	15 students
Welding	9 students
Drafting (2 classes)	27 students
Wards Clerks	8 students
Nurse's Aids	20 students
Furniture Repair	9 students

In negotiating a program in Vocational Nursing for the high school it was noted that the State Board of Nursing required that a student have completed all the graduating requirements by the end of their eleventh grade. A survey of interested students indicated that some 22 students needed one-half unit of government to qualify for this program. VOICE established an after-school course in Government to curtail this deficiency in the interested students. Twenty students volunteered for this class.

It was suggested that a similar class in typing would provide the students needed in support of the on-going Vocational Office Education class. VOICE also provided with an after-school course in typing that averaged some 30 students.

All youth to youth tutors were selected from the high school and operated in two of the elementary target schools.

VOCATIONAL OPPORTUNITIES IN CURRENT EDUCATION

SHORT TERM INTENSIVE TRAINING
(Average of 120 clock hours)

OBJECTIVE:

To provide intensive and short training prior to and/or after exit from the school for students who have not received vocational training.

SELECTION OF TEACHERS:

Priority on the selection of teachers and instructors is based on:

1. First consideration is given to the instructors of the on-going vocational programs.

2. Instructor's availability to participate.

3. The instructor's qualifications be in the field or related to the course being offered.

4. The instructor's willingness to modify and intensify a course of study that meets the need of the student, demand of the San Antonio community and the basic philosophy that has been set by the School Board SAISD.

COURSES OFFERED:

The following factors have been considered by the Coordinator of Practical Arts of Area III, the Principal of the participating high school and the Director of Program VOICE for the selection of courses:

1. The course must be different in content than that offered in the normal three-year on-going program.

2. The course must be comprehensive when applied in short term intensified form.

3. There must be a demand for this type of training by students and business and/or industry.

4. The courses offered do not interfere in any form with the on-going programs.

COURSES PROPOSED:

1. Nurses' Aide
2. Medical Ward Clerk
3. Engine Tune-up
4. Drafting
5. Introduction to Welding
6. Furniture Upholstery Helper

SELECTION OF STUDENTS:

1. Each instructor is responsible for the selection of his students.

2. Priority is given to 12th graders that are not pursing a vocational course of study.

3. Instructors will be given plenty time for selecting, testing and etc., prior to the beginning of the course.

PROCEDURES:

1. Instructors will be given time to develop a course of study and make contact with industry, labor and business to acertain the need of the type of craftsman he is going to train. All efforts should be made to get placement commitments as well as curriculum content from industry so as to meet their need.

2. All instructors are responsible to the Principal of the school. Attendance reports, course outlines, procedure used and etc., must be reported to the principal.

3. Maximum number of students per class should not exceed 18 in number. The number in attendance should be maintained at not less than 10.

4. All salaries payed will not exceed the existing scale that has been set by the SAISD for Vocational Instructors.

5. Coordination between the Vocational Department Head, the Coordinator of Practical Arts in Area III, the Instructors, the Director of VOICE and the School Principal will be maintained.

VOCATIONAL OPPORTUNITIES IN CURRENT EDUCATION

INTRODUCTION TO WARD CLERK TRAINING

The Ward Clerk (or Unit Clerk) class introduces students to the opportunity of working in a hospital as a clerk.

The students acquaint themselves with the hospital environment, its services to the community, standards, policies and regulations, and its history and organization.

The responsibilities and duties of a Ward Clerk are introduced to the class by lecture, demonstration, discussion and specifically following the lesson plans in the manual, Training The Ward Clerk.

The training manual familiarizes students with the hospital environment: administration, business management, nursing service, patient care, general standards, rules and regulations.

The specific purpose and duties of a Ward Clerk as taught in this class are:

1. Relieve the Nurse of clerical work.

2. Answer the phone and intercom.

3. Keep charts and chart contents in order.

4. Chart T.P.R.s and B.P.s on graphic sheet.

5. Transcribe Doctor's orders.

6. Order and keep in stock all necessary paper supplies.

7. Make our requisitions for equipment and supplies.

8. Assist in admitting, transferring or discharging patients.

The Ward Clerk class stresses the interest and enthusiasum the person must acquire and keep in order to become fully involved and totally prepared to do a good job.

Upon completion of this course (January 1971 - May 1971) the students will have 120 hours of theory and 80 hours of clinical training.

From June 7, 1971 to June 18, 1971 the Ward Clerk Class trained at the Santa Rosa Medical Center on a regular shift basis 7-3 for two weeks, five days a week. A total of 80 hours of clical training were received.

VOCATIONAL OPPORTUNITIES IN CURRENT EDUCATION

WARD CLERK

During the Spring semester session between January 12 and May 28, 1971, the Ward Clerk class has met every Tuesday and Thursday for a three hour class period. Approximately 108 hours of instruction, study, and learning may be credited to these students.

Instruction has taken place in the form of classroom meetings, speakers, lectures, films, textbooks, and a student manual, and field trips.

Being a Ward Clerk by the Hospital Research and Education Trust, is the student manual the class is using. Assigned reading, discussion, brief tests and practice (when able) have covered each chapter. Referernce has been made to the Life Science textbook covering the chapters ON THE BODY SYSTEMS. Corresponding lectures and films have been given. Speakers have covered pertinent subject matter. Field trips have been made to Lutheran General Hospital, Baptist Memorial Hospital, the School of Aerospace Medicine and recently to the Lackland Paramedical Rescue Procedures at Lackland A.F.B.

Our class enrollment in January was nine. Regular attendance was noted, however by March attendance dropped and eight students remained. Of these eight students only six attended regularly throughout the semester. May attendance was poor because of too much other Senior activity and graduation.

The students in this class have certainly put forth their time and effort and have sincere intentions of following a Health career. Some wish to further their education and go into a specialty field such as a Technician, LVN, and RN training.

From June 7 to June 18, 1971 the Santa Rosa Medical Center allowed us an on-the-job training period on a regular shift basis. The students were assigned to a Buddy system which worked very effectively. The Nursing Service personnel were very impressed with the background training these students had received in class and upon completion of their training, definite commitment of employment was made by Santa Rosa Medical Center.

VOCATIONAL OPPORTUNITIES IN CURRENT EDUCATION

INTRODUCTION TO ENGINE TUNE-UP

This is an after-school Engine Tune-up intensified short-term course. It is outlined to teach the student to develop basic skills and theory related to the trade and industry in Engine Tune-up.

OBJECTIVES OF ENGINE TUNE-UP COURSE:

1. Prepare student to qualify as helper for industry in the field of minor engine tune-up.

2. To develop a willingness to follow instructions; a desire to co-operate with fellow workers; a wholesome attitude towards the customer; and an attitude recognized throughout the industry of trade as outstanding.

3. To develop good work habits as safety responsibility, cleanliness, honesty, and a desire to excell in this trade.

COURSE OUTLINE:

Phase I:

A. Electrical

1. Battery
2. Coil
   (a) polarity
   (b) resistance
3. Timing
   (a) setting
   (b) effects
4. Points
   (a) Dwell
   (b) Use of filler guage
5. Distributor and Spark Plugs

Phase II:

A. Carburation

1. The vacuum guage
2. Gas-Air mixtures
3. Types of carburator
4. Carburation adjustments

INTRODUCTION TO ENGINE TUNE-UP (continuation)

COMMENTS:

Not a completely successful program because:

1. Insufficient time allotted for recruitment and campaigning.

2. Instructor unable to arrange time to explain objectives of his own program to students because of previously planned advisory meetings.

VOCATIONAL OPPORTUNITIES IN CURRENT EDUCATION

DRAFTING

OBJECTIVES:

1. Self-discovery by the pupil of his own abilities and aptitudes, leading toward maturing life interest.

2. Satisfying experience in self-expression through creative effort leading to material accomplishments.

3. Understanding of industry and methods of production, and of the influence of industrial products and services upon the pattern of modern social and economic life.

4. Appreciation of good design and good workmanship in their application to construction and to manufactured products.

5. Judgement and resourcefulness in selection, purchase, use, and care of industrial products and services both in the home and in occupational life.

6. Ability to use tools and materials leading to household maintenance, leisure-time pursuits, and to basic occupational skills.

7. Ability to read and make sketches and drawings used for illustrative and construction purposes, including the ability to read graphic and technical illustrations in books and magazines.

8. Development of maturing work habits, feelings of responsibility, and ability to plan and execute work alone and in cooperation with others.

9. Basic experience in the use of tools, machines, and materials of value in carrying on future educational and professional work on scientific and technological levels.

10. Development of safety habits and fundamental safety consciousness not only in the school but in the home and in future occupational life.

VOCATIONAL OPPORTUNITIES IN CURRENT EDUCATION

DRAFTING

COURSE OUTLINE:

I. Orientation

A. Class Organization

1. Seating
2. Shop Fees
3. Equipment Usage
4. Attendance

B. Safety

II. Learning to Draw

A. Basic Drawing Problems

III. Use of Scale

A. Care of Instrument

B. Essentials of Usage

IV. Drawing Lines

A. Problems

B. Filmstrips

V. Alphabet of Lines

A. Problems

B. Transparencies

VI. Lettering

A. Problems

B. Filmstrips and Transparencies

VII. Freehand Multiview Drawing

A. Problems

B. Filmstrips and Transparencies

VOCATIONAL OPPORTUNITIES IN CURRENT EDUCATION

DRAFTING

I feel the program was a big success. The students seemed as through they thoroughly enjoyed the program. I believe it was an enrichment to their lives.

We briefly touched on the following area: Freehand multiview drawing, shape description, geometric construction, isometric drawing, oblique drawing, sectional views, tracings, reproductions, and working drawings.

We did not go into sheet metal layout or auxiliary views. I feel these are important areas and I wish we had the time to study them.

The main area of concentration was in the architectual field. This is where the student's main interest was held.

There were 13 students enrolled in the program at the art set. The results of the program are as follows. four students are going into the military; six students are advancing into higher education to continue their studies in this field; one student will return to Lanier High School as a senior; the other two students I have no reports on.

The VOICE Program has very great potential. We have only begun to touch upon the surface of this potentiality. In the future I believe we can develop this potential on a larger scale and involve a greater number of students.

RANDELL MAYS
Drafting Instructor

VOCATIONAL OPPORTUNITIES IN CURRENT EDUCATION

DRAFTING # 2

1. Orientation
   A. Class Organization
      1. Seating
      2. Equipment usage
      3. Attendance
   B. Safety

II. Learning to draw
   A. Basic drawing problems

III. Use of scale
   A. Care of instrument
   B. Essentials of usage

IV. Pictorial Drawing Isometrics
   A. Problems

V. Pictorial Drawing Oblique
   A. Problems

VI. Size Description
   A. Problems

VII. Shape Description
   A. Problems

VIII. Working Drawings, Tracings, and Reproductions
   A. Straight line
   B. Curved line
   C. Combination

Comments:

This course was relatively successful. For the first time I encouraged some girls to enroll in this course and they turned out to be above average.

I need more time to make contacts with industry to place these students. In the future more time should be given to work with placement of these students.

I enjoyed working with these volunteer type students because they demonstrated a desire to learn.

Abraham Rodriguez
Drafting #2 Instructor

Introduction to Welding (VOICE)

INTRODUCTION:

VOICE Introduction to Welding is an after-school short-term course. The students selected will attend on voluntary basis and the rewards and compensation will be the training that each student gets out of this attendance. The completion of this course can serve as a stepping stone to further a student's technical training.

OBJECTIVES:

1. To develop a definite awareness of safety procedures in working with and around welding equipment.

2. To develop willingness to follow instructions; a desire to cooperate in shop settings and a willingness to improve.

3. To develop basic manipulative skills in the use of welding tools and equipment.

4. To provide the students with an awareness of the cost of materials, tools, equipment and shop operations.

SKILLS TO BE DEVELOPED:

1. Use of Oxy-Acetylene torch in:
   a. Cutting
   b. Simple flat welding
   c. Maintaining equipment and gas rig.

2. Use of Arc Welder:
   a. Use of welder in straight and reverse flat work.
   b. Use of charts in setting machine for operation.

COURSE OUTLINE:

I. Safety
   a. Shop layout
   b. Safety
      1. Hand tools

II. Oxy-Acetylene Torch
   a. The cutting torch
   b. The welding
      1. Fuse welding
      2. Brazing
      3. Flat Welding
   c. Safety

III. Arc Welding

a. Setting the machine

1. AC and DC equipment
2. Use of charts
3. Selecting Electrodes

b. Welding

1. Striking an arc
2. Flat head
3. Flat V weld
4. Beveling
5. Verticle beads
6. Horizonal beads

Comments:

1. The limited number of students that took the welding course were very good, aggressive, with a desire to learn.

2. Not enough time was given for effective recruiting of students.

3. Too many extra activities interfered with the after-school VOICE program.

Ernesto Lopez
Welding Instructor

INTRODUCTION

I

This is an after-school Furniture Upholstery intensified short-term course. It is outlined to teach the student to develop basic skills and theory related to the trade and industry in Furniture Upholstery. The completion of this course will give a student the basic skills to perform as a helper in the field of furniture upholstery.

OBJECTIVES OF FURNITURE UPHOLSTERY COURSE:

1. To develop skills in the use of tools of the trade, skills in the use and maintenance of equipment of the trade.

2. To develop a willingness to follow instructions; a desire to cooperate with fellow workers; a wholesome attitude towards the customer; and an attitude recognized throughout the industry of trade as outstanding.

3. To develop a sufficiently broad understanding of related technical information of the trade to permit entrance into the Furniture Upholstery Trade at an advance helper level.

SKILLS TO BE DEVELOPED:

1. To develop skills in using upholstery tools and equipment, such as electric sewing machines, air staplers guns, button machines, cushion-filling machine, regulator stuffing needle, fitting pins, webbing stretcher, ripping tool for removing of tacks, upholstery's hammer, curved upholstery's needle, upholstery's shears, etc.

2. To develop skills in stripping furniture, fitting and marking furniture materials, cutting a pattern on furniture materials, tacking and stretching webbing, placing and tying springs, sewing the fitted marked materials into a cover, sewing cushions, stuffing cushions and tacking cover on furniture.

3. To develop good work habits as safety responsibility, cleanliness, honesty, and a desire to excel in this trade.

KNOWLEDGE AND UNDERSTANDING TO BE DEVELOPED:

1. The general acceptance of "Learn by Doing" concept of education represents a trend towards a more practical form education which conforms to positive work day needs to enable youth efficiently to adjust itself to a world in which it must live and work and meet the challenge of the future.

APPRECIATIONS AND IDEALS TO BE DEVELOPED:

1. To develop leadership, good judgement and character, social industrial habits, general information values, and consumer education and safety education.

2. Through all of this in shop and regular academic studies and school activities, it is hoped that a well educated, fully developed and useful citizen will come forth ready to meet with the confidence a changing world.

SAFETY:

General shop safety rule practices, such as shop cleanliness, protection from hazardous equipment, use of personal safety equipment, safe arrangement of tools and machines will be followed with added emphasis being made by group and individual instruction in this area.

COURSE OUTLINE:

I. Orientation and Safety

   a. Shop layout and trade philosophy.

   b. Safety

      1. Hand tools

      2. Equipment

II. Basic Upholstery

   a. Tools and Equipment

   b. Fabrics

      1. Stripping

      2. Locating webbing.

      3. Tacking and stretching webbing.

c. Frames

1. Repairing springs.

2. Tying.

d. Bending, fastening and fabricating.

e. Burlapping.

III. Sewing

a. Planning and cutting.

b. Machine sewing

1. Making covers

2. Stitching

3. Cushions

c. Fitting

d. Filling cushions (machine).

THE OCCUPATIONAL SPEAKERS

Speakers from professional, technical and vocational fields are scheduled to speak, give demonstrations and be interviewed by the junior high student (grades 7-9). This is done in social studies, language arts, industrial arts, fine arts and study hall classes. The VOICE teacher consultants coordinate these efforts to insure teacher correlation and follow-up.

THE ROLE OF OCCUPATIONAL SPEAKERS

IN PROGRAM VOICE

Speaker-student relationship. Talking about a career is one thing, but having a representative of an occupation come into the classroom for a discussion with the children is far more desirable. Every attempt will be made to see that all students are exposed to a series of occupational role models representing various types of career fields.

Speaker-teacher support. The teacher in many instances lacks the knowledge to give students accurate information concerning particular career interests. Occupational speakers, therefore, can offer first-hand and relevant backing to a teacher's career orientation efforts. Also, in the beginning stages of the program many teachers may be hesitant in attempting to introduce a relatively new curriculum. In the past, teachers have not received extensive training in the area of career guidance. It must be expected, therefore, that many teachers are limited in their ability to transmit, with the enthusiasm necessary, a new set of concepts to their students. In this respect, the use of occupational speakers can serve as a most effective impetus for student instillment of career guidance concepts.

Speaker-consultant support. The consultant's chief vehicle into the classroom is through the use of occupational speakers. The consultant takes every measure to prepare the speaker, the teacher, and the students prior to the interview engagement. Furthermore, after only a few meetings speakers acquire the ability to work well with children assuring a meaningful exchange of ideas relating to the three basic areas of career education: job awareness, attitude development, social studies and language arts relevancy.

Speaker-curriculum supplement. The interview question sheet, which the speaker works off of, encompasses all three of the basic areas of career education mentioned above. Thus the speakers role in the program is unique insofar as it offers an opportunity to expose students, in one activity session alone, to nearly all concepts assigned to a given grade level. "School is part of the preparation for work," is a conceptual objective found at every elementary grade level. Consequently, speakers should be scheduled into the classroom, to lend supplemental curriculum support, as teachers begin to cover this key concept.

JOB DESCRIPTION

PROJECT COORDINATOR - VOICE

The Project Coordinator of VOICE serves as the Director of the program. His functions are to structure the program; interview and select the personnel in the program; provide leadership in all aspects; the development and implementation of projects concerning occupational orientation and career development. He is responsible for the selection and purchase of equipment; maintenance of records and coordination between the project, the local administration, the State Education Agency and the U. S. Office of Education.

The Program Director schedules, conducts and coordinates in-service, workshops and instructive meetings and sessions with the VOICE consultant staff. He is responsible for budget proposals, modification proposals and overall compliance to the contract that has been provided by the Office of Education.

Constant communications are maintained with school principals of the participating schools through the Deputy Superintendent.

OTHER DUTIES: Checking and reviewing of payroll transmittals, coordinating program evaluations, coordinating activities with the Vocational and Practical Arts Department and other duties that may be designated by the Administration of the District.

THE VOCATIONAL COUNSELOR

Shall work with administrators, teachers, employers, and other counselors for effective dissemination of occupational information to students.

The selection, administration, and interpretation of test instruments used in assisting students in making career choices shall be the responsibility of the Vocational Counselor.

Shall be responsible for the identification of students who may benefit by enrolling in vocational education.

Shall work with administrators, counselors, and vocational teachers in providing for orientation of students relating to vocational offerings of the school.

Shall provide a job placement program assisted by vocational teachers for students completing occupational courses.

Shall assist in individual vocational counseling of students.

Shall assist with follow-up studies of former vocational students, graduates, and drop-outs with the intention of improving services to current students and of continuing services to former students shall be directed by the Vocational Counselor.

Will develop, when appropriate, a vocational guidance program for adults who may enroll in adult vocational programs conducted by the school.

Will work with "feeder" schools regularly to explain vocational programs to prospective students.

OCCUPATIONAL ORIENTATION CONSULTANT - V.O.I.C.E. PROGRAM

Primary functions of the OOC are the procurring, previewing and development of appropriate career development materials, i.e. filmstrips, films, slides, recordings, kits, games, etc. All materials are classified by grade level and concept.

The OOC schedules materials circulating them through the schools using appointed grade chairmen on the elementary level and school counselors on the junior high level. The OOC consults with teachers individually when called upon to explain the purpose and use of materials. On the elementary level, the OOC consults frequently with teachers concerning implementation of activities out of the Career Development Guide. By invitation from the teacher, the OOC will aid in presentation of materials to the students.

The OOC is responsible for continual community contact. He solicits the participation of institutions, businesses, and other occupational resource persons on an individual basis. The OOC arranges speaker engagements. If need be, the OOC obtains visual or other material requested by speakers. On many occasions, the OOC will be present with the speaker in class to insure meaningful occupational orientation experiences within capacities he sees appropriate, i.e., interviewer, student prompter, making introductions, etc. Because of the sensitive nature of speaker experiences for students on the elementary level, the OOC assists individually in the preparation of speakers as well as teachers and classes.

The OOC arranges occupational observation visits through the school principal. Details concerning transportation, number of students involved, times and dates are worked out. The OOC takes slide pictures of all field trips. The OOC works with students who were chosen from their class to go on the field trip in developing sound narrations for a sound-on-slide presentation to the rest of the class.

The OOC is responsible for maintaining output records and charts of the various occupational orientation activities, and the collection of activity form sheets from teachers. The OOC reviews activity form sheets on a monthly basis; teacher suggestions and responses are considered as immediate input for further OOC responsibilities.

SPECIFIC RESULTS

Elementary Schools - Four occupational orientation specialists were assigned to work with students and teachers of the assigned elementary schools by providing with highly motivated lectures, instructional films, workshops and demonstrations. All efforts were made by the occupational specialists to provide liaison between the educational systems and industry and the world of work.

Junior High Schols - A vocational trades pilot program was implemented. Vocational instructors were scheduled to introduce vocational trades by giving demonstrations lecturing and providing with field trips and visitors from industry into the schools. Vocational counseling and guidance was provided on call.

High Schools - Guidance for the college bound was provided by exploring the availability of grants, loans, and scholarships for students on individual basis. Placement for terminal type students as well as testing and occupational evaluation was provided. A concentrated vocational short term program was established for those students that were not engaged in vocational education nor had chosen to continue their education in college.

Due to lack of qualified personnel in the Vocational Instructional area, positions in the occupational consultant field and the vocational counselor were not filled.

Fifteen field trips involving 415 students were taken, 54 classroom presentations and demonstrations to some 6,000 students were implemented, and some 100 students participated in the short-term intensive program. The pilot program involved some 50 students from junior high schools and 18 students from the elementary schools. Twenty-four staff presentations in in-service were made to teachers from all the participating elementary schools. One thousand-seven-hundred-sixty (1,760) hours on-the-job training at the Santa Rosa Medical Center by 22 students were accomplished during the summer while an average of 30 youth tutors tutored some 170 students in the elementary and high schools.

The VOICE staff contacted some 250 establishments about placement for students. A course in Occupational Orientation for 10th grade students and a course in drafting was implemented that served some 50 students. All students that were involved in the medical para-professional on-the-job training at Santa Rosa Medical Center were placed either on the job or in post medical training to further their education.

E V A L U A T I O N

E X E M P L A R Y P R O J E C T

VOCATIONAL OPPORTUNITIES IN CURRENT EDUCATION

REPORT NO. 5

PROJECT VOICE

OF

SAN ANTONIO INDEPENDENT SCHOOL DISTRICT

Sierra Planning/Research Associates

INTRODUCTION

In view of the many internal organizational changes that were taking place within Project VOICE the Evaluators delayed their on-site visit until these matters were finalized. The prior evaluation number 4 reporting the findings as of June 2, the close of the school year, was incorporated in the Interim Report submitted by Project VOICE at the close of the first year of funding.

Sierra Planning/Research Associates

Dana Davis

Len Trout

BASE LINE DATA

Evaluators: Dr. Dana Davis
Dr. Len L. Trout

Dates: October 11-14, 1971

Purposes of Evaluation Visit Number Five were as follows:

1. To collect data regarding the 1971-72 school year operation of Project VOICE.

2. To interview the staff and identify their role in the current program.

3. To review the line and staff structure of Project VOICE.

4. To offer guidance for further improvement of the operations of Project VOICE.

5. To review the priorities for the second year of the program operation.

6. To assist in formulating the fiscal strategies relating program operation.

Resume of Activities

The evaluation team met with Mr. Antu and discussed the overall operations of the project. In addition, certain areas that were to be explored in depth were identified. The staffing problems and new staff members were discussed. The evaluators were furnished copies of the Interim Report. Mr. Antu's Log was read and served to update the evaluators in regards to Mr. Antu's activities.

Site visits were made to Mr. Antu's office at the Central Office and to the staff offices at Cooper Junior High.

An informal meeting was held with the staff.

In-depth planning sessions were held with Mr. Antu.

Discussions were held with Dr. Robinson, Mr. Porter, and Mr. Perales.

PROCESSES

Staff

The following new staff members were added to VOICE with the following major areas of responsibility.

Mrs. Dona Gallagher, Tafolla Junior High School and Irving Junior High School
Mr. Jim Gallagher, Brackenridge and liaison between elementary and junior high school programs
Mr. Ray Nerio, Ogden and Storm Schools
Mr. Olive has accepted the position of placement coordinator and will initially be working out of Lanier High School

The balance of the staff was assigned these responsibilities:

Miss Judy Germer, Grant and Crocker Schools
Mr. Hector Cuellar, King, Brewer and Johnson
Mr. Elroy Rodriguez, Cooper Junior High School and Rhodes Junior High School

Materials and Supplies

The materials and supplies seemed to be arriving in an efficient manner.

The staff is to be commended for the development of many resource materials suitable for use in the classroom as well as others to serve as dissemination materials.

Facility

The locating of Mr. Antu's office in the District Office is a primary manifestation of the support that VOICE is now receiving from the San Antonio Independent School District administration. The ability to maintain direct communication with Dr. Robinson, Assistant Superintendent for Instructional Services,

should eliminate many of the problems that existed previously and were reported by the U.S.O.E. site visitor.

The separation of the staff offices from the Area III Administrative offices and locating them in Cooper Junior High School further recognizes the role of VOICE as a vehicle to effect change.

PRODUCT

The relocation of the offices of VOICE was previously noted.

The definitive assignment of VOICE consultants to specific areas of responsibility was previously noted.

Project VOICE staff personnel has entered a phase of support rather than implementation.

VOICE personnel are actively supporting the LAL program which is not a direct responsibility of VOICE.

VOICE personnel have conducted in-service training sessions for tutors in the Youth-Tutoring-Youth Title III Program.

The consultants logs recorded a great number of visits to schools in support of the career development phase of Project VOICE.

The materials developed and adapted for use within the classroom and community were many and varied. These products were substantial.

EVALUATION

As typical with new programs VOICE had its growing pains, time delays and frustrations. These problems were brought into focus by the U.S.O.E. site visitors report in May. The responses by the San Antonio Independent School District were immediate and positive. Many of these delays and frustrations should be eliminated by the new line and staff structure.

The development of long term objectives, specific objectives and project priorities for 1971-72 should provide cohesiveness and direction to a greater degree than existed in the past.

The completion of the staffing of the project with a placement coordinator should fill this void in the project.

The specific assignment of areas of responsibility of the project staff is to be commended. This should allow the Project Director to more closely evaluate performances. It should allow him more time for coordinating the project activities within the community and all other San Antonio Independent School District programs.

RECOMMENDATIONS

Direct attention be given to the budgetary control of Project VOICE. Because of the late start a certain amount of the funds were not expended. There should be a careful review of the need for these unexpended funds during the current fiscal year to attain the project goals.

The follow-up system of the former students of VOICE should be developed as soon as possible.

A rationale for testing and evaluation should be developed for the project.

A master log should be compiled and maintained in the Project Director's office. This should not record in minute detail the activities of the project director and his staff, but should record salient facts or activities that record changes in methods operations or goals of the project.

Activities of the Junior High program will be the priority of the next evaluators site visit.

BIBLIOGRAPHY FOR CAREER DEVELOPMENT

Dictionary of Occupational Titles, 1965, Vol. I & II., Definitions of Titles, Ed.3

U. S. DEPARTMENT OF LABOR

Occupational Outlook Handbook, 1970-71 Edition

U. S. DEPARTMENT OF LABOR

Occupational Outlook Reprints, Bulletins Nos. 1650-1 through 128

U. S. DEPARTMENT OF LABOR

Education Service Center, Region XX - 16 mm sound film

Counselor's Guide to Manpower Information

U. S. DEPARTMENT OF LABOR

"Occupational Outlook Quarterly" U.S. DEPT. OF LABOR

Facilitating Career Development, State of Illinois, Board of Vocational Education & Rehabilitation, Division of Vocational & Technical Education, Southern Illinois University, Carbondale, Ill.

Introduction to Vocations, by H. E. Beam & J. R. Clary (available through Chronicle Guidance)

Career Exploration - A Guide for Teachers, State Department of Education, State Department of Vocational & Technical Education, Stillwater, Oklahoma

Occupational Information Via TV - Atlantic Public Schools, Atlanta, Georgia, Dr. John W. Leston, Supt.

Elementary Guide for Career Development - Lee Laws, Region XIII, Education Service Center, 6504 Tracor Lane, Austin, Texas

Chronicle Guidance Publications, Inc., Moravia, New York 13118 - occupational briefs & posters

Texas Employment Commission - free brochures on job interviews, etc.

FILMS

Modern Talking Picture Service (available on free loan basis)

1. "We Haven"t Heard That Yet" - learning, school & careers, 14 min.color
2. "The Thin Blue Line" - police work, 27 min. color
3. "Build a Better Life" - construction industry, 14 min., color
4. "The Career Game" - dietetics, 14 min., color
5. "To Be Forged" - machine & tool making, 18 min., color
6. "A Matter of Opportunity" - medical careers, 27 min.
7. "Auto Mechanic" - 15 min., color
8. "Why Man Creates" - artistic & creative careers, 28 min., color
9. "The Noble Breed" - firemen, 28 min.
10. "That The People Shall Know" - journalism, 21 min.
11. "Bringing Home the Bacon" - meat processing jobs, 22 min., color
12. "But More Than This" - pharmacy, 29 min., color
13. "Horizons Unlimited" - medical careers, 28 min., color
14. "Follow the Fun" - career in music, 28 min., color
15. "What's So Special About Paper" - paper industry careers, 28 min., color
16. "Bright Star" - auto design, testing & production, 25 min., color
17. "Hey, How About Right Now?" - generation gap, 27 min., color
18. "Wondering About Things" - scientific research careers

Southwestern Bell Telephone Company

1. "Operator" - 14 min., color
2. "Thinking??? Machines" - computer careers, 16 min., color
3. "The Voice of Your Business", 13 min., color
4. "Tomorrow Is Now" - importance of education, 15 min., color

Jam Handy Corporation

1. "American Harvest" - interdependence of jobs, 30 min., color
2. "American Maker" - craftsmanship, 25 min., color
3. "A Special Breed" - construction industry, 22 min., color
4. "American Engineer" - 29 min., color
5. "American Look" - creative design, art
6. "Most Important Business in the World" - agriculture, 22 min., color

FILMSTRIPS

Edu-Craft - Dist. by Denoyer-Geppert, 5235 Ravenswood Ave., Chicago, Illinois 80840

The Wonderful World of Work Series

J. C. Penney Educational Service (local stores)

"Awareness - Insight Into People"
"Career Decisions"

FILMSTRIPS

Filmstrip resources for Elementary Schools:

One hundred seventy-five filmstrips were previewed and screened by VOICE

SELECTION PROCEDURES:

1. All films are ordered on a one month trial basis.

2. Films are previewed the minimum of two times by two VOICE staff members.

   a. On the previews of films, the VOICE staff members write comments on film. (Previews are made individually and separately).

   b. Comments are discussed with the VOICE Director. If comments are in conflict, the Director makes an additional preview.

   c. If modification of narration or other changes are recommended by either of the three previewers, the Coordinator of Elementary Language Arts is asked to preview the film and recommend on the film. Teachers in the program may be asked to make an additional preview.

   d. If modifications on the narration are recommended, the script is reviewed by the Director and the Coordinator of Elementary Language Arts.

3. All efforts are made for film substitution instead of modification of narration.

4. All film purchased is assigned a <u>file number</u> and <u>grade level</u>.

FILMSTRIPS

GRADE LEVEL	TITLE
5,6	EXCAVATING THE CELLAR
5,6	BUILDING THE FOUNDATION
5,6	BUILDING THE FRAME OF THE HOUSE
5,6	GAS, ELECTRIC, PLUMBING AND OTHER INSTALLATIONS
5,6	FURTHER INSTALLATIONS
5,6	COMPLETING THE OUTSIDE OF THE HOUSE
5,6	COMPLETING THE INSIDE OF THE HOUSE
5,6	THE HOUSE IS BUILT

SOURCES WHERE FILMSTRIPS WERE OBTAINED:

Eye Gate House
146-01 Archer Avenue
Jamaica 36, New York

Curriculum Material Corporation
1319 Vine Street
Philadelphia, Penn.

Longfilm Slide Service
7505 Fairmont Avenue
El Cerrito, California

Encyclopaedia Britanica Films
425 Michigan Avenue
Chicago, Illinois 60611

Society for Visual Education
1345 Diversy Parkway
Chicago 14, Illinois

McClintock Producers
6 Healthcote Rd.
Searsdale, New York

Young American Filmstrips
330 West 42nd Street
New York, New York

Key Products, Inc.
527 Madison Avenue
New York, New York

McGraw Hill Company
330 W. 42nd Street
New York 36, New York

Visual Education Consultants, Inc.
2066 Helena Street
Madison 4, Wisconsin

FILMSTRIPS

GRADE LEVEL	TITLE
3,4	AIRPORTS & AIRPLANES
3,4	HEALTH
3,4	HOUSES
3,4	POLICEMAN & FIREMAN
3,4	OUR POST OFFICE
3,4	SCHOOLS
1,2,3	THE TEACHER
1,2,3	THE CUSTODIAN
1,2,3	THE SAFETY PATROL
1,2,3	THE PRINCIPAL
1,2,3	THE SCHOOL NURSE
1,2,3	THE CAFETERIA WORKERS
2,3,4	THE BUS DRIVER
2,3,4	THE DOCTOR
2,3,4	THE GROCER
2,3,4	THE POLICEMAN
2,3,4	THE FIREMAN
2,3,4	THE MAILMAN
2,3,4	DENTIST
2,3,4	MILKMAN
2,3,4	LIBRARIAN
2,3,4	SERVICE STATION ATTENDANT
2,3,4	STREET MAINTENANCE CREW
2,3,4	SANITATION DEPARTMENT CREW
1,2,3,4	MY DAD IS A CARPENTER
1,2,3,4	MY DAD IS A MOVING MAN
1,2,3,4	MY DAD WORKS IN A SHOE STORE
1,2,3,4	MY DAD WORKS IN A FACTORY
1,2,3,4	MY DAD WORKS IN A SUPERMARKET
1,2,3,4	MY DAD WORKS IN A SERVICE STATION
2,3,4	MY MOTHER IS A WAITRESS
2,3,4	MY MOTHER IS A DENTAL ASSISTANT
2,3,4	MY MOTHER WORKS IN A BANK
2,3,4	MY MOTHER WORKS IN AN OFFICE
2,3,4	MY MOTHER WORKS IN A DRUG STORE
2,3,4	MY MOTHER WORKS AT HOME
3,4	THE METROPOLITAN AIRPORT
3,4	AIR PASSENGER SERVICE
3,4	AIR CARGO SERVICE
3,4	AIR SAFETY
3,4	AIRPORT WORKERS
3,4	THE COMMUNITY AIRPORT
4,5	IS FARMING FOR ME?
4,5,6	WHY DO PEOPLE WORK?

FILMSTRIPS

GRADE LEVEL	TITLE
1,2,3	THE BAKER
1,2,3	THE DAIRYMAN
1,2,3	THE SHOEMAKER
1,2,3	THE TAILOR
1,2,3	OUR NEIGHBORHOOD LAUNDRY
1,2,3	THE BUTCHER
1,2,3	THE WATCHMAKER & JEWELER
1,2,3	THE FRUIT AND VEGETABLE STORE
3,4,5,6	THE NEIGHBORHOOD DOCTOR
3,4,5,6	THE NEIGHBORHOOD PHARMACIST
3,4,5,6	THE NEIGHBORHOOD OPTOMETRIST
3,4,5,6	THE NEIGHBORHOOD BARBER
3,4,5,6	THE NEIGHBORHOOD BEAUTICIAN
3,4,5,6	THE NEIGHBORHOOD NEWSPAPER STORE
3,4,5,6	AUTOMOBILE SERVICE STATION
1,2,	COMMUNITY HELPERS
1,2,	SCHOOL HELPERS
6	THE JOB INTERVIEW
5,6	STOCKER IN A SUPERMARKET
5,6	THE WAITRESS
5,6	FIXING A FLAT TIRE
5,6	HOW TO USE YOUR CHECKBOOK
5,6	THE VARIETY STORE
5,6	THE SCHOOL CAFETERIA WORKER
5,6	THE NURSES AID
5,6	GAS STATION ATTENDANT
2,3,4	SPEAKING AND WRITING
2,3,4	PAPERS AND BOOKS
5,6	WEATHERMAN AT WORK
6	OBSERVING - FUNDAMENTALS OF THINKING
1,2	WHERE OUR DADDIES WORK
5,6	AMERICANS AT WORK
6	OIL, WEALTH FROM THE GROUND
1,2,3,4	BUILDING A HOUSE
1,2,3	HELPERS FOR OUR HOME
1,2,3	HELPERS FOR OUR SCHOOL
2,3	THE POLICEMAN
2,3	THE FIREMAN
2,3	OTHER COMMUNITY WORKERS
3,4	FATHER'S WORK - TRUCK DRIVER
3,4	HOW PEOPLE MAKE A LIVING
3,4	WHERE DOES MOTHER WORK
1,2,3	WE LEARN ABOUT BUSINESS
2,3,4	HOW BUSINESS WORKS

FILMSTRIPS

GRADE LEVEL	TITLE
1,2,3	WE LEARN ABOUT TRADE
3,4,5	RULES FOR BUSINESS
3,4,5	WE LEARN HOW THINGS ARE MADE
3,4,5	WE VISIT A CLOTHING FACTORY
3,4,5	WE VISIT A LUMBER MILL
1,2,3,	WE RUN A BANK
3,4,5	AUTOMOBILE WORKERS
3,4,5	OFFICE WORKERS
3,4,5	WE RUN A STORE
3,4,5	FACTORY WORKER
2,3,4	PLANNING YOUR DAY
3,4,5	LOOK AT EVERYTHING AROUND YOU
5,6	OUR NEWSPAPER (TELLS US ABOUT THE WORLD)
5,6	MANY WORKERS PROVIDE OUR FOOD
4,5	MANY WORKERS PROVIDE OUR SHELTER
2,3	ROBBIE'S NEIGHBORHOOD
2,3	DIFFERENT NEIGHBORHOODS
2,3	SHARING WITH NEIGHBORS
2,3	PLACES WE ALL OWN
2,3	NEIGHBORHOOD WORKERS
2,3	IN AND OUT OF THE NEIGHBORHOOD
3,4,5	THIS IS OUR TOWN
3,4,5	HOW OUR TOWN BEGAN
3,4,5	HOW OUR TOWN GREW
3,4,5	LIVING IN OUR TOWN
3,4,5	WORKING IN OUR TOWN
3,4,5	THE FUTURE OF OUR TOWN
4,5	HER IS THE CITY
4,5	BUSINESS IN THE CITY
4,5	LIVING IN THE CITY
4,5	PROBLEMS IN THE CITY
4,5	WORKING IN THE CITY
4,5	KEEPING THE CITY ALIVE
5,6	TOOLS AND MATERIALS FOR BUILDING A HOUSE
3,4	SIGNS AND SIGNALS
3,4	MESSENGERS
3,4	THE MAIL GOES THROUGH
3,4	COMMUNICATION BY SOUND
3,4	COMMUNICATION BY SIGHT
3,4	COMMUNICATION BY ELECTRICITY
3,4	MODERN MEANS OF COMMUNICATION
3,4	THE AMERICAN FARMER
3,4	ANIMALS ON THE FARM
3,4	MACHINES ON THE FARM
3,4	WHEAT FOR BREAD

FILMSTRIPS

GRADE LEVEL	TITLE
3,4	CORN FOR ALL
3,4	DAIRY FARMING
3,4	CATTLE RAISING
3,4	FRUIT FARMING
3,4	TRUCK FARMING
4,5	OUR NEIGHBROHOOD STORES
4,5	CROSSING A BRIDGE
4,5	PEOPLE OF OTHER NEIGHBORHOODS
4,5	PEOPLE AT WORK
4,5	VISITING A VILLAGE
4,5	VISITING A TOWN
4,5	VISITING A LARGE CITY
4,5	A TRIP TO THE MOUNTAINS
4,5	HAVING FUN IN THE CITY
1,2,3	LIFE ON A SMALL FARM
1,2,3	LIFE ON A LARGE RANCH
1,2,3	LIFE IN A SMALL TOWN
1,2,3	LIFE IN A LARGE CITY
1,2	A LOAF OF BREAD
3,4,5,6	WHO ARE YOU?
3,4,5,6	WHAT DO YOU LIKE TO DO?
3,4,5,6	WHAT IS A JOB?
3,4,5,6	WHAT ARE JOB FAMILIES?
6	WHAT GOOD IS SCHOOL
2,3,4	THE STORY OF COTTON
2,3,4	THE STORY OF WOOL
2,3,4	THE STORY OF LEATHER
2,3,4	THE STORY OF RUBBER
4,5	STORY OF STEEL
2,3,4	THE STORY OF MILK
2,3,4	THE STORY OF BREAD
2,3,4	THE STORY OF FRUITS AND VEGETABLES
2,3,4	THE STORY OF MEAT
4,5	THE STORY OF HOW APPLES GROW
2,3	MY DAD IS A WHEAT FARMER
2,3	MY DAD IS A TRUCK FARMER
2,3	MY DAD IS A FRUIT FARMER
2,3	MY DAD IS A COTTON FARMER
2,3	MY DAD IS A DAIRY FARMER
2,3	MY DAD IS A HAY FARMER
2,3	MY DAD IS A VETERINARIAN
2,3	MY DAD IS A SHEEP HERDER
2,3	MY DAD IS A POULTRY FARMER
2,3	MY DAD IS A CATTLE RANCHER
5,6	HOW IT STARTED

OCCUPATIONAL LITERATURE FOR THE IMPLEMENTATION
OF
CAREER DEVELOPMENT CONCEPTS

Code: 11 - Brewer 69 - Storm 30 - Grant 44 - King
18 - Crockett 57 - Ogden 42 - Johnson 10 - J. T. Brackenridge

11	10	18	69	44	57	42	30	WORK HAS DIGNITY (1-3)
x	x		x	x	x	x	x	Hoffman, Elaine & Heffle-finger. Family Helpers
x	x	x	x	x	x	x	x	Clark, Ann Nolan, In My Mother's House
x		x			x			Lenski, Lois, Let's Play House
x								Schlein, Miriam. Lazy Day
x		x		x				Marino, Dorothy. Where Are The Mothers?
x					x			Tresselt, Alvin. A Day with Daddy
x			x					Frank, Janet. Daddies
x	x	x		x	x	x	x	Greene, Carla. I Want To Be A Homemaker
x	x	x	x	x	x		x	Hoffman, Elaine and Heffle-finger. Family Helpers
	x				x			Merriam, Eve. Mommies At Work
x	x	x		x	x		x	Puner, Helen Walker. Daddies, What They Do All Day
								Boutwell, Edna. Red Rooster: O.W.W. Families at Work
							x	Flothe, Louise Lee. Cowboy on the Ranch (3-)
								Hayes, Will. Biggest Pig (3-)
								Liffring, Joan. Dee and Curtis on a Dairy Farm (3-)
								Bate, Norman. Who Built the Highway (3-)
								Schlein, Miriam. A Fisherman's Day (3-)
x	x	x	x		x	x	x	Beim, Jerrold. Shoeshine Boy (3-)
								SOME WORKERS COME TO OUR HOME (1-3)
								Abel, Ruth. The New Sitter.
x	x	x	x	x	x	x	x	Hoffman, Elaine and Hefflefinger, Jane. Family Helpers
x			x					Fabry, Sally. Who Am I
x					x			Hoffman, Elaine. Our Friendly Helpers
x					x			Lenski, Lois. At Our House
					x	x		Barr, Jene. Mike, the Milkman
x	x		x	x	x	x	x	Zion, Gene. Dear Garbage Man.
					x			Hoffman, Elaine and Hefflefinger, Jane. More Friendly Helpers.
								SOME WORKERS COME TO OUR SCHOOL
x	x	x	x	x	x	x	x	Buchheimer, Naomi. Let's Go to a School (1-2)
x		x		x	x	x	x	Elkin, Benjamin. True Book of Schools (1-2)
x	x	x	x	x	x	x	x	Greene, Carla. I Want to Be a Teacher (1-2)
x		x			x		x	Hefflefinger, Jane and Hoffman, Elaine. About School Helpers. (1-2)
		x			x			Buchheimer, Naomi. I Know a Teacher (K-3)

11	10	18	69	44	57	42	30	SCHOOL IS PART OF THE PREPARATION FOR WORK
x		x	x		x			Greene, Carla. I Want to Be a News Reporter (1-3)
x		x	x	x			x	Miner, Opal and Sevrey, Irene. True Book of Communication (1-3)
x		x		x	x		x	Sooting, Laura, Let's Go to a Newspaper. (1-3)
x	x	x		x	x	x	x	Barr, Jene. Good Morning, Teacher (1-3)
x	x	x	x	x	x	x	x	Buchheimer, Naomi. Let's Go to the Library (1-3)
x	x	x	x		x	x		Greene, Carla. I Want to be a Librarian (1-3)
		x					x	Barr, Jene. Miss Terry at the Library. (2-5)
		x						Colonius, Lillian. At the Library. (2-5)
		x						Lewellen, John Bryan. Tommy Learns to Drive a Tractor. (2-5)
								MacMan, Elaine. Risky Business. (2-5)
					x			Russell, Betty. Chick-Chick Here. (2-5)
x		x	x	x		x	x	Greene, Carla, What Do They Do? Policemen and Firemen (2-5)
x		x				x	x	Ormsby, Virginia H. Twenty-one Children (2-5)
x		x				x		Agle, Nan, and Wilson, Ellen. Three Boys and a Tugboat (2-5)
x		x			x	x	x	Bialk, Elsa. Tizz and Company (2-5)
							x	Smith, Eunice Young. Denny's Story (2-5)
x					x		x	Ipcar, Dahlov. I Like Animals (2-5)
								Reichert, Edwin, and Bracken, Dorothy K. Bucky's Friends. (2-5)
x	x	x	x	x	x	x	x	Brewster, Benjamin. First Book of Firemen (2-5)
x	x	x		x	x	x	x	Buchheimer, Naomi, Let's Go to a Post Office (2-5)
x					x	x		Cochrane, Joana. Let's Go to the United Nations Headquarters (2-5)
x		x	x		x			Rosenfield, Bernard. Let's Go to the Supreme Court (2-5)
x			x		x			Rosenfield, Bernard. Let's Go to the F.B.I. (1-)
								Carmer, Carl L. Too Many Cherries (4-)
								Flothe, Louise Lee. Triangle X. (4)
						x		Bangert, Ethel E. Polly Perry, TV Cook (4-)
								Buehr, Walter. The Genie and the Word (4-)
x								Cooke, David Coxe. Behind the Scenes in Television (4-)
x								Lent, Henry Bolles. I Work on a Newspaper (4)
x	x	x		x	x	x		Schloat, G. Warren. Adventures of a Letter (4)
								Graham, Clarence Reginald. First Book of Public Libraries (4)
								Noble, Iris. Clarence Darrow: Defense Attorney (4)
								B. F. Goodrich Co. Tommy Looks at Farming. (5)
	x				x	x	x	Colby, Carroll Burleigh, Police: The Work, Equipment, and Training of our Finest (5)
					x			Floherty, John Joseph, Our F.B.I. -- An Inside Story (5)
						x		Gibson, Michael Dara, Rescue From the Air Abelard. (5)
								Braude, Michael. Andy Learns about Advertising (5-7)
								Buchheimer, Naomi. Let's Go to the Telephone Company (4-6)
					x	x		Cahn, William and Rhonda. The Story of Writing, From Cave Art to Computer (5-6)

11	10	18	69	44	57	42	30	SCHOOL IS PART OF THE PREPARATION FOR WORK (Con't)
x	x	x	x	x	x	x		Greene, Carla. I Want to be a Telephone Operator. (1-3)
x		x		x	x	x	x	Hoke, John. The First Book of Photography (3-5)
x					x		x	McCabe, Sybil Anderson. How Printing Helps Us. (3-5)
x					x			Meshover, Leonard. You Visit a Newspaper -- Television Station (3-5)
x								Parsons, Tom. Find a Career in Journalism (6)
								BY WORKING, PEOPLE IN A COMMUNITY HELP EACH OTHER
	x							Barr, Jene. Fireman Fred (2-3)
					x			Barr, Jene. Mr. Mailman (2-3)
	x							Barr, Jene. Policeman Paul (2-3)
	x	x	x	x	x	x	x	Brewster, Benjamin. First Book of Fireman (2-3)
		x				x	x	Brown, Margaret W. The Little Fireman (2-3)
x		x		x	x		x	Buchheimer, Naomi. Let's Go to a Firehouse (2-3)
x					x			Cochrane, Joanna. Let's Go to a Sanitation Department (2-3)
x		x					x	Colonius, Lillian, and Schroeder, G. W. At the Post Office (2-3)
x		x		x			x	Dillon, Ina K. Policeman.
x	x	x	x		x		x	Greene, Carla. I Want to be a Postman (2-3)
x	x	x	x	x	x	x	x	Greene, Carla. I Want to Be a Bus Driver (2-3)
x	x	x	x	x	x	x	x	Greene, Carla. I Want to Be a Truck Driver (2-3)
								Barr, Jene. Baker Bill (2-)
								Barr, Jene. Ben's Busy Service Station (2-)
					x			DeAngeli, Marguarite. Ted and Nina Go to the Grocery Store (2-)
x	x	x	x	x	x	x	x	Goodspeed, J. A. Let's Go to a Supermarket. (2-)
								Dean, Lucille D. At the Dry Cleaners. (2-)
x	x	x	x	x	x	x	x	Greene, Carla. I Want to Be a Storekeeper (2-)
x		x		x	x	x		Hastings, Evelyn B. The Department Store (2-)
								Greene, Carla. Motor Holiday (2-)
						x		Adamson, Hans Christian. Keepers of the Lights (2-)
								Martin, Patricia Miles. Benjie Goes into Business (2-)
								Miller, Jane. Dean and Don at the Dairy (2-)
								Stever, Dorothy Voorhies. Wholesale Produce Market (2-)
x		x	x		x		x	Lenski, Lois. When I Grow Up. (2-)
x							x	Seignobosc, Francoise. What Do You Want to Be? (2-)
							x	Wiseman, Bernard. Morris Is a Cowboy, a Policeman, and a Babysitter (2-)
					x	x		McCall, Edith S. The Buttons at the Farm
								Beim, Jerrold. Country Garage.

11	10	18	69	44	57	42	30	BY WORKING, PEOPLE IN A COMMUNITY HELP EACH OTHER (Cont't)
	x			x	x	x	x	Curren, Polly. This Is a Town
x		x			x			Schlein, Miriam. City Boy, Country Boy.
x	x	x	x	x	x	x	x	Schloat, G. Warren, Jr., Milk for You
x	x			x	x		x	Bendick, Jeanne and Robert, Television Works Like This.
x					x	x		Bate, Norman, Who Built the Bridge?
								Brooks, Anita, The Picture Book of Fisheries.
x		x		x	x	x	x	Bendick, Jeanne. First Book of Airplanes.
x					x		x	Black, Charles L. Big Book of Real Airplanes.
x					x			Burr, Walter. Cargoes in the Sky.
					x			Colby, Caroll Burleigh. Helicopters to the Rescue.
x								Cole, Lois Dwight. Linda's First Flight.
								Cooke, David Coxe. Behind the Scenes at an Airport.
		x						Cooke, David Coxe. How Airplanes are Made.
x		x						Whitehouse, Archibald. Real Book about Airplanes.
								SOME WORKERS PRODUCE GOODS, OTHERS PRODUCE SERVICES
								Buchheimer, Naomi. Let's Go to a Candy Factory (2)
x	x	x	x	x	x	x	x	Goodspeed, J. M. Let's Go to a Dairy (2)
								Hoke, Helen. Factory Kitty. (2-)
				x			x	Barr, Jene. Mike the Milkman (2-)
x		x		x				Greene, Erma. Let's Go to a Steel Mill (2-)
x								Lazarus, Harry. Let's Go to a Clothing Factory (2-)
						x	x	Letton, Mildred C. and Meyer, Barbara K. Maybe I'll be an Icecream Maker. (2-)
x		x				x	x	McCall, Edith, How We Get Our Clothing. (2-)
x		x					x	Phillips, Eleanor, About Oil
x		x				x	x	Randall, Winifred. Milk for You and Me.
x	x	x		x	x	x	x	Shannon, Terry. About Food and Where It Comes From (2-)
x								Wilson, Marilyn C. Let's Go to a Rubber Plant. (2-)
x	x	x		x	x	x	x	Beim, Jerrold. Shoeshine Boy. (2-)
								Greene, Carla. Hotel Holiday (2-)
x	x	x	x	x	x	x	x	Greene, Carla. I Want to be a Mechanic (2-)
								Kunhardt, Dorothy. Billy, the Barber. (2-)
						x		Kunhardt, Dorothy. Gas Station Gus. (2-)
x		x						Gelb, Donald L. What Will I Be From A to Z (2-)
						x	x	Hader, Bertha, and Elmer. Little Town. (2-)
x		x		x	x	x	x	Lenski, Lois. We Live in the City. (2-)
x		x	x		x		x	Maddox, Edith E. When I Grow Up.
x	x	x			x			Merriam, Eve. Mommies at Work (2-)
x		x			x			Radlauer, Ruth S. Fathers at Work.
								Radlauer, Ruth S. Women at Work (2-)
x								Urell, Catherine and others. Big City Workers (2-)
								Green, Mary Moore. About Apples from Orchard to Market (3-)
					x	x		Israel, Marion Louise. Sheep on the Ranch. (3-)
x								Collier, Ethel. I Know a Farm (3-)
x								Traver, Dorothy, and Miller, Art. Growing Oranges (3-)

11	10	18	69	44	57	42	30	SOME WORKERS PRODUCE GOODS, OTHERS PRODUCE SERVICES
x								Bate, Norman, Who Built the Bridge? (3-)
x	x	x	x	x	x	x	x	Greene, Carla, I Want to be a Carpenter (3-)
								Hammond, Diana. Let's Go to a Harbor (3-)
		x						McCarthy, Agnes. Let's Go to a Court. (3-)
								Chace, H. Haile. About the Captain of a Ship (3-)
						x		Allee, Veva Elwell. The Frozen Foods Plant (2-4)
					x			Banks, Marjorie Ann. How Foods Are Preserved (2-4)
x	x	x			x	x	x	Banks, Marjorie Ann. How We Get Our Dairy Foods (2-4)
x		x				x		Buchheimer, Naomi. Let's Go to A Bakery (2-3)
x	x	x	x		x	x		Greene, Carla. I Want to be A Baker (1-3)
x		x	x		x	x		Greene, Carla, I Want to be A Restaurant Owner (1-3)
x								Meshover, Leonard. You Visit a Dairy -- Clothing Factory (2-4)
		x			x			Brooks, Anita. The Picture Book of Oil (3-6)
					x	x		Butler, Roger. Let's Go to an Automobile Factory (4-6)
x						x		Butler, Roger. Let's Go to an Oil Refinery (3-5)
								Cooke, David C. Behind the Screnes at an Oil Field (4-6)
x		x						Cooke, David C. How Automobiles Are Made (4-6)
x					x			Cooke, David C. How Books Are Made (4-6)
x		x						Cooke, David C. How Money is Made. (4-6)
x		x						Cooke, David C. How Paper is Made. (4-6)
x		x		x				Jacobs, Lou, Jr. Oil, U.S.A. (3-5)
x								Norling, Josepnine. Pogo's Letter -- A Story of Paper (1-4)
x								Schatz, Letta. No Lights for Brightsville. (1-3)
x					x			Shannon, Terry. About Ready-to-Wear Clothes (3-6)
x								Dean, Lucille D. At the Dry Cleaners. (2-5)
								Dean, Lucille D. At the Laundry. (2-5)
x	x	x		x	x	x	x	Bendick, Jeanne. The First Book of Automobiles. (3-5)
x		x			x	x	x	Fenton, Caroll Lane and Kitchen, Hermini. Fruits We Eat.
						x		Foster, Joanna, Pages, Pictures and Print: A Book in the Making (5)
								Billings, Henry. Construction Ahead (5-)
					x	x		Coombs, Charles Ira. High Timber: The Story of American Forestry.
	x				x	x	x	Brooks, Anita. The Picture Book of Tea and Coffee.

WHERE A PERSON LIVES DETERMINES THE KINDS OF OCCUPATIONS FOUND THERE

Burt, Olive. Peter's Sugar Farm (4-)
Lenski, Lois. Corn-Farm Boy. (4-)
Sterling, Dorothy. Wall Street (4-)
Brooks, Anita. The Picture Book of Fisheries. (4-)
Freuchen, Peter. Whaling Boy. (4-)
Ipcar, Dahlov. Lobsterman. (4-)
Colby, Carroll Burleigh. Park Ranger. (4-)

11	10	18	69	44	57	42	30	WHERE A PERSON LIVES DETERMINES THE KINDS OF OCCUPATIONS FOUND THERE
								Floherty, John Joseph. Our F.B.I.: An Inside Story. (4-)
					x		x	Lent, Henry. Submariner. (4-)
								Hyde, Wayne. What Does a Parachutist Do? (4-)
					x	x		White, Anne Terry. All About Archaeology (4-)
							x	Hyde, Wayne. What Does a Diver Do? (4-)
						x		Gross, Herbert H. Exploring Regions Near and Far. (4-)
								Munzer, Martha. Unusual Careers. (4-)
x							x	Pierce, Mary Lusk. The Community Where You Live. (4-)
x								Howard, Robert West. Real Book About Farms (6)
					x			Rounds, Glen. Whitey's First Roundup (6)
								Bethers, Ray. Perhaps I'll Be a Sailor (4-6)
x								Chace, Haile H. About the Captain of a Ship (1-5).
x		x		x	x	x	x	Brewster, Benjamin. The First Book of Cowboys (4-6)
x		x			x	x		Brown, Margaret Wise. The Little Farmer (1-3)
					x			Gartland, Robert. Cowboys and Cattle. (1-5)
x	x	x	x		x	x		Greene, Carla. I Want to be a Cowboy (1-3)
x	x	x	x		x	x		Greene, Carla. I Want to be a Farmer (1-3)
x							x	Harvey, Lois F. About Cotton Growing (2-6)
x								Hyde, Wayne. What Does a Cowboy Do? (4-6)
x		x		x		x	x	Johnson, Irma B. About Truck Farming (3-6)
					x			Landin, Les. About Cowboys Around the World (3-5)
						x		Liffring, Joan. Jim and Alan on a Cotton Farm (3-5)
x								Shapp, Charles and Martha. Let's Find Out About Cowboys. (1-3)
x		x			x			Sootin, Laura. Let's Go to a Farm (1-3)
				x				Colby, Carroll B. Fish and Wildlife. (4-6)
x					x			Colby, Carroll B. Park Ranger (4-6)
								Colby, Carroll B. Smoke Eaters (4-6)
								Colby, Carroll B. Snow Surveyors (4-6)
								Colby, Carroll B. Soil Savers (4-6)
					x			Colby, Carroll B. Tall Timber (U.S. Forest Service (4-6)
								Dobrin, Norma. About Foresters (3-6)
	x		x	x	x	x	x	Lent, Henry Bolles. Men At Work in New England (4-6)
	x		x	x	x	x	x	Lent, Henry Bolles, Men at Work in the Great Lake States (4-6)
			x	x	x	x	x	Lent, Henry Bolles, Men at Work in the South (4-6)
	x		x	x	x	x	x	Lent, Henry Bolles, Men at Work on the East Coast (4-6)
		x	x					Greene, Carla. I Want to be a Coal Miner (1-3)

11	10	18	69	44	57	42	30	PEOPLE WORK FOR VARIOUS REWARDS
								Gustafson, Anne. Shad of Circle C. Ranch (2-)
					x			Hurd, Edith Thacher. Mr. Charlie's Farm (2-)
x		x			x	x	x	Martini, Teri. True Book of Cowboys.
							x	Tefft, Bess Hagamanx. Ken of Centennial Farm (2-)
x	x	x		x	x	x	x	Burton, Virginia Lee. Mike Mulligan and His Steam Shovel (2-)
x	x	x	x					Greene, Carla, I Want to be a Road Builder (2-)
						x		Schlein, Miriam. A Fisherman's Day. (2-)
								Brown, William L. and Rosalie M. Whistle Punk (2-)
								Elting, Mary, and Weaver, Robert. Soldiers, Sailors, Fliers, and Marines.
x		x	x		x			Lenski, Lois. Little Fire Engine (2-)
							x	Meeks, Esther K. Fireman Casey and Fireboat (2-)
x		x	x					Greene, Carla. I Want to be a Coal Miner. (2-)
x		x	x	x	x	x		Greene, Carla. I Want to be an Animal Doctor (2-)
								Bolton, S. D. Lives of Poor Boys Who Became Famous. (4-)

CAREERS ARE GROUPED BY JOB FAMILIES

		x		x		x	x	Elting, Mary. First Book of Nurses. (1-)
x		x	x			x	x	Greene, Carla. I Want to Be a Dentist (1-)
x	x	x	x	x		x	x	Greene, Carla. I Want to Be a Doctor (1-)
x	x	x	x	x		x	x	Greene, Carla. I Want to be a Nurse (1-)
x		x			x			Hammond, Diana. Let's Go to a Hospital (1-)
x					x			Jubelier, Ruth. About Jack's Dental Checkup (1-)
x					x		x	Jubelier, Ruth. About Jill's Checkup (1-)
						x		Kunhardt, Dorothy. Dr. Dick (1-)
								Pyne, Mable. The Hospital (1-)
x						x		Sever, Josephine Abbott. Johnny Goes to the Hospital (1-)
								Thompson, Frances B. About Miss Sue, The Nurse (1-)
								Thompson, Frances B. About Doctor John (1-)
					x	x		Witty, Paul. The Doctor. (1-)
								Boreman, Jean. Bantie and Her Chicks (2-)
x								Collier, Ethel. I Know a Farm (2-)
								Liffring, Joan. Dee and Curtis on a Dairy Farm (2-)
								MacMann, Elaine. Risky Business. (2-)
x					x			Payton, Evelyn. About Farm Helpers (2-)
						x		Tefft, Bess Hagaman. Ken of Centennial Farm (2-)
						x		Brown, William L. and Rosalie M. The Forest Fireman (2-)
x					x			Dobrin, Norma. About Foresters (2-)
					x			Russell, Solving About Saving Wild Life for Tomorrow (2-)
					x	x		Barr, Jene. Dan the Weatherman (2-)
x								Chester, Michael. Let's Go to a Rocket Base (2-)
x	x	x	x	x		x		Greene, Carla. I Want to Be a Space Pilot (2-)
x					x			Wolfe, Louis. Let's Go to a Weather Station (2-)

11	10	18	69	44	57	42	30	CAREERS ARE GROUPED BY JOB FAMILIES (Con't)
x								Butler, Roger. Let's Go to an Oil Refinery. (2-)
x		x			x	x		Nighbert, Esther. The True Book of Cloth (2-)
					x			Barr, Jene. Mike The Milkman. (2-)
				x		x		DeAngeli, Marguerite. Ted and Nina Go to the Grocery Store (2-)
x		x	x		x	x	x	Elkin, Benjamin. The True Book of Money. (3-)
x		x	x				x	Rees, Elinor. At the Bank (3-)
x		x	x	x	x		x	Sootin, Laura. Let's Go to a Bank (3-)
x				x	x		x	Rosenfield, Bernard. Let's Go to the U.S. Mint (3-)
x			x	x	x	x		Greene, Carla. I Want to Be a Restaurant Owner (3-)
						x	x	Miller, Jane. To Market We Go. (3-)
x	x	x		x	x	x	x	Carter, Katherine. The True Book of Houses (3-)
								Merrill, Jean Fairbanks. Blue's Broken Heart (3-)
x	x	x		x	x	x	x	Brewster, Benjamin. First Book of Baseball (4-)
								Calder, Peter Ritchie. The Wonderful World of Medicine. (4-)
x					x			Daniel, Anita. Story of Albert Schweitzer (4-)
						x		Deming, Dorothy. Sky Nurse (4-)
								Deming, Dorothy. Hilda Baker, School Nurse. (4-)
								Gelman, Steve. Baseball Bonus Kid (4-)
x		x			x	x		Hume, Ruth Fox. Florence Nightingale. (4-)
x		x	x		x	x	x	Rose, Mary Catherine. Clara Barton: Soldier of Mercy
								Truax, Rhoda. True Adventures of Doctors (4-)
								Deming, Dorothy. Hilda Baker, School Nurse (6)
x		x	x	x		x		Graham, Alberta Powell. Clara Barton, Red Cross Pioneer.
						x		Adamson, Gareth. Mr. Budge Builds a House (4-7)
x	x				x			Benenson, Lawrence A. How a House is Built. (5-6)
								Bergere, Thea and Richard. From Stones to Skyscrapers (4-6)
								Chester, Michael. Let's Go to Build a Suspension Bridge. (4-6)
			x					Colby, Jean Poindexter. Tear Down to Build Up (4-6)
x					x		x	Goodspeed, J. M. Let's Go Watch a Building Go Up (1-3)
x	x	x	x					Greene, Carla. I Want to be a Road Builder (1-3)
x	x	x				x	x	Antonacci, Robert J. and Jene Barn. Baseball for Young Champions (4-6)
								Schuon, Karl. The First Book of Acting (4-6)
x			x					Greene, Carla. I Want to be a Fisherman (1-3)
x								Allee, Veva Elwell. The Frozen Foods Plant (2-4)
						x		Banks, Marjorie Ann. How Foods Are Preserved (2-4)
x								Colby, Carroll B. Fish and Wildlife. (4-6)
					x			Colby, Carroll B. Park Ranger (4-6)
x	x				x	x	x	Newman, Shirlee, and Sherman D. About the People Who Run Your City.
		x	x		x			Polking, Kirk. Let's Go to See Congress at Work (3-5)
					x			Wolfe, Louis. Let's Go to a City Hall. (2-4)
x	x	x	x		x	x		Greene, Carla. Soldiers and Sailors -- What Do They Do? (1-3)

11	10	18	69	44	57	42	30	CAREERS ARE GROUPED BY JOB FAMILIES (Con't)
					x			Hyde, Wayne. What Does a Parachutist Do. (4-6)
				x				Weller, George. The Story of the Paratroops. (5-6)
	x	x	x	x				Wells, Robert. What Does an Astronaut Do? (4-6)
x		x			x	x		Berger, Knute and others. A Visit to the Doctor. (1-)
x		x			x			Buchheimer, Naomi. Let's Go to a Dentist (1-)
x		x			x	x		Chase, Francine. A Visit to the Hospital (1-)

GENERAL ACTIVITIES OF VOICE PROGRAM

TOPIC	NO. OF LECTURES	NO. OF STUDENTS
Physical Therapy	16	1,085
Police Work	54	2,111
Attorneys	2	70
Construction (Electrical)	12	200
Vocational Nursing	6	848
Salesmanship	21	125
Art	45	983
Music	37	840

GENERAL ACTIVITIES OF VOICE PROGRAM

SCHOOL	ACTIVITIES	TOTAL NUMBER OF STUDENTS
SARA KING ELEMENTARY	SPEAKERS	575
J. T. BRACKENRIDGE ELEM.	SPEAKERS	530
GRANT ELEMENTARY	SPEAKERS	335
BREWER ELEMENTARY	SPEAKERS	250
JOHNSON ELEMENTARY	SPEAKERS	463
OGDEN ELEMENTARY	SPEAKERS	293
STORM ELEMENTARY	SPEAKERS	566
CROCKETT ELEMENTARY	SPEAKERS	513
TAFOLLA JUNIOR HIGH	SPEAKERS	689
IRVING JUNIOR HIGH	SPEAKERS	379
RHODES JUNIOR HIGH	SPEAKERS	1,102
COOPER JUNIOR HIGH	SPEAKERS	239
STORM ELEMENTARY	FIELD TRIPS	30
J. T. BRACKENRIDGE ELEM.	FIELD TRIPS	30
GRANT ELEMENTARY	FIELD TRIPS	37
JOHNSON ELEMENTARY	FIELD TRIPS	5
KING ELEMENTARY	FIELD TRIPS	5

FIELD TRIPS

PLACE	NUMBER OF TRIPS	NUMBER OF STUDENTS
KCOR Television Station & Radio Station	1	5
H. B. Zachery Construction Company	1	25
WOAI-TV Station	1	30
Area I Administrative Offices	1	12
Law Offices - Alma Lopez, Attorney	1	5
San Antonio Junior College	1	5
Light Publishing Company	1	25
Visit to Municipal Court	1	1

E-Enrollment
A-Attendance

INSTRUCTOR	1-5-71 E/A	1-7-71 E/A	1-12-71 E/A	1-14-71 E/A	1-19-71 E/A	1-21-71 E/A	1-26-71 E/A	1-28-71 E/A	2-2-71 E/A	2-4-71 E/A	2-9-71 E/A	2-11-71 E/A	2-16-71 E/A	2-18-71 E/A	2-23-71 E/A	2-25-71 E/A	3-2-71 E/A	3-4-71 E/A	3-9-71 E/A	3-11-71 E/A	3-16-71 E/A	3-18-71 E/A	3-23-71 E/A
FALCON (Furn. Rpr.)	4 4	5 5	6 4	6 6	7 6	8 6	8 7	8 7	8 7	8 8	8 6	8 6	8 8	9 9	9 9	9 9	9 9	9 9	9 9	9 9	9 9	9 9	9 8
LOPEZ (Welding)	8 8	10 10	10 9	10 8	10 10	10 6	10 3	10 10	10 10	10 8	10 10	10 5	10 10	10 10	10 6	10 10	10 10	10 10	10 10	10 10	10 7	10 10	10 8
MAYS (Drafting)	13 13	13 13	13 13	13 13	13 13	13 13	13 13	13 13	13 13	13 13	13 13	13 12	13 13	13 13	13 9	13 13	13 13	13 13	13 13	13 13	13 9	13 13	13 13
NEWTON (Nurses' Aide)	14 14	15 14	15 13	15 14	17 17	18 18	20 [illegible]	20 18	20 19	20 17	20 18	20 19	20 18	20 16	20 15	20 16	20 18	20 19	20 18	20 17	20 18	20 19	20 19
RAMIREZ (Wards Clerks)	8 7	8 8	8 8	8 7	8 8	8 7	8 6	8 7	8 7	8 8	8 8	8 6	8 8	8 8	8 8	8 8	8 8	8 7	8 8	8 8	8 8	8 8	8 8
RODRIGUEZ (Drafting)	12 9	13 13	13 13	14 12	14 12	14 12	14 13	14 10	14 12	14 12	14 12	14 10	14 12	14 12	14 10	14 10	14 10	14 10	14 9	14 9	14 11	14 10	14 10
SANCHEZ (Engine Tune-up)	14 7	14 8	15 8	15 8	15 9	15 10	15 10	15 10	15 9	15 9	[illegible]	15 8	15 9	15 9	15 9	15 9	15 10	15 9	15 10	15 10	15 13	15 13	15 10
HIGDON (Typing)													10 10	24 24	36 36	36 14	41 22	41 39	41 39	41 29	41 29	36 14	36 14

E - Enrollment
A - Attendance

INSTRUCTOR	3-23-71 E/A	3-25-71 E/A	3-30-71 E/A	4-1-71 E/A	4-6-71 E/A	4-8-71 E/A	4-13-71 E/A	4-15-71 E/A	4-20-71 E/A	4-22-71 E/A	4-27-71 E/A	4-29-71 E/A	5-4-71 E/A	4-6-71 E/A	5-11-71 E/A	5-13-71 E/A	5-18-71 E/A	5-20-71 E/A	5-25-71 E/A	5-27-71 E/A
FALCON (Furn. Rpr.)	9/9	9/7	9/6	9/5	9/5	9/5	9/6	9/0	9/4	9/7	9/5	9/6	9/9	9/7	9/8	9/7	9/6	9/5	9/8	9/8
LOPEZ (Welding)	10/6	10/7	10/7	10/7	10/7	10/4	10/4	10/0	10/6	10/6	10/4	10/8	10/10	10/10	10/9	10/8	10/7	10/10	10/8	10/8
MAYS (Drafting)	13/8	13/12	13/10	13/8	13/8	13/4	13/9	13/0	13/8	13/8	13/9	13/8	13/12	13/8	13/10	13/10	13/10	13/12	13/11	13/11
NEWTON (Nurses' Aide)	20/15	20/16	20/18	20/15	20/15	20/16	20/17	20/0	20/16	20/16	20/14	20/16	20/17	20/18	20/18	20/17	20/16	20/17	20/18	20/18
RAMIREZ (Wards Clerks)	8/7	8/8	8/7	8/5	8/5	8/0	8/6	8/0	8/6	8/8	8/4	8/8	8/8	8/8	8/7	8/6	8/6	8/7	8/7	8/8
RODRIGUEZ (Drafting)	14/-	14/7	14/5	14/6	14/8	14/6	14/8	14/0	14/6	14/8	14/8	14/7	14/10	14/8	14/10	14/9	14/9	14/8	14/10	14/12
SANCHEZ (Engine Tune-up)	15/8	15/7	15/10	15/5	15/6	15/6	15/7	15/0	15/6	15/9	15/6	15/10	15/10	15/11	15/11	15/11	15/13	15/14	15/12	15/13
HIGDON (Typing)	36/20	36/28	41/26	41/41	41/20	36/36	36/20	36/0	36/20	36/24	36/24	36/24	34/24	34/25	34/27	34/27	34/30	32/27	32/30	32/27

EXPENDITURES - HIGH SCHOOL (SHORT TERM COURSES)

ITEMS UNDER $50.00:

COURSE	ITEM	QUANTITY	UNIT COST	TOTAL
Engine Tune-up	Timing Light	1 ea	$ 35.05	$ 35.05
Furniture Repair	Staple Gun Model #CT830	2 ea	12.50	25.00
	Staple Gun Model #CT855	2 ea	12.50	25.00
	Staple Gun Model #CT851	2 ea	12.50	25.00
	Bent Trimmer Shears	6 ea	7.50	45.00
	Pinking Shears	2 ea	7.15	14.30
Introduction to Welding	Arc-welding Helmets	6 ea	10.89	65.34
	Acety Regulators	2 ea	27.00	54.00
	Oxy Regulators	2 ea	36.00	72.00

ITEMS OVER $50.00:

Engine Tune-up	Dwell Tach Meter	1 ea	68.35	68.35
	Ignition Tester	1 ea	57.95	57.95
Introduction to Welding	Victor Oxy-Acety Welding Outfits	2 sets	143.90	230.24

SUPPLIES AND SMALL TOOLS

ENGINE TUNE-UP COURSE:

Quantity	Item	Unit Cost	Total Cost	Grand Total
24 cans	Soap - Hand Cream	$ 1.50	$ 36.00	$ 36.00
1 set	Ignition Wires	7.32	7.32	7.32
2 set	Spark Plugs	4.56	9.12	9.12
12 cans	Carburator Cleaner	1.40	16.80	16.80
6 ea	Condensers	.54	3.24	3.24
4 sets	Points G.M.	1.60	6.40	6.40
4 ea	Rotors G.M.	.78	3.12	3.12
4 ea	Rotors - Ford	.50	1.00	1.00
2 sets	Points - Ford	1.20	2.40	2.40
	Total			$ 85.40

DRAFTING #1:

10 ea	Minimum Property Stds (FHA Pub#300)	2.50	25.00	25.00
1 ea	#3434 Pencil Lead Pointer	2.95	2.95	2.95
1 ea	#FL-8 French Curve Set	4.00	4.00	4.00
15 ea	#3296 Flexible Stainless Shields	.20	3.00	3.00
15 ea	#959 Oval Spring Blades	2.40	36.00	36.00
1 doz	A-1 3/8 x 1/16 Needle Points	2.10	2.10	2.10
1 doz	B-1 3/8 x 1/16 Needle Points	1.90	1.90	1.90
1 doz	C-1 1/64 x 3/64 Needle Points	1.90	1.90	1.90
1 doz	B5 Eye Bolts & Screws	2.10	2.10	2.10
1 doz	B6 Eye Nut & Screws	2.10	2.10	2.10
1 ea	36" Parallel Ruling Straight Edge	24.72	24.72	24.72
1 gross	H Grade Metric Dr. Pencils	9.72	9.72	9.72
1 gross	4H Metric Dr. Pencils	9.72	9.72	9.72
1 gross	#300 Pink Pear Erasures	9.72	9.72	9.72
	Total			$ 134.93

SUPPLIES AND SMALL TOOLS

FURNITURE REPAIR:

Quantity	Item	Unit Cost	Total Cost	Grant Total
2 box	No. 5010 5/16 Due Fast Staples	2.75	5.50	5.50
2 box	No. 5012 3/8 Due Fast Staples	2.75	5.50	5.50
2 box	No. 508 1/4 Due Fast Staples	2.50	5.00	5.00
2 box	#5016 1/2 Due Fast Staples	2.95	5.90	5.90
2 box	#308 1/4 Due Fast Staples	2.40	4.80	4.80
2 box	#3010 5/16 Due Fast Staples	2.75	5.50	5.50
2 box	#3012 3/8 Due Fast Staples	2.75	5.50	5.50
2 box	#2 1/2 oz Uph. Tacks	.99	1.98	1.98
2 box	#3 oz Uph. Tacks	.89	1.78	1.78
2 box	#4 oz Uph. Tacks	.87	1.74	1.74
2 box	#8 oz Uph. Tacks	.82	1.64	1.64
2 box	#10 oz Uph. Tacks	.78	1.56	1.56
2 box	#12 oz Uph. Tacks	.78	1.56	1.56
6 ea	S Curved Magnetic Hammer	3.50	21.00	21.00
6 ea	Ripping Tool	1.85	11.10	11.10
4 ea	Size #3 Hickory Mallet	2.93	11.80	11.80
2 ea	Size #1 Rawhide Mallet	3.05	6.10	6.10
3 ea	Knife, Carpet or Oilcloth	1.10	3.30	3.30
2 ea	Tufting Needle	5.65	11.30	11.30
2 ea	Aluminum Straight Edge	5.95	11.90	11.90
1 box	3 1/2" Upholstery Fitting Pins	3.00	3.00	3.00
4 ea	12' Lafkin Steel Tape	2.95	11.80	11.80
1 sheet	4 x 66 x 105 Poly Foam	19.25	19.25	19.25
1 roll	1/2" Poly Foam	15.00	15.00	15.00
4 box	Chalk	1.45	5.80	5.80
2 box	Assorted Nylon Thread	9.00	18.00	18.00
2 box	White Nylon Bobbins A	5.50	11.00	11.00
2 box	Black Nylon Bobbins A	5.50	11.00	11.00
2 box	Taupe Nylon Bobbins A	5.50	11.00	11.00
1 box	White Nylon Bobbins G	5.50	5.50	5.50
1 box	Taupe Nylon Bobbins G	5.50	5.50	5.50
1 box	Black Nylon Bobbins G	5.50	5.50	5.50
1 bolt	Muslin	.30	18.00	18.00
40 yds.	Speckled Denim	.25	10.00	10.00
25 yds.	Burlap	.25	6.25	6.25
1 reel	5/32 Fiber Flex	4.45	4.45	4.45
1 roll	Spring Twine	5.85	5.85	5.85
1 roll	BFM Webbing	7.25	7.25	7.25
2 box	#308 Staples 1/4"	2.50	5.00	5.00
1 box	#3010 Staples 5/16"	2.75	2.75	2.75
1 box	#3012 Staples 3/8"	2.75	2.75	2.75
	Total			$ 309.11

SUPPLIES AND SMALL TOOLS

DRAFTING #2:

Quantity	Item	Unit Cost	Total Cost	Grand Total
1 ea	Master Punch	$ 6.05	$ 6.05	$ 6.05
1 doz	K Leads, grades 1, 2 & 5	6.00	6.00	6.00
10 ea	Federal Aids Sheets	.20	2 00	2.00
1 roll	Drawing Linen	41.32	41.32	41.32
5 ea	Scribecoat Sheets	2.00	10.00	10.00
3 ea	Bottles - Stabilene	1.20	3.60	3.60
1 roll	Albanene Film	8.00	8.00	8.00
5 ea	Sheets 601 White Board	.74	3.70	3.70
2 ea	Woodgrain Board	.93	1.86	1.86
12 ea	Drop Bow Compass	6.26	75.12	75.12
12 ea	Semicircular Protractors	.94	11.28	11.28
1 ea	Stainless Steel T Square	20.93	20.93	20.93
1 ea	Chalk Board Compass	1.83	1.83	1.83
1 ea	Chalk Board Protractor	2.21	2.21	2.21
12 ea	Dry Cleaning Pads	.59	7.08	7.08
12 ea	Adjustable Post Scriber	5.93	71.16	71.16
3 ea	100CL Template	5.81	17.43	17.43
3 ea	120CL Template	5.81	17.43	17.43
3 ea	140CL Template	5.81	17.43	17.43
3 ea	175CL Template	6.41	19.23	19.23
12 ea	0 Pens	.71	8.52	8.52
12 ea	1 Pens	.64	7.68	7.68
12 ea	2 Pens	.41	4.92	4.92
3 ea	3 Pens	.41	1.23	1.23
3 ea	4 Pens	.41	1.23	1.23
3 ea	5 Pens	.41	1.23	1.23
3 ea	6 Pens	.41	1.23	1.23
1 gross	Dixon Metric Pens	12.12	12.12	12.12
	Total			$ 381.82

INTRODUCTION TO WELDING:

3 tanks	Acetylene			
4 tanks	Oxygen		23.57	23.57
10 ea	Book: Arc Welding	1.00	10.00	10.00
10 ea	Books Oxy-Acety	1.00	10.00	10.00
12 ea	Books: Modern Welding	6.96	83.52	
	Less Discount		-18.38	65.14
6 ea	Tillman Cape Sleeves	17.50	105.00	105.00
6 ea	Filter Lens	1.15	6.90	6.90
6 ea	Plastic Lens	.17	1.02	1.02
20 ea	Carbon Arc Sticks 1/16	.30	6.00	6.00
20 ea	Carbon Arc Sticks 3/8	.34	6.80	6.80
12 ea	Strikers	.70	8.40	8.40
	Total			$ 242.83

SUPPLIES AND SMALL TOOLS

NURSE'S AIDS:

Quantity	Item	Unit Cost	Total Cost	Grand Total
2 ea	Nurse's Uniforms	$ 7.00	$ 14.00	$ 14.00
1 ea	White Levis	6.98	6.98	6.98
1 ea	Hot Water Bottle	2.39	2.39	2.39
1 ea	Wash Basin	1.94	1.94	1.94
12 ea	Thermometer (rectal)	.60	7.20	7.20
12 ea	Thermometer (oral)	.60	7.20	7.20
2 pkg	Gauze Flates 2 x 2	1.30	2.60	2.60
1 ea	Bed Pan (nylon)	5.91	5.91	5.91
1 ea	Urinal (male)	2.20	2.20	2.20
1 ea	Emesis Basin	.85	.85	.85
2 ea	Pillows	1.75	3.50	3.50
6 ea	Bath Towels	.95	5.70	5.70
6 ea	Face Towels	.59	3.54	3.54
6 ea	Wash Cloths	.29	1.74	1.74
2 ea	Sheet Blankets	3.49	6.98	6.98
20 ea	Manuals - Nurse's Aide	2.60	49.40	49.40
	Total			$ 122.13

WARDS CLERK:

1 ea	Name Tag	$ 2.20	$ 2.20	$ 2.20
8 ea	Manuals - Ward Clerk	4.50	36.00	36.00
1 ea	Instructor's Guide - Wards Clerk	4.28	4.28	4.28
5 ea	Dictionary - The New American Medical	1.25	6.25	6.25
10 ea	Dictionary - The New American Medical	.85	8.55	8.55
	Total			$ 57.28
	Total			$ 1,333.50

OFFICE EQUIPMENT

ITEMS UNDER $50.00:

Quantity	Item	Unit Cost	Total Cost
2 ea	Bracket (Miranda Camera)	$ 3.38	$ 6.76
2 ea	Coiled Cord (Shutter Flash)	3.71	7.42
2 ea	Accessory Lens Kit	5.96	11.92
2 ea	Case (Miranda Camera)	13.13	26.26
1 ea	Kodak Carousel Loader	9.71	9.71
1 ea	Kodak Carousel Synchronizer	31.60	31.60
1 ea	Slides Tray	2.21	2.21
1 ea	Knox Screen	49.46	49.46
1 ea	Reader Printer Lens	35.00	35.00
3 ea	Typewriter Elements	16.00	48.00
1 ea	Luxor Vu File	42.90	42.90
1 set	Metal Booking Tabs #516	3.50	3.50
1 set	Metal Booking Tabs #517	3.50	3.50
2 sets	Filmstrip Cards	5.80	11.60
	Total		$ 289.84
	TOTAL		$ 4,605.43

HIGH SCHOOL (Short Term Courses)

EQUIPMENT AND TOOLS REPORT

Items under $ 50.00

Engine Tune-up Course

Quantity	Item	Unit cost	Total cost	
1ea.	Timing Light	$ 35.05	$ 35.05	$ 35.05

Furniture Repair Course

2ea	Staple Gun Model #CT830	12.50	25.00	
2ea	Staple Gun Model# CT855	12.50	25.00	
2ea	Staple Gun Model #CT851	12.50	25.00	
6ea	Bent Trimmer Shears	7.50	45.00	
2ea	Pinking Shears	7.15	14.30	
	Less discount of		-7.93	
		Total	$ 128.37	$ 128.37

Introduction to Welding

6ea	Arc-welding Helmets	10.89	65.34	
2ea	Acety Regulators	27.00	54.00	
2ea	Oxy Regulators	36.00	72.00	
		Total	$191.34	$ 191.34

Items over $ 50.00

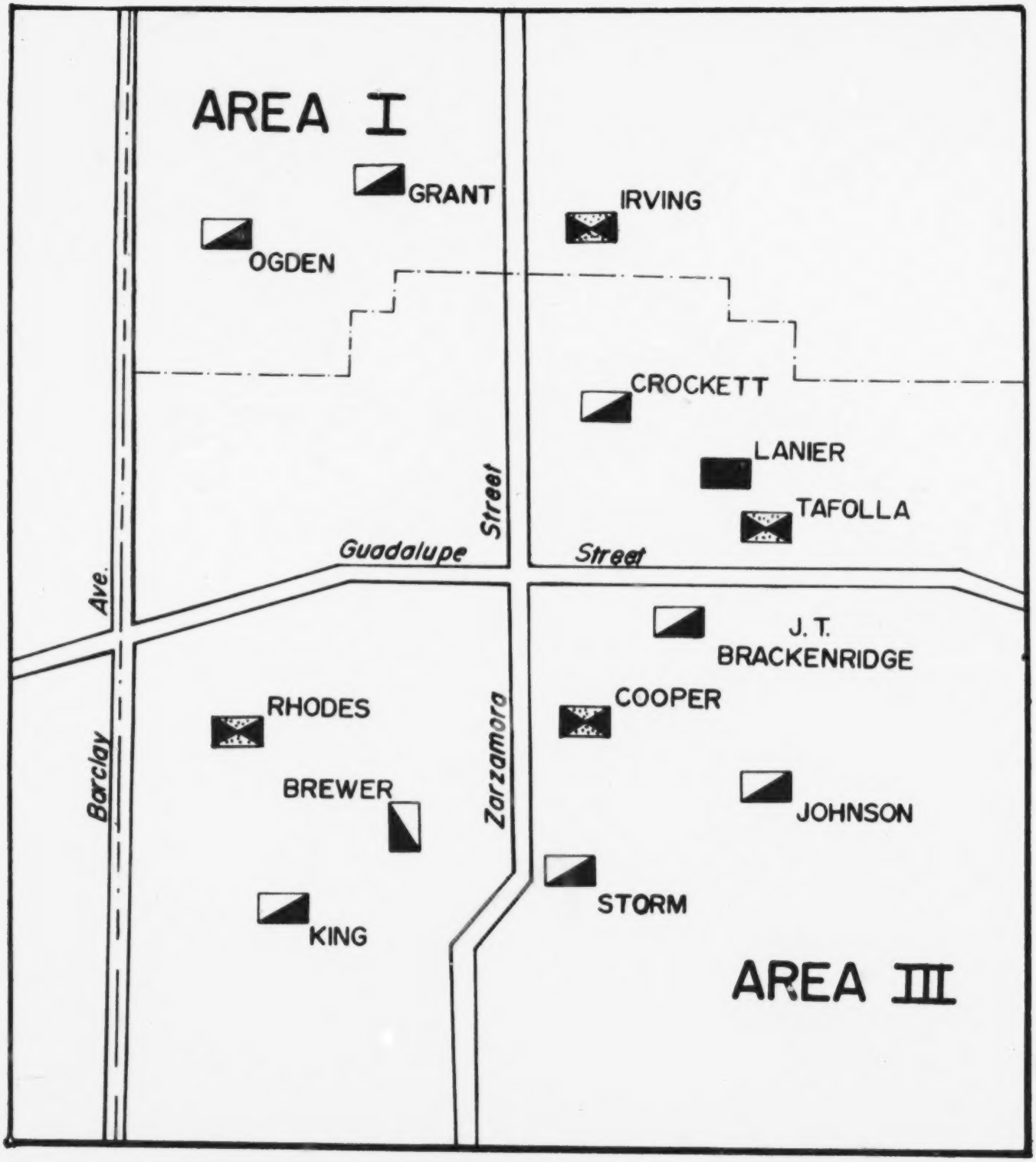
Engine Tune-up Course

1ea	Dwell Tach Meter	68.35	68.35	
1ea	Ignition Tester	57.95	57.95	
		Total	$ 126.30	$ 126.30

Introduction to Welding Course

2 sets	Victor Oxy-Acety Welding Outfits	143.90	230.24	$ 230.24
		Total		$ 711.30

COURSE	TOTAL COST OF EQUIPMENT
Engine tune-up Course	$ 161.35
Furniture Repair Course	128.37
Introduction to Welding	421.58
Drafting Course #1	0.00
Drafting Course #2	0.00
Nurses Aid Course	0.00
Wards Clerks	0.00
Typing Class	0.00
Grand Total	$ 711.30



LEGEND

Area Boundary Line

District Line

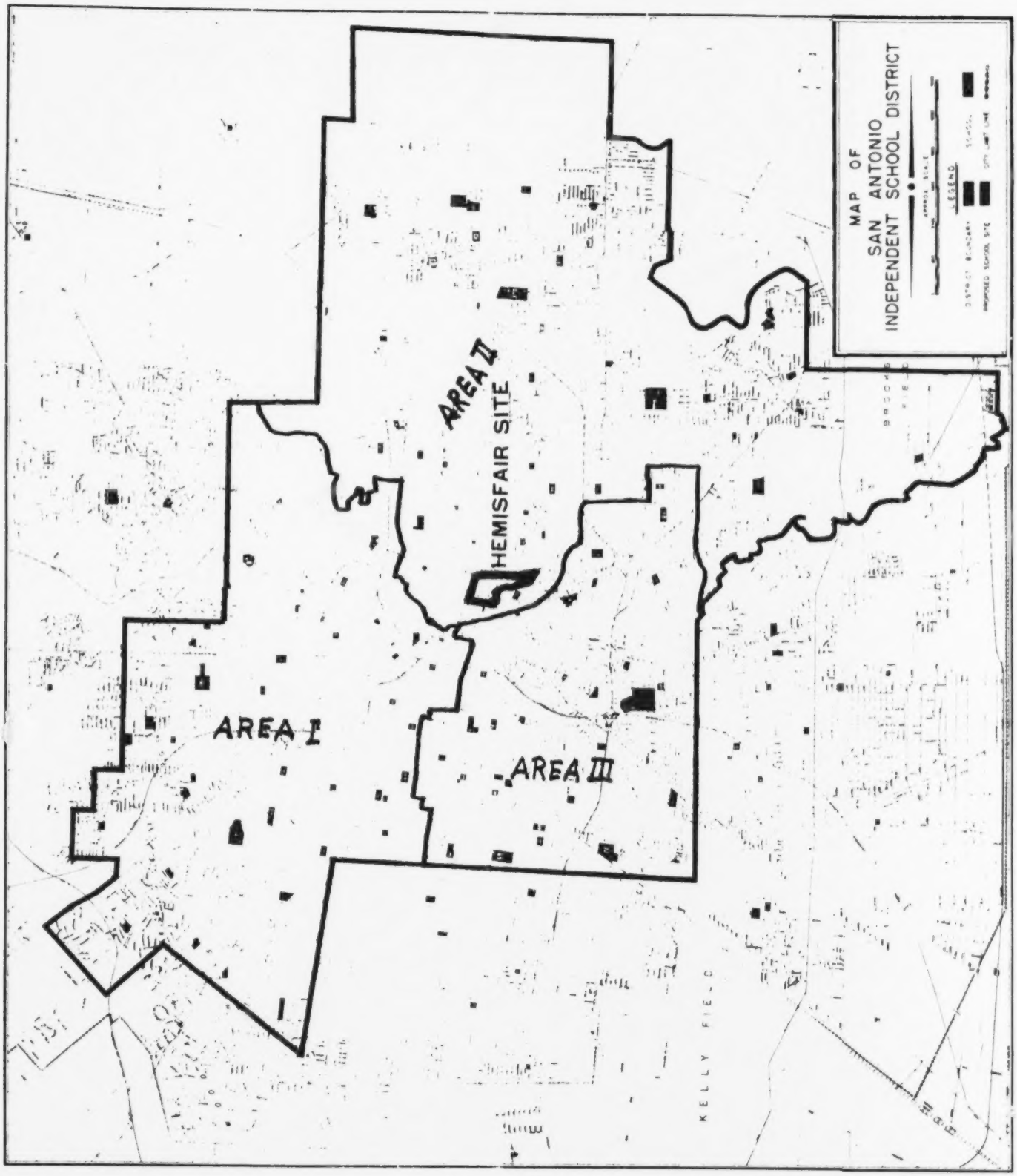
Main Arteries

Schools:

Elementary

JR. High

High


MAP OF
SAN ANTONIO
INDEPENDENT SCHOOL DISTRICT
LEGEND
AREA I
AREA II
AREA III
HEMISFAIR SITE
KELLY FIELD

VT 017 546

VT 017 546
HARNED, THOMAS LEE
INCREASING STUDENT-TEACHER RATIO IN A CORE HEALTH OCCUPATION CURRICULUM.

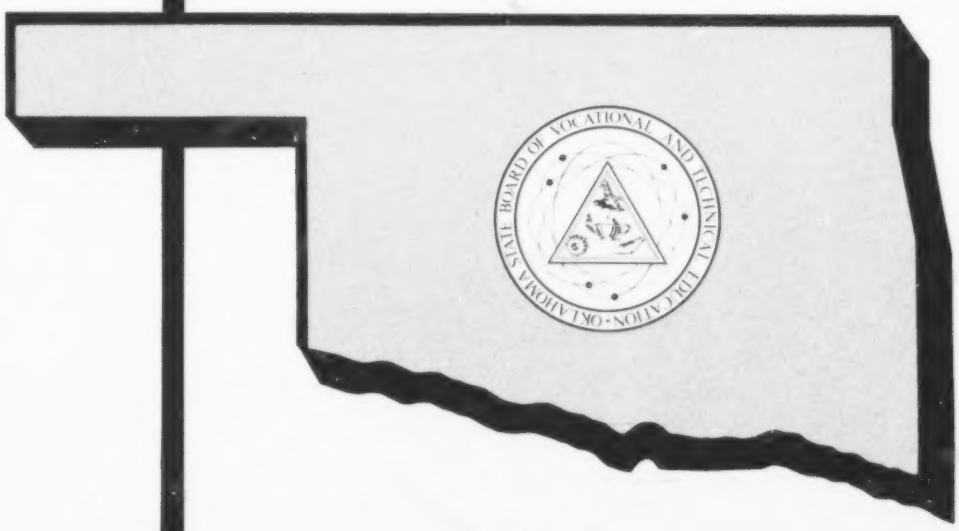
OKLAHOMA STATE DEPT. OF VOCATIONAL AND TECHNICAL EDUCATION, STILLWATER. DIV. OF RESEARCH, PLANNING, AND EVALUATION.
MF AVAILABLE IN VT-ERIC SET.
PUB DATE - 01JUL72 19P.

DESCRIPTORS - *CURRICULUM EVALUATION; *HEALTH OCCUPATIONS; *STUDENT TEACHER RATIO;NURSING; POST SECONDARY EDUCATION
IDENTIFIERS - DECISIONS

ABSTRACT - THIS DOCUMENT CONTAINS AN EVALUATION OF THE CORE HEALTH OCCUPATION CURRICULUM AT NORTHERN OKLAHOMA COLLEGE, TANKAWA, OKLAHOMA. THE PURPOSE OF THE EVALUATION IS TO ASSESS THE FEASIBILITY OF INCREASING THE STUDENT-TEACHER RATIO IN A CORE HEALTH OCCUPATION CURRICULUM. THE EVALUATION IS PRESENTED IN THE FOLLOWING SEQUENCE: (1) REVIEW OF THE OBJECTIVES OF THE PROJECT, (2) REVIEW OF THE ACTIVITIES OF THE PROJECT, (3) EVALUATION FINDINGS, (4) AN APPENDIX, AND (5) A SAMPLE OF ONE AUDIO-VISUAL PROGRAM. (DL)

INCREASING STUDENT-TEACHER RATIO IN A CORE HEALTH OCCUPATION CURRICULUM

THOMAS LEE HARNED



DIVISION OF RESEARCH, PLANNING, AND EVALUATION

STATE DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION /STILLWATER, OKLAHOMA

VT017546

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EDUCATION & WELFARE
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INCREASING STUDENT-TEACHER RATIO IN A CORE HEALTH OCCUPATION CURRICULUM

By

Thomas Lee Harned, R.N., M.P.H.
Director of Nursing
Northern Oklahoma College
Tonkawa, Oklahoma

July 1, 1972

EVALUATION OF CORE HEALTH OCCUPATIONS CURRICULUM
Northern Oklahoma College
Tonkawa, Oklahoma

July 1, 1972

REVIEW OF THE PURPOSE

The purpose of the project has been to assess the feasibility of increasing the student-teacher ratio in a core health occupation curriculum. The specific problems in occupational education with which this program is concerned are: first nursing programs are traditionally high-cost programs and second, many associate degree nursing programs have prepared graduates with low skill proficiency.

REVIEW OF THE OBJECTIVES

1. To increase the student-teacher ratio without loss of student achievement.

2. To increase the maximum number of freshman admissions in the nursing program.

3. To increase the total number of health occupation workers in Oklahoma.

It was stated originally in this project that a simple average of student-teacher ratio was 1 to 25. This is, however, a ratio of total nursing students (individuals) to total faculty. A policy statement entitled "A System for Calculation of Staff Requirements in Associate Degree Nursing Programs" has been developed by the president and the director of nursing of Northern Oklahoma College. In that policy various ratios are recommended for different learning environments. To quote from that policy will best demonstrate philosophy.

> It is further suggested that there are varying numbers of students which can be accommodated in each of these instructional situations, and that there may be: (1) maximum group sizes for maintenance of reasonable quality control; (2) minimal group sizes for

maintenance of efficiency; and (3) optimal group sizes in consideration of both quality and efficiency. These are suggested to be as follows:

Instructional Activity	Minimum Group Size	Optimal Group Size	Maximum Group Size
Theory Class	18	25-30	50
Laboratory Practicum	6	8-10	12
Individualized skills center guided learning & practice	1	5-6	10

REVIEW OF THE ACTIVITIES

This project has provided for an audio-visual learning center. The learning center contains a simulated hospital room and a simulated doctor's examining room. In addition there is a group viewing area used by students on an appointment basis. There are approximately 200 single concept audio-visual or visual programs related to the psychomotor skills of basic patient care. The nursing and medical assistant students were able to see an A-V demonstration as many times as was necessary for understanding; and then practice the skill in the same room until mastery of that skill was achieved. It is our belief that these repetitive skills are best taught and learned in this manner. This has freed the clinical instructor from supervising the practice of basic skills in the clinical lab and permits both student and instructor to work on higher level learning activities when in the clinical lab.

Tables I, II, III, and IV on pages 3 and 4 indicate the student use of the learning center by months and days of the week and also by clock-hour appointment and months.

TABLE I

(Indicates the total number of learner hours in the audio-visual skills center by the month and by the day for first semester 1971-72)

	Monday	Tuesday	Wednesday	Thursday	Friday	Total
Sept.	185	233	232	392	173	1215
Oct.	213	143	151	248	163	918
Nov.	182	180	173	75	40	650
Dec.	58	77	71	49	54	309
Total	638	633	627	764	430	3092

TABLE II

(Indicates the total number of learner hours in the audio-visual skills center by the month and by the day for second semester 1971-72.)

	Monday	Tuesday	Wednesday	Thursday	Friday	Total
Jan.	32	113	55	110	46	356
Feb.	50	116	39	68	61	334
Mar.	43	45	58	47	29	222
April	63	21	34	20	39	177
May	34	36	10	23	16	119
Total	222	331	196	268	191	1208

Total of Both Semesters

Monday	Tuesday	Wednesday	Thursday	Friday	Total
860	964	823	1032	621	4300

TABLE III

(Number of learner hours in A-V skills center by clock-hour appointment and by the month for first semester 1971-72.)

	September	October	November	December	Total
8:00	0	0	0	0	0
9:00	140	103	105	38	386
10:00	158	93	103	42	396
11:00	178	111	105	51	445
12:00	36	58	30	6	130
1:00	111	70	38	25	244
2:00	169	122	104	50	445
3:00	190	121	89	43	443
4:00	172	98	85	42	397
5:00	30	77	11	5	123
6:00	18	46	0	0	64

TABLE IV

(Number of learner hours in A-V skills center by clock-hour appointment and by the month for second semester 1971-72.)

	January	February	March	April	May	Total	Total of Both Semesters
8:00	51	30	31	40	20	172	172
9:00	47	45	36	36	21	185	571
10:00	48	20	11	14	16	109	505
11:00	46	32	25	17	19	139	584
12:00	2	21	14	6	0	43	173
1:00	45	38	35	16	14	148	392
2:00	52	31	27	20	14	144	589
3:00	56	27	27	13	12	135	578
4:00	9	27	15	15	3	69	466
5:00	0	0	0	0	0	0	123
6:00							64

A teacher's aide was employed to be present in the learning center seven hours a day, five days a week. This person was a technical nurse graduate (R.N.). She had work experience both in the hospital and doctor's office. This R.N. set up and maintained an appointment book and a student record keeping system for the learning center. She also developed and prepared student learning packages for the psychomotor skills required in the first year of the nursing program.

A consultant was employed to assist the faculty in development of materials which better adapt to the evaluation instrument used in evaluating learner performance on clinical practice and psychomotor skill development. The consultant, Grace Fivars, a representative of a national research organization American Institutes for Research was employed to work two days with health occupations faculty in a workshop setting.

Faculty travel and continuing education was one of the most vital aspects of this project. It especially aided our faculty to develop a group and program image which reflected the progressive aspects of our program philosophy and administration. A list of these experiences is as follows:

March 1972	-	National League for Nursing Council of Associate Degree Nursing Programs Annual Workshop, Dallas, Texas Attended by: T. Harned, Q. Turner
March 1972	-	El Centro Community College, Dallas, Texas Associate Degree Nursing Program facilities Attended by T. Harned, Q. Turner
March 1972	-	Visit to Arizona State University, College of Nursing, Tempe, Arizona. Meeting with faculty director of curriculum development. Attended by: T. Harned

March 1972 - Visit to facilities and gathering of materials from the following A.D.N. Programs:
Amarillo College, Amarillo, Texas
Phoenix College, Phoenix, Arizona
Northern Arizona Univ., Flagstaff, Arizona

Attended by: T. Harned

April 1972 - Visit to The University of Tulsa, School of Nursing, Tulsa, Oklahoma. Meeting with the director of nursing, tour of model facilities, and discussion of modern progressive curriculum design.

Attended by: T. Harned, M. Lawler, Q. Turner, J. Wilson

May 1972 - Workshop for new faculty in Associate Degree Nursing Programs, Manatee Junior College, Bradenton, Florida

Attended by: B. Fehrenbach, J. Wilson

June 1972 - A.A.J.C.-N.L.N. Workshop for new faculty in health occupations programs, St. Louis, Mo.

Attended by: D. Hufford, Q. Turner, J. Wilson

FINDINGS

We find that the beginning student in nursing or medical assisting comes to the learning environment with a preconceived idea of what nursing and medical assisting is. This preconceived idea is frequently and predominately skill oriented. The skill function of client care certainly is important, however we recognize that it alone is only a portion of the practice.

In order to meet the learners' needs at a time of readiness we encourage independent auto-tutorial learning of basic psychomotor skills of client care from the first week of each program (practicum). In the nursing program specifically the curricular plan calls for 6 hours per week of laboratory practice. In management of time our program has 5 hours

per week in supervised laboratory practice. As an incentive we give 1 hour per week to the learner to be used in auto-tutorial learning in the A-V Skills Center. It can be noted in analysis of the data in Table I that readiness is apparent. At the end of the first month there were over 1200 learner hours logged by 50 nursing students. This is an average of 24 hours per month per student, in the first month. The program only requires 1 hour per week or 4 hours per month for each student. Thus in the first month we find students of their own volition spending 6 times as much time as required in the learning center. This certainly bears out the readiness factor for the practicum class does not require demonstration of psychomotor skills until about the seventh week of practicum.

At the time that learners are concentrating on the development of psychomotor skills, the faculty are stressing in theory classes 'concepts' relevant to client care skills. The concepts, to list a few, are communication, observation, assessment, problem-solving and decision making. We further believe that the learning of concepts is of prime importance in career development. It is through the study of concepts in conjunction with principles (as versus facts alone) that the learner prepares for a flexible, dynamic and progressive career. Facts alone are often outdated in a short period of time (5 to 6 years).

Further analysis of the data indicates in the month of April (the last full month) there were 177 learner hours logged in the skills center. There were approximately 35 learners in the practicum class at this time which would give us an average of 5 hours per month per student. This figure is significant we feel in that the learner is still spending more than the required time per month in learning the basic psychomotor skills of client care.

The special characteristics of Northern Oklahoma College's program which has enhanced its success are: (1) telling the learner in behavioral terms what is expected in basic psychomotor skill development for client care, and (2) requiring the individual development of skill mastery in the learning center.

By requiring independent and continued learning activity on the part of the students during their basic educational program, it is felt that these two characteristics will be more evident in the graduate and also produce a graduate with greater skill competencies.

In conclusion we feel that we have demonstrated that it is feasible to increase the student-teacher ratio without loss of student achievement. The academic failure, in nursing practice class, in the first semester of this project was 10%. The academic failure, in nursing practice class, in the second semester of this project was 6%. Thus our over-all academic failure in nursing practice classes for the first year of this project was 8%. The cumulative academic failure for both nursing theory and nursing practice classes for the entire first year of this project was 17%.

APPENDIX

A SAMPLE OF ONE

AUDIO-VISUAL PROGRAM

NORTHERN OKLAHOMA COLLEGE

FUNDAMENTALS OF NURSING

SKILL CENTER

INJECTION SERIES

SUBCUTANEOUS INJECTION: SITE SELECTION AND ADMINISTRATION

Instructions:

After viewing the learner will be able to:

Objectives:

1. Select an appropriate site for subcutaneous injection.
2. Manipulate the syringe effectively using sterile technique.
3. Protect the patient from error and/or from injury.

AUDIO-VISUALS TO BE USED

1. Fundamentals of Nursing, Lippincott (Film Loop), "Subcutaneous Injection: Site Selection and Administration".

2. Basic Patient Care, Robert J. Brady Company, (Sound Filmstrip Program). A Subsidiary of Prentice-Hall, Inc. "Subcutaneous (Hypodermic) Injection Technique", B.P.C. - 33.

PRE-TEST

Instructions:

Read the following questions. Prepare to answer, while viewing.

1. How does the nurse identify the patient?

2. How does the nurse prepare the skin for injection or prior to injections?

3. At what angle to the skin does the nurse inject the needle and why?

4. How does the nurse prevent injection into a blood vessel?

5. Can the nurse promote rapid absorption of a drug, if so how?

6. How does the nurse aspirate the syringe?

7. At what period is the syringe left uncovered and unattended?

Instruction:

The Learner will obtain mastery, if the following can be completed with 90% to 100% accuracty

MASTERY LEVEL

1. The learner will be able to recall the physician's written statement on the chart regarding a specific procedure and recognize the scientific principles.

2. The learner will be able to determine the correct amount of medication.

3. The learner will be able to determine the correct patient.

4. The learner will be able to choose, by applying the scientific principles, the correct site for injection.

5. The learner will be able to demonstrate the subcutaneous method, by using a 45 degree angle for injection.

6. The learner will demonstrate the technique of aspiration before medication injection.

7. The learner will be able to demonstrate the basic principles maintaining sterile techniques.

8. The learner will use the scientific principles in preparing the skin for injection.

9. The learner will be able to employ the technique and recognize the scientific principle in gentle massage after injection.

10. The learner will be able to record in writing on the client's chart the technique or procedure completed.

POST TEST
SELF-EVALUATION

Instructions:

Immediately after viewing answer the following questions.

Questions:

1. What two sites are recommended for subcutaneous injections?

2. Can I estimate a 45 degree angle with good accuracy?

3. Was a sterile technique maintained?

4. Absorption was promoted by massaging the area thoroughly.

5. List three indications for the use of the subcutaneous injection.

6. Describe aspiration.

7. Into what layer of skin is the injection given?

8. List three ways of identifying the patient before giving an Injection.

INVENTORY OF SOFTWARE

HARRIS-TUCHMAN PRODUCTIONS, INC.

Communication filmstrips (cassette version)
2 Cassette Super Micromatic (DuKane) Model 28A15A

CONCEPT MEDIA

Set S102 - Nurse-Patient Interaction (with cassette tapes)
Set S103 - Pain-Sleep (with cassette tapes)

TRAINEX CORPORATION

1 Pkg. BN (101, 102, 105, 106, 107) C
1 Pkg. BN (108, 115, 116, 119, 124) C
1 Pkg. SN (140, 141, 142, 144, 145) C
1 Pkg. SN (148, 149, 151, 152, 153) C
1 Pkg. SN (154, 156, PC-173, 175, 177) C
1 Pkg. PC (178, 180, 181, 182, 185) C
1 Pkg. PC (187, 188, 193, 199, 201) C
1 Pkg. PC-207 C
HI-212C

ROBERT J. BRADY CO.

1 set Fundamental Nursing Principles-Transparencies
1 set Basic Patient Care-Filmstrips/Cassettes

J. B. LIPPINCOTT COMPANY

1 Postural Drainage Part 1
1 Postural Drainage Part 2
1 Deep Breathing - Cough
1 Intrapleural Drain One B
1 Intrpl Dr Suc Wtr Seal 1
1 Intrpl Dr Suc Wtr Seal 2
1 Endotrach-Bronch Aspirat
1 Trach Aspirat By Nurse 1
1 Trach Aspirat By Nurse 2
1 Trach Aspir by Patient
1 Gastric Aspiration
1 Gastric Lavage Part 1
1 Gastric Lavage Part 2
1 Gastric Gavage - Feeding
1 Gastronintestinal Drain
1 Handwashing
1 Gloves Reusable Opn Tech
1 Gown Gloves Mask
1 Gown Re Use Technic
1 Blood Pressure In Isolat
1 Sterile Field Prep

J. B. LIPPINCOTT COMPANY (con't)

1 Wound Care Cleans Redres
1 Surgical Scrub
1 Surgial Gown and Gloves
1 Making Unoccupied Bed 1
1 Making Unoccupied Bed 2
1 Making Occupied Bed 1
1 Making Occupied Bed 2
1 Manipulation of Linen 1
1 Manipulation of Linen 2
1 Bed Bath Part 1
1 Bed Bath Part 2
1 Care of Dentures
1 Prep Injection from Vial
1 Prep Injection Ampule
1 Prep Injection Tablet
1 Subcutaneous Injection
1 Site IM Injec Deltoid
1 Site IM Injec Lat Thigh
1 Site IM Injec Ventroglut
1 Site IM Injec Dorsoglut
1 Administration Im Inject
1 Moving Weak Patient
1 Moving Helpless 1 Worker
1 Moving Helpless 2 Workers
1 Weak Patient Into Chair
1 Wheelchair Very Weak Pat
1 Stretcher Helpless Patnt
1 Trochanter Roll
1 Prevention Drop Foot 1
1 Prevention Drop Foot 2
1 Projector 81 oz Zoom

VT 017 552

VT 017 552
A COMPREHENSIVE CAREER DEVELOPMENT PROGRAM K-10.

AKRON CITY SCHOOL DISTRICT, OHIO.
OHIO STATE DEPT. OF EDUCATION, COLUMBUS.
MF AVAILABLE IN VT-ERIC SET.
PUB DATE - ND 20P.

DESCRIPTORS - *CAREER EDUCATION; ELEMENTARY GRADES; SECONDARY GRADES; *EDUCATIONAL PROGRAMS; EVALUATION; EDUCATIONAL OBJECTIVES; QUESTIONNAIRES; TEACHING PROCEDURES
IDENTIFIERS - CAREER AWARENESS

ABSTRACT - THIS DOCUMENT GIVES A DESCRIPTION OF THE COMPREHENSIVE CAREER DEVELOPMENT PROGRAM K-10 AS DEVELOPED BY THE BOARD OF EDUCATION IN AKRON, OHIO. THE DOCUMENT PRESENTS AN END-OF-YEAR REPORT OF THE CAREER MOTIVATION PROGRAM FOR TWO ELEMENTARY SCHOOLS, FIVE JUNIOR HIGH SCHOOLS, AND ONE SENIOR HIGH SCHOOL. EACH SEGMENT OF THE REPORT ON THE SCHOOLS CONTAINS A STATEMENT OF AIMS AND PROCEDURES FOR THE PROGRAM, ITS PROJECTED CONSEQUENCES TO EDUCATION, AND AN EVALUATION OF THE PROGRAM. AN APPENDIX INCLUDES DATA ON TEACHER AND STUDENT INVOLVEMENT, STUDENT QUESTIONNAIRES, AND TEACHER, PARENT, AND BUSINESS EVALUATION FORMS. (DL)

COVER PAGE

Title of Program or Project:	A Comprehensive Career Development Program K-10
Applicant Organization:	Board of Education Akron City School District
Initiator:	Lloyd W. Bull Dr. Lloyd W. Bull Assistant Superintendent Curriculum and Instruction 216-434-1661, Ext. 209
Project Director	Nicholas J. Topougis Nicholas J. Topougis Coordinator, Career Programs 216-434-1661, Ext. 209
Transmitted by:	Conrad C. Ott Conrad C. Ott Superintendent of Schools 216-434-1661, Ext. 224
Duration of Activity:	July 1, 1971 to June 30, 1972
Purpose of Grant or Contract:	To conduct experimental developmental and pilot programs designed to meet the special vocational needs of youth.
Use of Funds:	Demonstration and dissemination projects.
Total State Funds Expended:	$147,696.29

Date Transmitted: _____

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
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VT017552

-ABSTRACT-

Title of Project or Program	A Comprehensive Career Development Program K-10
Principal Investigator	Dr. Lloyd W. Dull, Assistant Superintendent Curriculum and Instruction
Contracting Agency	Akron City School District
Amount of State Funds Expended	$147,696.29
Duration of Activity	July 1, 1971 to June 30, 1972

A. Statement of Objective

Objectives of the proposal include:

Develop positive student attitudes toward career opportunities K-10.

Facilitate pupil self=awareness and examination in terms of careers demands.

Facilitate flexible development of skills necessary to adjust to changing labor demands.

Facilitate pupil development of marketable skills.

Increase students awareness of how school activities related to future occupational choices.

B. Description of activities

Continue to evolve active career oriented learning experiences by providing hands on experiences and activities within the formal bounds of curriculum.

Continue to evolve work related curriculum entries and provisions for on the job application of basic skills.

Conduct purposeful occupational exploration through on the job site visitations, speakers, and suitable career supplementary material.

Conduct in-service education for the involved schools in order to reinforce career concepts and improve teaching techniques.

Continue to plan and provide resources necessary for special occupational experiences commensurate with individual pupils goals.

Examine and improve the counseling and guidance component.

C. Techniquest of Evaluation

Periodic evaluation reports of career efforts will be submitted by the involved staff. A mid-year evaluation will be submitted to the State Department of Education followed by an end of the year evaluation summary to determine the effectiveness of the career program in accomplishing stated objective.

D. Contribution to Education

Improvement and expansion of the current comprehensive career integrated curriculum material and related support materials.

THE NARRATIVE REPORT PLAN
END-OF-YEAR REPORT
CAREER MOTIVATION PROGRAM

The Akron Public Schools have completed the second year of operation of the Career Motivation Program for kindergarten through sixth grades. The two schools participating in the pilot program were Firestone Park and Seiberling Elementary Schools with a total enrollment of approximately 2200 students. Seventy-five professional staff members were involved in the implementation of the program this year.

The emphasis has been to develop an awareness of people as motivators and developers of society; teachers have utilized subject matter to build background for future career choices. Helping children see the relationship between the schools' role of its' preparing them for society while giving them the background necessary to assume their career role is the goal of the program.

It is hopeful that the enclosed evaluation report will confirm the author's belief that (1) the career program has been favorably accepted by the staff, students, teachers, parents, and community, (2) a variety of career activities have been utilized in program implementation, (3) growth and improvement have occurred as the program progressed, and (4) a high degree of success is evident in meeting stated objectives.

Aims of the Program

The objectives of the program are as follows:

.... to help child develop an awareness of himself as a worthwhile individual;

.... to create an awareness of the relationship of each occupation to the student, home, neighborhood, community, state, and nation;

.... to develop an understanding of the inter-relationships and inter-dependencies of workers and occupations;

.... to instill an understanding that there is dignity in all worthwhile work;

.... to emphasize the importance of decision-making and the thinking process;

.... to help students understand the role of the school in preparing for a career;

.... to increase the student's awareness of the many occupations found in our changing society.

Career Motivation Program Acceptance

Teachers' involvement evaluation indicates that 90% of the teachers were involved from very involved to satisfactorily involved. This involvement indicates the amount of time spent on career education in regard to state requirements. Very involved indicates that time well above the state requirements was spent on career education. Satisfactorily involved indicates that state requirements of time were met. See Appendix I.

Students were asked to respond to the question: "How important do you feel the following activities were in helping you to learn more about occupations and careers?" See Appendix III.

Students felt that field trips were most helpful with movies, filmstrips being second followed by tapes, records and class reports.

Students were questioned as to whether the program helped them realize the importance of school subjects to most jobs. Eighty-five percent responded that the program did.

Students were surveyed as to the knowledge they had gained in relationship to their interest and abilities. Eighty-one percent indicated they had a better knowledge of these areas. See Appendix II.

Parents were surveyed at the beginning of the year as to areas of expertise and interest and as to their interest in participating in the program. Parents responded favorably and their presentations to the children were very well received.

The businesses which were visited by the children and the speakers who spoke to the children all responded with admiration for the preparation and attention which were given their presentation.

Procedures

- Involved the business, industrial and professional community along with parents in providing occupational observations and resources for the students.
- A Career Program Coordinator supervised the total project. A Career Resource Teacher certified in Elementary Guidance coordinated building activities.
- Several in-service meetings were held for developing in-depth knowledge of career education and for the development of the total program. These meetings contained the following objectives:
- Construction of objectives:
- Planning programs and procedures:
- Reactions to the program after implementation;
- Writing scope and sequence and actual lesson plan guides.
- A curriculum guide was developed by the staff, using a committee with representatives from each grade level.
- Appendix III shows the various tools and facilities which were used to achieve the developmental and behavioral objectives.
- Pilot programs were developed to give hands on experience. Children work with students from the University of Akron's Home Economics department as well as the Industrial Arts department at Kent State University. Topics covered in Home Economics were:

Consumerism

Nursery School Operation

Food & Nutrition

Home Management

Topics covered in the Industrial Art Department:

Cooperation in a Technical Society

Appreciation of variety skills necessary in tehcnological soceity.

Awareness of one's own abilities in relation to industrial society.

Awareness of man's role as a builder in an industrial society.

Awareness of division of labor.

Contribution to Education

There were seven objectives listed at the beginning of this report. There has been considerable movement towards the attainment of the stated objectives. The development of self-worth and the relevancy of the curriculum to the world of work were the primary goals which have shown the greatest degree of change.

Although the students have only been in the program two years, you can see a marked improvement in their response to the taxonomy of behavioral objectives.

The spectrum level of the activities have become increasingly more sophisticated. In essence it can be said that we have moved well along in our progress toward the attainment of our intended goals.

The need for additional in-service training is evident as the increased involvement of staff takes place. In-service education will continue to develop and improve techniques of instruction and methodology.

THE NARRATIVE REPORT PLAN
END OF YEAR REPORT
CAREER ORIENTATION PROGRAM

The Akron Public Schools have completed two years of operation at two of our junior high schools, one year at a third school, and four months at a fourth junior high school which was made possible with additional funds received during the school year. The first two schools had an enrollment of 1670 students, the third school had an enrollment of about 780 while the fourth school involved 1020 students in the seventh and eighth grades. This enrollment involved a total of 3470 students and approximately 150 staff members.

It is hopeful that the enclosed eveluation report will substantiate the author's belief that (1) the "Career Orientation Program" has been favorably accepted by the staff, students, parents, and community of the selected schools; (2) a variety of activities were conducted in the program implementation; (3) continuous growth and improvement had occurred as the program progressed; and (4) a high degree of success was evident in meeting stated obuectives.

Aims and Objectives

The Career Orientation Program was structured to provide students with a continuation of opportunities to:

.... develop an awareness of their own interests, abilities, aptitudes, and personality strengths and weaknesses and the effects of these characteristics on future job choices;

.... gain exposure to diversity of careers available in society;

.... provide the students with opportunities for exposure to all levels of employment within career clusters;

.... provide career exposure to meet the needs of all students;

.... provide opportunities for school-wide orientation and development of the entire staff;

.... implement curriculum that enables the student to analyze various occupations in terms of data, people and things;

.... provide for continuous curriculum development, revision and evaluation;

.... develop disseminate information concerning career development to the parents and community in an effort to gain understanding and support.

Procedures

The Career Programs Coordinator supervised the total project with a Career Resource teacher at each school, assisting in the coordination of the career activities working in close cooperation with the professional staff and business and industry.

In both grades visitations to on-the-job sites were an important aspect of the program. The observations were highly structured with students spending the entire morning or afternoon, not only observing individuals working, but where possible, being given an opportunity to participate in an active work experience.

The Guidance Staff not only assisted in curriculum development, but also worked closely with the career teachers to identify students' choices of career clusters. In addition, they were responsible for the administering and interpreting interest and aptitude tests.

At one school a pilot "Super Arts" program was developed for the eighth grade students. All the arts (music, industrial, home economics, as well as art) teachers worked together in groups with students selecting areas according to interests. Boys went to courses of cooking and sewing, while girls took woodwork and metal shop classes. As a culmination to these activities the groups formed companies patterned after Junior Achievement. Their field observation enabled them to learn assembly line techniques. Speakers were involved, discussing the distribution of stocks and bonds and manufactured products. Businesses were also contacted regarding the advertisement process. As a culmination activity, there was a trades fair held in which the products of the companies were displayed and sold to the general public.

Evaluation of the Career Orientation Program

Included within the total evaluation are responses from students, teachers, parents and industry. Questionnaires were utilized with each of the mentioned groups in order to obtain a comprehensive view of the value of the total program to all concerned.

Approximately 600 of the 3470 responded to four questions. The first question was an attempt to measure how helpful the "Career Orientation Program" was to the participants in gaining knowledge in a wide variety of occupations. Forty-seven percent responded that the career activities proved very helpful, while forty-three percent said they were helpful.

Students' response to question two attempted to measure student reaction to the various career activities provided. Seventy-two percent believed the field trips were of assistance in gaining knowledge of occupations, while the resource speakers were related favorably by sixty-eight percent. Movies, filmstrips, and tapes received favorable comment from sixty-four percent of the respondents.

As a result of participation in the program, sixty-nine percent stated they had seen jobs that they felt they could successfully accomplish, while eighty-seven percent indicated they saw jobs they would like to try. Eighty-six percent indicated they saw a greater relationship between school subjects and future job success and seventy-nine percent felt that they had a better understanding concerning occupational preparation. A total of seventy-one percent believed that knowledge of their interest and abilities was increased as a result of the program.

A significant result was that ninety-eight percent wanted to see the career education continued.

Teacher Response to the Career Orientation Program

The reaction received from the evaluation of the total staff reinforces the acceptance of the program. The questionnaire made an attempt to measure approaches utilized in the program and the reaction to them.

The most widely used tool for career program implementation was the field trips; ninety-two percent felt this was very helpful to helpful. The second most useful tool was the resource speaker which seventy-nine percent felt was very helpful to helpful.

Significant outcome of the program was that ninety-four percent of the teachers responded that the career program increased their knowledge of occupations. Also, eighty-four percent felt the career program was helpful in their students gaining occupational information. The response of the staff concerning their desires to be participants in next year's program was extremely gratifying, with ninety-three percent responding affirmatively.

Parent Evaluation of the Career Program

Parents played a vital role during the entire implementation of the program. They were surveyed as to their interest in being speakers or having students visit their place of employment or businesses. They also accompanied students on selected field trips, as well as relating their occupations to the subjects the students were studying. The response received in the parent evaluation of the program indicates their favorable impression as a result of the survey. All of the parents surveyed,wish to see the continuation of the program.

Business and Industry Evaluation

Upon the completion of each field trip or speaker, an evaluation instrument was submitted to the firm visited or speaker who participated pertaining to student reaction and participation. In addition, comments were requested concerning the attitudes toward each activity. From the returns submitted, it was evident that they were in complete agreement that the program provided students with an excellent opportunity to become acquainted with a wide variety of careers. Because of the time required by the industry in presenting the field experience or sending out speakers, it would lead one to believe that there would be some negative attitudes, but each of the instruments indicated a willingness to participate in the program in the future.

Contributions to Education

The evaluation instrument indicates there has been a high degree of growth in career awareness as well as their interests and aptitudes. The 456 field trips in which 3470 students were involved indicates that a substantial exposure to on-the-site instruction took place. There were 135 speakers who related to the same audience for additional occupational knowledge. This coupled with the untold hours of preparation and follow-up discussion along with related classroom activities, indicates a great deal of career orientation and exploration took place during the course of the school year.

The eight workshops which were attended by the staffs of the involved schools, provided opportunities of further developing and improving classroom activities related to the program. The utilization of career films, tapes, filmstrips, and other manipulative devices by teachers as well as students, certainly gave both an opportunity to further increase their present occupational knowledge. The "Super Arts" program, as well as other business oriented units of study, such as "Advertisement and the Economy", "Ecology and its Effect on the Environment", permitted students to gain a greater relevancy of the curriculum in relationship to the world of work.

Curriculum writing sessions were held during the past school year and there is a committee meeting this summer to look at a revision or integration of the career program and the curriculum through the fifteen cluster areas. Coordinators and teachers disseminated information on career education through the use of bulletin boards, newsletters, presentations at staff meetings, as well as personal contact and the periodic workshops.

THE NARRATIVE REPORT PLAN
END OF YEAR REPORT
CAREER EXPLORATION PROGRAM

The Akron Public Schools have completed the second year operation of the Career Exploration Program at two schools, Goodyear Jr. and East Senior High. A second junior high, Perkins, was added this year and the last semester of the school year saw Buchtel Senior High added to the program with the acceptance of additional state funds. The total enrollment at the four schools in the ninth and tenth grades is about 1678 students.

It is hopeful that the enclosed evaluation will substantiate the author's belief that: (1) the "Career Exploration Program" has been favorably accepted by the students, staff, parents and business community of the selected schools; (2) a variety of career activities were conducted in program implementation; (3) continuous growth and improvement had occurred as the program progressed; and (4) a high degree of success was evident in meeting stated objectives.

Aims of the Program

The objectives of the program were as follows: A general orientation to the world of work at the outset with an examiniation of selected career areas as the program progressed in order to:

.... develop a more realistic view of occupations;

.... provide an opportunity for a systematic study of selected occupational clusters;

.... provide for practical work experience in selected occupational areas;

.... develop increased self=awareness so students understand how their attitudes and experience affect job choices and satisfactions;

.... provide an opportunity for a visual understanding of what a person does for a particular job.

Procedures

The procedures utilized in program impelmentation are as follows:

.... The Career Coordinator supervised the total project.

.... A Career Resource Teacher (coordinator) in each building assisted in the coordination of the career activities within the school and worked in close cooperation with local business and industry to provide in-depth exposures to selected career areas.

.... Teachers in the ninth grade continued to develop programs which would integrate career education into the curriculum.

.... Career classes were conducted by the tenth grade career teacher. Career materials such as films, filmstrips, cassette tapes, books, pamphlets, etc., were utilized in the presentations. In addition, representatives from business and industry presented detailed occupational information to students.

.... In both grades visitations to on-the-job sites was an important aspect of the program. The visitations were highly structured with students spending the entire morning or afternoon, not only observing individuals working, but where possible, being given an opportunity to participate in an active work experience.

.... The Guidance Staff not only assisted in curriculum development, but also worked closely with the career teachers to identify students' choices of career clusters. They were responsibly for administering and interpreting of interest and aptitude tests.

.... Exploration on a one-to-one basis with persons performing jobs relating to the clusteral interest of the student.

.... Visits were made to training locations to observe training facilities, students at work, and to talk with the instructors.

.... Lab units in construction and trade, photography, and agriculture were implemented on a pilot basis within the ninth grade.

Evaluation of the Career Exploration Program

Included within the total evaluation are responses from students, teachers, parents, and the business community. Questionnaires were utilized with each of the mentioned groups in order to obtain a comprehensive view of the values of the total program to all concerned.

Approximately 440 of the 1678 students responded to four questions. The first question was an attempt to measure how helpful the "Career Exploration Program" was to the participants in gaining a knowledge of a wide variety and selected areas of occupations. Ninety-seven percent responded that the career activities were helpful to the participants in gaining this knowledge.

Students' responses to question two attempted to measure students' reactions to various career activities provided. Ninety-eight percent felt the field trips were of assistance in gaining knowledge of occupations while teachers were rated favorably by eighty-six percent of the students. Movies, film strips, tapes, and other audio-visual aides obtained favorable comments from sixty-one percent of the participants.

As a result of participation in the program, seventy-four percent stated they saw jobs they felt they could accomplish, while eighty-two percent indicated they saw jobs they would like to do. Eighty-two percent mentioned they saw a greater relationship between school subjects and future job success and eighty-seven percent felt they had a better understanding concerning occupational preparation. Fifty-three percent found vocational programs of interest to them, but only forty-eight percent planned to continue education beyond high school. A total of seventy-two percent believed that knowledge of their abilities and interests was increased as a result of the program.

A significant result in the Program evaluation was that ninety-eight percent of the students wished to see the Career Exploration Program continued.

Business and Industry

Upon the completion of each structural visitation an evaluation was submitted by the firm visited pertaining to student reaction and participation. In addition, they were asked to make comments concerning their attitudes towards each activity. From returns submitted, it was very evident that business and industry were in complete agreement that the program provided students with a very good opportunity to become acquainted with careers. Because the ninth and tenth grade trips required a greater amount of time than the general observation type, it would lead one to believe that there might be a negative attitude towards them; however, all the places visited agreed to continue the cooperative program this coming year.

Parent Evaluation of Career Programs

Parents played a vital role during the entire program's implementation. Not only did they accompany teachers and students on selected trips, but they also presented information concerning their specific occupations to classes. Evening courses were held in conjunction with Project Trend, which informed parents of the career program and its offerings. The response received in the parent evaluation of the program indicates their favorable impression. Sixty-six percent stated the program was excellent, while the rest believed it worthwhile. All parents surveyed wish to see the program continued.

Summary

It was felt that the past year's experience has been extremely beneficial to all concerned. Workshops have been held during the school year and writing sessions are continuing into the summer at both the ninth and the tenth grade levels.

We are still exploring possibilities for hands-on experience. Our thrust next year will be to work toward the identification of career clusters as they relate to subject areas, develop an awareness on the part of the students, and then try to correlate their field trips and other career activities to correspond with the students' field of interest. Our second area of concern will be in attempting to develop some more concrete hands-on experiences for the students. We are exploring this possibility with the local universities, as well as the service organizations, volunteer groups, and the business and industrial community.

A P P E N D I X I

CAREER MOTIVATION K - 6

CHART OF TEACHER INVOLVEMENT

Very Involved
Above State Requirements 43½%

Satisfactorily Involved
Meeting State Requirements 46½%

Fairly Involved
Below Requirements 10%

APPENDIX II

CAREER MOTIVATION K - 6

STUDENT PARTICIPATION

	Number	Students Involved
Field Trips.	260	9100
Speakers	50	1750

APPENDIX III

CAREER MOTIVATION K-6

STUDENT RESPONSE CHART

		Very Helpful	Helpful
A.	Field Trips.	49%	43%
B.	Speakers.	23%	54%
C.	Counselors.	46%	36%
D.	Lesson or Class Assignment on Occupations.	18%	49%
E.	Movies, Filmstrips.	42%	49%
F.	Career Kits, books, pamphlets. . .	27%	43%
G.	Tapes, records, class projects. . .	43%	43%

RESPONSE TO TWO QUESTIONS ABOUT RESULTS IN STUDENTS

		Yes	No
A.	Realized school subjects are important for success in most jobs.	85%	5%
B.	Gained more knowledge about my interest and abilities.	81%	9%

RESPONSE TO THE QUESTION ABOUT WHETHER THE CAREER PROGRAM SHOULD BE CONTINUED

A. 97% responded yes

B. 2% responded no

C. 1% did not respond

TEACHER EVALUATION OF CAREER PROGRAM

*TEACHER _____ SUBJECT _____ GRADE LEVEL _____

Following are some questions that ask about your feelings and attitudes regarding this year's Career Program. We hope to use your answers to evaluate our efforts in career development and in improving the program for the coming school year.

1. Indicate all the ways in which students in your classes were exposed to occupations this school year. (Mark all that apply.)

   _____A. Field trips.
   _____B. Special class assignments in careers.
   _____C. Resource speakers.
   _____D. Trying some practical experience in class that is related to an occupation.
   _____E. Using audio-visual career material.
   _____F. Using interest and aptitude test. (counselor or teacher administered)
   _____G. Vocational group counseling sessions with counselor.
   _____H. Using career exploration kits and games.
   _____I. Related subject matter to occupations whenever possible.
   _____J. None of the above.
   _____K. Other _____

2. Rate your students' attitude toward the following career activities.

	Very Interested	Interested	Not Sure	No Interest
Field trips				
Speakers				
Classroom Career Projects				
Occupational movies, filmstrips				
Career Exploration kits, books and pamphlets				

3. Which of the following best describes your occupational knowledge and background prior to the beginning of the program?

   _____A. Very good background, knowledge and experiences related to the world of work.
   _____B. Sufficient background, knowledge and experiences regarding a variety of occupations.
   _____C. Limited background and knowledge (possibly exposed only to the professions).
   _____D. Very little background related to the world of work.

4. Has your involvement in the Career Program increased your occupational knowledge?

   _____Yes _____No Additional comments _____

   _____

* If you desire, you may omit your name.

5. How helpful do you think the Career Program has been in exposing students to occupations?

_____A. Very helpful.
_____B. Helpful.
_____C. Not sure.
_____D. No help at all.

6. The assistance rendered by the building coordinator and the career office in planning your career activities has been:

_____A. Very helpful.
_____B. Helpful.
_____C. No help requested.
_____D. Dissatisfied with the assistance.

7. Please mark appropriate areas in which you feel need to be improved upon for next year's career program.

_____A. More classroom activities providing "hands-on" experience in specific occupations.
_____B. Wider selection of supplemental career material.
_____C. Curriculum guides which suggest possible career activities.
_____D. Information regarding what will be seen or heard on field trips prior to visitation.
_____E. Other (Explain briefly)

8. Would you be willing to participate in the Career Program next school year?

____Yes _____No

9. Would you be willing to attend a summer workshop to expand career development teaching techniques?

_____A. Yes, regardless of time.
_____B. Yes, if time is suitable.
_____C. No.

10. Please use space to make any additional comments that you feel will be important to our evaluation and improvement of present program.

STUDENT QUESTIONAIRE

NAME_____Grade_____School _____Age_____

Please check the following as they apply to you.

I. The career activities that I participated in this past year have proven to be: (Mark only one)

_____A. Very helpful in learning about a variety of occupations.
_____B. Helpful in learning about a variety of occupations.
_____C. Of no help at all in learning about various jobs.
_____D. Not sure.
_____E. Did not participate in any career activities.

If you have marked A or B in the above question, please answer questions 2 & 3 as they apply to you.

II. Rate how important each of the career activities was to you in gaining more knowledge about occupations.

	Very Helpful	Helpful	Not Sure	No Help
Field trips- - - - - - - - - - - -				
Speakers - - - - - - - - - - - - -				
Counselors- - - - - - - - - - - - -				
Lessons or class assignments on- occupations- - - - - - - - - - - -				
Movies, film strips- - - - - - - -				
Career kits, books, pamphlets- - - -				
Tapes, records, class projects, games				

III. As a result of my participation in the Career Program, I have:

	Yes	No	Not Sure
A. Seen jobs I could successfully do.			
B. Seen jobs I would like to do.			
C. Realized school subjects are important for success in most jobs.			
D. A better understanding on how to prepare for a job.			
E. Found vocational school programs interest me. - - - - - - - - - -			
F. Decided to continue my education after school. - - - - - - - - - -			
G. Gained more knowledge about my interest and abilities.			
H. Selected certain occupations that I would like to gain more information.			

IV. I would like to see the Career Program continued next year. ___Yes ___No.

EVALUATION FOR PARENTS

Dear Parents:

This year sophomores at East High School have participated in a Career Exploration Program. The purpose of this program was to start students thinking seriously about their future. We tried to aid the students in making career decisions by providing them specific information about various careers and by taking them to places of their own choosing where they were able to see jobs being performed in the environment peculiar to that career. We would like to know what you think about the program.

A._____ B._____
Your Name Your child's name (please print)

Place an X in front of one answer that best describes your opinion.

1. How much do you know about the Career Exploration Program that was started to help your child learn about jobs? (Mark only one.)

   _____A. I know a lot about the program.
   _____B. I know some about what students do in the program.
   _____C. I know a little about what students do in the program.
   _____D. I know nothing about what students do in the program.

   If you know about the Career Exploration Program, from what source did you learn most about it? (Mark only one.)

   _____A. From your child?
   _____B. From the school?
   _____C. From the people in the community?
   _____D. Other

   How do you feel about having your child participate in the Career Program in his school? (Mark only one.)

   _____A. An excellent experience.
   _____B. A good experience.
   _____C. My child would have learned as much about jobs without the program.
   _____D. Complete waste of my child's time.

   Would you like to see the Career Program continued next year? ____Yes ____No

   Please add any comments or suggestions you might have. We would be interested in any changes in interests or attitudes that your child has shown that might have been stimulated by career trips.

   _____

   _____

   _____

After completion, please place in stamped envelope and mail.

BUSINESS AND INDUSTRY EVALUATION

We would greatly appreciate it if you could take a few minutes of your time to fill out this evaluation form to help us set up future programs of this type.

Thank you very much for your help.

1. Did you fully understand what was expected of you before each trip?	yes	no	at times	
2. How do you think the students responded to the trip?	very well	well at times	not at all	could not tell
3. Was the time allowed for the trip long enough?	yes	no	too long	adequate time
4. Do you think the students were adequately prepared for the trip?	yes	no	could not tell	
5. Were the students adequately supervised?	yes	no	at times	

6. Please feel free to add any comments you have about your experiences with the students and the teachers.

_____

_____

_____

_____

7. Would you be willing to lend support to this program again?

NAME_____ POSITION_____

PHONE_____ COMPANY_____

VT 017 560

VT 017 560
GRIFFITH, B.B.
A COMPARATIVE STUDY OF FEDERALLY REIMBURSED WITH NON-FEDERALLY REIMBURSED BUSINESS EDUCATION PROGRAMS IN OKLAHOMA.

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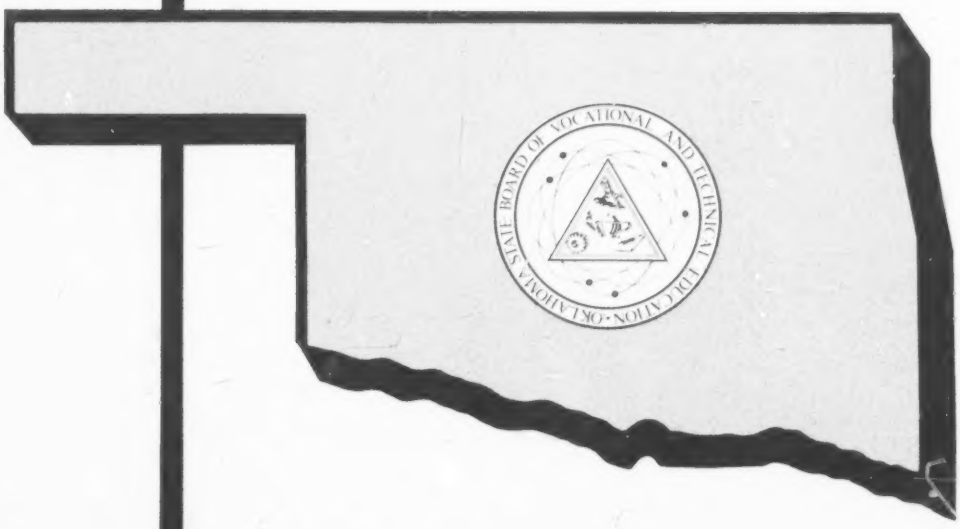
IDENTIFIERS - *OKLAHOMA; EDUCATIONAL AWARENESS

ABSTRACT - THE PURPOSES OF THIS STUDY WERE: (1) TO DETERMINE WHETHER THE FEDERAL FUNDS HAVE APPRECIABLY IMPROVED REIMBURSABLE BUSINESS EDUCATION PROGRAMS COMPARED TO NON-REIMBURSABLE BUSINESS EDUCATION PROGRAMS IN OKLAHOMA, AND (2) TO MAKE RECOMMENDATIONS FOR FUTURE ALLOCATIONS OF RESOURCES TO BUSINESS EDUCATION. IN EACH OF EIGHT SELECTED SCHOOLS HAVING AVAILABLE BOTH REIMBURSABLE AND NON-REIMBURSABLE PROGRAMS, ONE CLASS OF REIMBURSABLE BUSINESS EDUCATION STUDENTS AND ONE CLASS OF NON-REIMBURSABLE STUDENTS COMPLETED A DATA SHEET FOR THE STUDY. SEVEN MONTHS AFTER THEIR GRADUATION, THE PARTICIPATING STUDENTS WERE MAILED A QUESTIONNAIRE CONCERNING THEIR EMPLOYMENT. AN EVALUATION QUESTIONNAIRE WAS ALSO SENT TO THEIR EMPLOYERS. FINDINGS INDICATED THE REIMBURSABLE STUDENTS HAD OBTAINED MORE AND BETTER EMPLOYMENT POSITIONS, MORE ADDITIONAL TRAINING, BETTER PAY, AND HIGHER RATINGS BY THEIR EMPLOYERS. AMONG THE RECOMMENDATIONS ARE THE FOLLOWING: (1) EXTENSION OF THE REIMBURSABLE BUSINESS EDUCATION PROGRAMS, (2) EMPHASIS ON SECRETARIAL AND CLERICAL OCCUPATIONS WITHIN THE PROGRAMS, (3) PROVISION FOR TRAINING OF BUSINESS STUDENTS IN MARKETING AND DISTRIBUTION, AND (4) ADDITIONAL EMPHASIS ON SPELLING, MATHEMATICS AND OTHER SKILLS EMPLOYERS FOUND LACKING IN THE GRADUATES. (KH)

A COMPARATIVE STUDY OF FEDERALLY REIMBURSED WITH NON-FEDERALLY REIMBURSED BUSINESS EDUCATION PROGRAMS IN OKLAHOMA

B. B. Griffith



DIVISION OF RESEARCH, PLANNING, AND EVALUATION

STATE DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION /STILLWATER, OKLAHOMA

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A COMPARATIVE STUDY OF FEDERALLY REIMBURSED WITH NON-FEDERALLY REIMBURSED BUSINESS EDUCATION PROGRAMS IN OKLAHOMA

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Summer 1972

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CHAPTER I

INTRODUCTION

Business education subjects taught in the traditional manner have a long and successful history of preparing our nation's youth for occupations in the business world. This history, despite periods of both limited and extensive success, includes business education at the secondary level that offers general and vocational training for all students who desire to enroll in the various courses. Business education programs were supported by local funding until the George-Deen Act of 1936 which allocated federal funds for distributive education programs.

The various social and economic forces at work in the nation led to the enactment of the Vocational Act of 1963 and the Vocational Education Amendments of 1968. The purposes of these Acts state that: It is the purpose of this part to authorize Federal grants to states to assist them to maintain, extend, and improve existing programs of vocational education, to develop new programs of vocational education, and to provide part-time employment for youths who need the earnings from such employment to continue their vocational training on a full-time basis. The Acts further state that: Vocational training or retraining shall include programs designed to fit individuals for gainful employment as semiskilled or skilled workers in business and office occupations.

Following the enactment of the Vocational Education Act of 1963, state plans were written to designate specific areas in which federal funds could be used and to designate the implementation of vocational business education programs at the local level. Although the intent of both Acts was to bring about improvement, the follow-up to see that improvement occurred has not been extensive. Little evaluation has taken place to see that existing programs have been maintained, if traditional programs have been extended, and if existing traditional programs have been improved.

Evaluation is needed in the area of vocational business education programs funded by the Vocational Education Act of 1963 and the Vocational Education Amendments of 1968 to determine specifically if the reimbursement has brought about improvement in existing programs which train our youth for the world of work. Business education can be strengthened at all levels if the effects of reimbursement can be determined. Evaluation of any program is necessary if strengths are to be maintained and weaknesses eliminated.

The Problem

The Vocational Education Act of 1963 and the Vocational Education Amendments of 1968 provided opportunity for secondary schools to develop programs with different approaches for teaching employable skills. However, when such programs are developed, efforts must be made to determine if they are as effective as the traditional manner of teaching the skills courses and informative courses in business education.

The problem of this study was to compare the effectiveness of federally reimbursed business education programs conducted under the provisions of the Vocational Education Act of 1963 and the Vocational Education Amendments of 1968 with non-federally reimbursed business education programs. More specifically, this study included an evaluation of instructional programs by (1) persons who have received instruction under reimbursed business education programs, (2) persons who have received instruction under non-reimbursed business education programs, and (3) employers of those persons.

Purposes of the Study

The purposes of this study were (1) to determine whether the funds provided by the Vocational Education Act of 1963 and the Vocational Education Amendments of 1968 have appreciably improved reimbursable business education programs as compared to non-reimbursable business education programs of instruction in Oklahoma, and (2) to make recommendations for future allocations of resources to business education programs.

Rationale of the Program

Schools located in Bartlesville, Oklahoma City, Sand Springs, and Tulsa were selected to participate in the study. The selection of these sites was dependent upon (1) the size of the school, (2) the location of the school, (3) the availability of federally reimbursed business education programs, (4) the close working relationship that the program director has with the schools as a College Supervisor of Student Teaching in Business Education and as a Teacher Educator in Vocational

Business and Office Education, and (5) the schools' willingness to participate in the study.

As indicated above, the schools selected for this study were limited to four different cities. The selection, however, includes two large metropolitan areas, and two medium size cities. This procedure should add validity to the data collected because programs may tend to have different objectives and prepare students for different entry jobs.

Definition of Terms

Reimbursable Cooperative Office Education is considered to be a vocational business course in which the student is in school one-half day and is on the job in a business training position for one-half day for approximately 15 hours per week.

The reimbursed courses included in the study were those secondary school courses in cooperative office occupations, office procedures, and second-year shorthand, or second-year typewriting which were considered to be a part of a vocational program that is reimbursed by the provisions of the Vocational Education Act of 1963 and the Vocational Education Amendments of 1968.

Non-Reimbursable Business Education Program is considered to be traditional business education courses taught in the traditional manner receiving funds for equipment and supplies through local taxation and state aid. No federal aid is involved in teacher reimbursement or in funds provided for the purchase of equipment, supplies, and/or facilities. The graduates of this program who, in the judgment of the school, will

have completed a program which fits them for entry level jobs in the general office, secretarial, bookkeeping or related occupations.

Limitations

The study was limited to eight Oklahoma high schools where both reimbursable and non-reimbursable programs were available. These schools and the number of students involved in the study are listed in Chapter 2.

Assumptions

The following basic assumptions were made in this study:

1. That the findings of this study would be comparable to the findings if a similar study were conducted in other geographical areas of Oklahoma.

2. That each teacher involved in the study was a fully qualified business teacher with equivalent teaching skills in reimbursable and non-reimbursable business education programs.

3. That the subject areas of both reimbursable and non-reimbursable business education programs are representative of those taught in any established Oklahoma secondary business education program.

4. That job opportunities are equally available to graduates of both the reimbursable and non-reimbursable business education programs.

Changes Made in the Original Proposal

The original proposal for this study was dated to begin on June 1, 1970, and conclude on June 30, 1971. The investigation was designed to involve a follow-up study of approximately 200 business education graduates of federally reimbursed and non-federally reimbursed programs located in Bartlesville, Oklahoma City, Pryor, Stillwater, and Tulsa.

However, because of lack of funding the study was postponed to begin on June 1, 1971, and conclude on June 30, 1972. In addition, changes were made in the schools to be included in the study. This was necessary because of program changes and the willingness of the schools to participate in the study.

CHAPTER II

DESIGN AND METHODOLOGY OF THE STUDY

The purpose of this chapter is to describe the method used in selecting the population for the study, the methods used to design the data gathering instruments, the pilot study, and the methods used for data collection.

Selecting of the Population

One class of reimbursable business education students and one class of non-reimbursable business education students was selected from each of the eight high schools. The schools and the total number of reimbursable and non-reimbursable business education students are listed in Table I below. A total of 291 students are listed in this table.

TABLE I

ORIGINAL SURVEY OF REIMBURSABLE AND NON-REIMBURSABLE BUSINESS EDUCATION STUDENTS

School and Letter		Reimbursable	Non-Reimbursable
Charles Page High School	A	26	29
College High High School	B	23	13
Douglass High High School	C	17	12
Sooner High High School	D	27	9
U. S. Grant High School	E	27	28
Washington High School	F	13	0
Webster High School	G	22	9
Will Rogers High School	H	18	13
Totals		178	113

A student data sheet was completed by each of the 291 students. This sheet was designed to secure the full name of each student, their present mailing address, and the total number of business education courses completed during their high school career. The average number of business subjects completed by the reimbursable students was 5.7, and the average number of business subjects completed by the non-reimbursable students was 5.0. The student data sheet is illustrated in Appendix A.

Methods Used in Designing Data Gathering Instruments

In April of 1969 the National Delta Pi Epsilon Research Committee met in Iowa City, Iowa, to design instruments similar to the ones used in this study. This committee was composed of outstanding leaders in business education from across the nation.

After receiving a copy of the instruments, this writer made the necessary changes in order to meet the objectives of this study. In addition, two business education staff members from Oklahoma State University reviewed the instruments and made some recommendations for revision.

Pilot Study

The pilot study was considered essential to determine if the student questionnaire would gather the needed data. The pilot study was conducted in two senior highs with a total of 39 reimbursable and non-reimbursable business education students.

Each student was asked to complete the questionnaire and to make comments about questions that were unclear or difficult to answer.

The results of the pilot study indicated that students had little or no difficulty answering the questions, and they had no trouble in projecting their thinking as to the purposes of the study. The student questionnaire is illustrated in Appendix B.

No attempt was made to conduct a pilot study with the employer questionnaire. Since the questionnaire had been reviewed by this writer and the two business education faculty members, it was felt that the instrument was designed to seek the necessary information for this study. A copy of the employer questionnaire is also illustrated in Appendix B.

Methods Used for Data Collection

The initial mailing of the 291 student questionnaires was made on January 3, 1972. The mailing included a questionnaire, a cover letter, and a stamped self-addressed envelope. A follow-up mailing was initiated on January 24, 1972, to those students who had not responded to the initial mailing.

The employer questionnaires were placed in the mail as soon as the completed student questionnaires were received.

Copies of the letters sent to the students and their employers are illustrated in Appendix C.

CHAPTER III

PRESENTATION AND ANALYSIS OF DATA

The purpose of this chapter is to present the data collected from the student questionnaires and the employer questionnaires.

Analysis of Student Questionnaires

Table Ia shows the reimbursable male and female graduates who responded to the questionnaires. From the total of 120 reimbursable graduates responding, 117 were female and 3 were males. The three male students came from two of the eight high schools.

TABLE Ia - REIMBURSABLE

Male and Female Graduates Responding to Survey from Eight Oklahoma High Schools

Schools	No. of Graduates Responding	Females		Males	
		No.	%	No.	%
A	20	20	100.0	0	0.0
B	16	16	100.0	0	0.0
C	10	10	100.0	0	0.0
D	22	22	100.0	0	0.0
E	15	15	100.0	0	0.0
F	10	9	90.0	1	10.0
G	15	13	86.6	2	13.4
H	12	12	100.0	0	0.0
Totals	120	117		3	

Table Ib shows the non-reimbursable male and female graduates who responded to the questionnaires. From the total of 44 non-reimbursable

graduates responding, 43 were female and 1 male graduate. This high proportion of female responses from both reimbursable and non-reimbursable programs indicates that the majority of enrollees in both programs were females.

TABLE Ib - NON-REIMBURSABLE

Male and Female Graduates Responding to Survey from Eight Oklahoma High Schools

Schools	No. of Graduates Responding	Females		Males	
		No.	%	No.	%
A	10	10	100.0	0	0.0
B	4	4	100.0	0	0.0
C	3	3	100.0	0	0.0
D	4	4	100.0	0	0.0
E	15	15	100.0	0	0.0
F	0	0	0.0	0	0.0
G	4	3	75.0	1	25.0
H	4	4	100.0	0	0.0
Totals	44	43		1	

The results of the remainder of the student questionnaires are shown in tabular form in Appendix D.

The data presented in Tables II and IIa compares full-time and part-time status of first jobs held by reimbursable and non-reimbursable business education graduates. From the 102 reimbursable graduates, 65 obtained full-time employment after graduation and 37 obtained part-time employment. Thirty-five non-reimbursable graduates from the total of 44 responding to the survey obtained either full-time or part-time employment after graduation. From the 35 non-reimbursable graduates, 18 obtained full-time employment and 17 part-time employment.

Tables III and IIIa illustrate the number of graduates with full-time or part-time jobs at the time the study was conducted. Sixty-six of the 69 reimbursable graduates were employed full-time, and 18 of the 19 non-reimbursable graduates were employed full-time. All of the reimbursable graduates from five of the eight schools were employed full-time, and all of the non-reimbursable graduates from six of the eight schools were employed full-time.

Table IV shows the methods by which responding reimbursable graduates obtained their first jobs. The most common method of obtaining initial employment as stated by 103 responding graduates was through the efforts and services rendered by the high school or college. This amounted to 45.6 per cent. Applying directly to a person or company amounted to the methods next most often used with 17.5 per cent of the graduates responding.

Table IVa shows that 11 or 30.6 per cent of 36 non-reimbursable graduates obtained initial employment through a friend or relative. This compares to 14.7 per cent of the reimbursable graduates. Applying directly to a person or company was also the second best method as used by non-reimbursable graduates.

The size of companies in which reimbursable and non-reimbursable graduates are employed is shown in Tables V and Va. Of the 75 employers responding, 34.7 per cent employed over 500 persons, 10.7 per cent employed from 101 to 500 persons, 22.7 per cent employed from 26 to 100 persons, 21.3 per cent employed from 6 to 25 persons, and 10.7 per cent employed from 1 to 5 persons. Nineteen employers responded to the size of companies where non-reimbursable graduates were employed at the time of the survey. Of the 19 employers, only 2 firms employed over 500 persons. Six of the firms employed from 6 to 25 persons.

Tables VI and VIa show the length of time that elapsed between graduation and initial employment for responding graduates. The majority of both reimbursable and non-reimbursable graduates found jobs before they left school. Sixty-seven or 69.8 per cent of the reimbursable graduates found jobs before they left school compared to 14 of the 36 non-reimbursable graduates or a total of 38.9 per cent.

The number of different job titles held by graduates from initial employment to the time of the survey is shown in Table VII and Table VIIa. From the 105 reimbursable graduates, 51 or 48.5 per cent held only one job title. Also, 21 or 58.3 per cent of the 36 non-reimbursable graduates held only one job title since the time of initial employment. Twenty-seven of the reimbursable graduates and three of the non-reimbursable graduates held no job title.

Tables VIII and VIIIa show the number of promotions that graduates had received at the time of the survey. Both tables show that most graduates had not received a promotion at the time of the study. Twenty per cent of the reimbursable graduates had received one promotion as compared to 18.2 per cent of the non-reimbursable graduates.

Twenty-five or 25.8 per cent of the 97 reimbursable graduates responding to the survey reported the job title of secretary as their first position after graduation. The remainder of the various job titles reported by reimbursable graduates are listed in Table IX. Table IXa contains the various job titles for the first jobs of 36 non-reimbursable graduates. Again, the largest number of graduates held the job title of secretary.

Tables X and Xa contain the various job titles held by graduates at the time of the survey. Sixteen or 23.2 per cent of the 69 reimbursable

graduates responding to the survey were secretaries. Approximately 10 per cent were classified as a clerk-typist. The remaining job titles are listed in Table X. Only 17 non-reimbursable graduates responded to this question. The number of graduates in each job title was so small that no attempt was made to evaluate Table Xa.

The data presented in Tables XI and XIa presents job titles of graduates distributed by types of occupations. Table XI shows that secretarial and clerical occupations accounted for 74 per cent of all jobs presently held by 69 reimbursable graduates. Bookkeeping and accounting jobs were held by 2.9 per cent of the graduates, and data processing jobs were held by 10.1 per cent. Non-business jobs accounted for 10.1 per cent of the graduates' employment. The 17 non-reimbursable graduates present job titles accounted for 53.0 per cent in the secretarial and clerical occupations. Non-business jobs accounted for 17.7 per cent of the graduates employment.

Employers reported secretary as the most prominent job title with more than 22 per cent frequency among 75 reimbursable graduates. Clerk-typist was listed second with 14.7 per cent frequency. The remainder of the job titles are shown in Table XII. Table XIIa shows the results of present job titles held by 19 non-reimbursable graduates as reported by employers. Two graduates were classified as salesgirls and the remainder of job titles were held by one graduate in each position.

Secretary was the job title most often indicated by employers and graduates. Employers reported 17 reimbursable graduates were classified as secretaries, and 16 graduates reported their job title as secretary. Employers listed clerk-typist second, while the graduates reported clerk-typist and receptionist as tied for second. A total of 40 different job titles were reported. Eleven graduates

classified themselves in nine job titles compared to the employers, where they did not list these job classifications. These comparisons are shown in Table XIII.

The comparison of job titles as reported by employers and non-reimbursable graduates are listed in Table XIIIa. Twenty-four different job titles were reported. Again, seven graduates classified themselves in six job titles whereas the employers did not list these job classifications.

Tables XIV, XIVa, XV, XVa, XVI, and XVIa contain data about additional training received by both reimbursable and non-reimbursable graduates. Of the 106 reimbursable graduates, 67 or 63.2 per cent had received no additional training from their employer from the time of initial employment to the time of the survey. This percentage compares closely with the non-reimbursable graduates where 23 or 63.9 per cent of the 36 graduates had received no additional training.

The major reasons given for additional training, as shown in Tables XV and XVa, were to do the regular job and to perform special tasks. Approximately 46 per cent of both reimbursable and non-reimbursable graduates reported that the purpose of additional training was to do their regular job.

Table XVI shows that 56.4 per cent of the reimbursable graduates received 16 hours or less of additional training and the remaining 43.6 per cent received more than 24 hours of additional training. These percentages compare very closely with the non-reimbursable graduates where 53.8 per cent received less than eight hours of additional training and 38.5 per cent received more than 24 hours of additional training.

Forty-one reimbursable graduates reported that they had received on-the-job training in 34 different types of job training situations. Three graduates received on-the-job training in Auto and Life Insurance, and three received on-the-job training in computer operation. The total on-the-job training received by reimbursable graduates is shown in Table XVII. Twenty-two non-reimbursable graduates received on-the-job training in 21 different types of job training situations. Two graduates received on-the-job training in filing, and the remaining twenty graduates received on-the-job training in the remaining 20 types of job training situations as shown in Table XVIIa.

Tables XVIII, XIX, XX, XVIIIa, XIXa, XXa, XXI, XXII, XXIII, XXIa, XXIIa, and XXIIIa report the hourly range of pay, the weekly range of pay, and the monthly range of pay for first and present jobs held by reimbursable and non-reimbursable graduates.

Twenty-five or 53.2 per cent of 47 reimbursable graduates reported an hourly range of pay for thier first job from $1.50-$1.74. The second largest percentage of reimbursable graduates on their first job received hourly wages ranging from $1.75-$1.99. Only one graduate received an hourly wage of $3.00. This information is presented in Table XVIII.

Only four reimbursable graduates reported a weekly range of pay for their first job. One graduate reported in the $100-$124 range; one graduate in the $75-$99 range; one graduate in the $50-$74 range; and the fourth in the $0-$49 range. This information is presented in Table XIX.

The largest percentage of reimbursable graduates on their first job received wages ranging from $300-$349 per month. This information was reported by 20 or 52.7 per cent of 38 reimbursable graduates. One graduate reported a monthly salary range of $450-$500, while one reported receiving wages ranging from $100-$149 per month.

Tables XVIIIa, XIXa, and XXa contain the hourly range of pay, the weekly range of pay, and the monthly range of pay for first jobs as reported by non-reimbursable graduates.

The hourly range of pay as reported by 16 or 76.1 per cent of 21 non-reimbursable graduates was $1.50-$1.74. Three graduates reported a salary range of $1.75-$1.99, and no graduate reported receiving a salary beyond this range. This information is shown in Table XVIIIa. Only two non-reimbursable graduates reported receiving a weekly range of pay. This is shown in Table XIXa.

Two non-reimbursable graduates reported a monthly salary range from $300-$349, and two reported a monthly salary range of $350-$399. Only six non-reimbursable graduates responded to this question, and none of the six reported receiving a salary beyond $400 per month. The results of this question are shown in Table XXa.

Tables XXI, XXII, and XXIII show the hourly range of pay, the weekly range of pay, and the monthly range of pay for present jobs as reported by reimbursable business education graduates.

Fourteen or 48.4 per cent of 29 reimbursable graduates reported hourly range of pay for their present job of $1.50-$1.74. Seven graduates reported a range of $1.75-$1.99. The top salary range reported in

Table XXI was $2.25-$2.49 per hour. Only four reimbursable graduates reported a weekly salary range for their present jobs. The highest weekly range, as shown in Table XXII, was $100-$124.

Table XXIII shows that approximately one-half of the 29 reimbursable graduates reporting, indicated a monthly range of pay for their present jobs of $300-$349. Eleven graduates reported a range of $350-$399, and one graduate reported a range of $400-$449.

Table XXIa contains the hourly range of pay for present jobs as reported by 10 non-reimbursable graduates. Five or 50 per cent reported a range of $1.50-$1.74, four reported a range of $1.75-$1.99, and one graduate reported an hourly range of $1.25-$1.49. Table XXIIa shows the weekly range of pay for two non-reimbursable graduates. One range was $0-$49, and the other was $75-$99.

Three of six non-reimbursable graduates reported a monthly range of pay for their present job of $300-$349. The highest monthly range of pay, as shown in Table XXIIIa, was $450-$499, and the lowest was $100-$149.

Tables XXIV, XXV, and XXVI show a comparison of hourly ranges of pay, weekly ranges of pay, and monthly ranges of pay on first job and on present job as reported by reimbursable graduates.

Table XXIV shows that 47 graduates reported their hourly ranges of pay for their first job, and 29 graduates reported their hourly ranges of pay for their present job. Approximately one-half of the 47 graduates reported an hourly range of pay for their first job of $1.50-$1.74. One-fourth of these same graduates reported a range of $1.75-$1.99 per hour. Again, approximately one-half of the 29 graduates reported an hourly

range of pay for their present job of $1.50-$1.74. Also, approximately one-fourth of these same graduates reported a range of $1.75-$1.99 per hour.

Four reimbursable graduates are listed in four different weekly ranges of pay for their first jobs and from graduates are listed in four different ranges of pay for their present jobs. This information is shown in Table XXV.

Table XXVI shows a comparison of monthly ranges of pay on first job and on present job of reimbursable graduates. Thirty-eight graduates responded to the monthly range of pay for their first jobs, and 29 graduates responded to the monthly range of pay for their present jobs. Twenty or 52.7 per cent of the 38 graduates reported a monthly range of pay for their first job of $300-$349, while 14 or 48.4 per cent of the 29 graduates reported a monthly range of pay for their present jobs of $300-$349. However, 37.9 per cent of the 29 graduates reported a range of $350-$399 for their present jobs compared to 18.4 per cent of the 38 graduates in their first job.

Tables XXIVa, XXVa, and XXVIa show a comparison of hourly ranges of pay, weekly ranges of pay, and monthly ranges of pay on first job and on present job as reported by non-reimbursable graduates.

Table XXIVa shows that 21 graduates reported their hourly ranges of pay for their first job, and 10 graduates reported their hourly ranges of pay for their present job. Sixteen or 76.1 per cent of the 21 graduates reported an hourly range of pay for their first job of $1.50-$1.74. Five or 50 per cent of the 10 graduates reported the same hourly range of pay for their present job. Only two non-reimbursable

graduates reported a weekly range of pay. This information is illustrated in Table XXVa.

Six non-reimbursable graduates reported their monthly ranges of pay for their first job, and six graduates reported their monthly ranges of pay for their present job. Four or 66.6 per cent reported a range of $300 per month to $399 per month for their first job. Three of six graduates reported a range of $300-$349 for their present job. One graduate reported a monthly range of $450-$499 for his present job. Also, one graduate reported a monthly range of pay for both first and present job of $100-$149. The results of this question is shown in Table XXVIa.

The data presented in Table XXVII shows the skills and knowledges needed on first and present jobs as reported by 86 reimbursable graduates. The skills and knowledges needed by the highest percentage of graduates for their first jobs were: filing, 57.0 per cent; telephone usage, 57.0 per cent; ten-key adding machine, 53.5 per cent; business English, 41.9 per cent; manual typewriting, 40.7 per cent; electric typewriting, 40.7 per cent; photocopy equipment, 34.9 per cent; and written business communications, 29.1 per cent. All other skills and knowledges that were identified were needed by fewer than 25 per cent of the graduates included in the survey. The same skills and knowledges needed on the first job were also identified by more than 25 per cent of the graduates on the present job although in all eight skills and knowledges listed above, the percentages were reduced.

Table XXVIIa lists the skills and knowledges needed on first and present jobs as reported by 38 non-reimbursable graduates. The skills and knowledges needed by the highest percentage of graduates for their first

jobs were; filing, 44.7 per cent; electric typewriting, 36.8 per cent; and telephone usage, 28.9 per cent. All other skills and knowledges that were identified were needed by fewer than 25 per cent of the graduates included in the survey. Filing was the only skill needed on the present job by more than 25 per cent of the graduates.

Table XXVIII gives information about the adequacy of preparation for performing job skills as reported by reimbursable graduates. From the data in Table XXVIII, it can be seen that for few skills and knowledges did graduates indicate poor preparation. No preparation was indicated by a high percentage of graduates for MTST operation, the IBM selectric composer/varityper, unit record equipment, and for several of the marketing and distribution skills and knowledges. For most skills and knowledges, preparation was believed to be excellent or good.

The data contained in Table XXVIIIa lists the adequacy of preparation for performing job skills as reported by non-reimbursable graduates. From the data presented in this table, it can be seen that graduates reported low percentages as poor adequacy for performing job skills that are listed in the table. However, high percentages were listed for no preparation for the MTST, dictation machine transcription, spirit process operation, photocopy equipment, IBM selectric composer/varityper, unit record equipment, printing calculator, bookkeeping machines, and for several of the marketing and distribution skills and knowledges. For most of the skills and knowledges, preparation was believed to be excellent or good.

Analysis of Employer Questionnaires

The data collected from the employer questionnaires are presented in this part of the study. The tables showing the results of the questionnaires are listed in Appendix E.

Table XXIX shows the tasks performed by reimbursable graduates as reported by 75 employers. Eighty per cent of the employers had graduates typing memos, letters, and tables, and performing the task of filing. Other tasks frequently indicated as being performed by graduates were: answering and placing telephone calls, 78.7 per cent; posting to various records, 54.7 per cent; pick up, sort, and distribute mail, 49.3 per cent; deliver messages, 46.7 per cent; and operate copying machines, 40.0 per cent. The remaining tasks performed by graduates were listed by less than 30 per cent of the employers.

Table XXIXa shows the tasks performed by non-reimbursable graduates as indicated by 19 employers. The data shows that 47.3 per cent of the employers had graduates typing memos, letters, and tables; 42.1 per cent had graduates filing; 47.3 per cent had graduates answering and placing telephone calls; 36.8 per cent had graduates delivering messages; and, 31.5 per cent had graduates operating a cash register and picking up, sorting, and distributing mail. The remaining tasks performed by graduates in Table XXIXa were listed by less than 30 per cent of the employers.

The importance of tasks performed by reimbursable graduates are rated by employers in Table XXX. Twenty-seven employers rated typing memos, letters, and tables as very important, while 24 employers rated this task as moderately important. Twenty-nine employers rated filing as very important, while 24 employers rated this task as moderately

important. Twenty-six employers rated answering and placing telephone calls very important, while 20 employers rated this task moderately important. Sixteen of 42 employers rated posting to various records very important, while 18 of the 42 employers rated the task as moderately important. Thirteen of 42 employers rated picking up, sorting, and distributing mail as very important, while 13 of 42 employers rated this task as moderately important. The number of employers rating the tasks under minor importance or no importance was small compared to the number rating tasks under very important or moderately important.

Table XXXa describes the importance of tasks performed by non-reimbursable graduates and rated by their employers. The number of employers responding to these tasks was very small. However, the majority of those reporting rated the tasks as either very important or moderately important.

The data presented in Table XXXI describes the quality of tasks performed by reimbursable graduates as evaluated by their employers. Very few of the employers rated the quality of the tasks performed by reimbursable graduates as outstanding and very few rated the quality of the tasks as below average. The largest number of employers rated the quality of the tasks performed as either average or above average. The average distribution between these two categories of performance were almost identical.

Table XXXIa shows the quality of task performance by non-reimbursable graduates as evaluated by their employers. The tasks with the highest per cent of rating as outstanding performance by graduates are: take dictation and transcribe, 100 per cent; lab work, 100 per cent; x-ray

work, 100 per cent; verify reports, 50 per cent; operate telephone switchboard, 50 per cent; mark price changes, 50 per cent; and perform calculations by machine, 50 per cent. The three 100 per cent ratings were made by one employer on each of three different tasks. Very few of the employers rated the quality of the tasks performed as below average. The majority of employers rated the quality of the tasks performed as either average or above average.

Table XXXII shows the employers' ratings of personal traits possessed by reimbursable graduates. The majority of employers rated each personal trait in the above average category. Very few employers rated the graduates in the below average category. The percentage rating of all personal qualities in the outstanding category were all below 30 per cent. Only nine of 69 employers rated the ability to organize work as outstanding.

Table XXXIIa shows the employers' ratings of personal traits possessed by non-reimbursable graduates. More employers rated each personal trait in the average category than any of the other three categories. Very few employers rated the personal qualities of the graduates in the below average category. Seven or 43.7 per cent of 16 employers rated observance of company rules as outstanding while two or 12.5 per cent of 16 employers rated ability to work under pressure as outstanding.

The data presented in Table XXXIII shows the specific personal quality strengths of reimbursable graduates as identified by employers. There were 38 personal quality strengths indicated by employers. A total of 23 of these 38 strengths was listed only one time. There were nine indications that neatness was a personal quality strength. There

were seven indications that willingness was a personal quality strength. Good typing ability, good business training background, and dependability was each listed six times by employers as strengths of the graduates. Aggressiveness, personality, and taking instructions was each listed three times by employers as strengths of the graduates, and good on business machines, pleasant, finishes work on time, alertness, cheerful, and friendliness was each listed two times by employers.

Table XXXIIIa shows the personal quality strengths of non-reimbursable graduates as identified by employers. There were 19 personal quality strengths indicated by employers. A total of 17 of these 19 strengths was listed only one time. There were two indications that good skills was a personal quality strength, and two indications that communication was a personal quality strength possessed by non-reimbursable graduates.

Tables XXXIV and XXXIVa describe the personal quality weaknesses of reimbursable and non-reimbursable graduates as identified by employers. Table XXXIV lists 29 personal quality weaknesses for reimbursable graduates. A total of 17 of these 29 received only one listing. Six of the employers listed spelling as a weakness, and six employers listed lack of initiative as a personal weakness. There were five employers who named mathematics as a weakness. Shorthand, English, lack of neatness, and lack of interest in work was each listed four times by employers as weaknesses of the graduates. Shyness and lack of maturity was each listed three times, and more interest in personal gain, knowledge of business practices, and too many outside distractions was each listed two times by employers as weaknesses possessed by non-reimbursable graduates.

Table XXXIVa lists 13 personal quality weaknesses of non-reimbursable graduates as identified by employers. Twelve of these weaknesses were listed only one time. There were two indications that appearance was a personal quality weakness of non-reimbursable graduates.

CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter presents a summary of the problem, methods and procedures, conclusions, and recommendations as a result of the study.

Summary

The answers to many problems in business education come to a large extent from research studies. The comparative study procedure and the follow-up procedure are useful tools in helping to provide useful information that could be helpful to business educators.

The purposes of this study were: (1) to determine whether the funds provided by the Vocational Education Act of 1963 and the Vocational Amendments of 1968 have appreciably improved reimbursable business education programs compared to non-reimbursable business education programs in Oklahoma, and (2) to make recommendations for future allocations of resources to business education.

The methods and procedures used in this study consisted of selecting schools located in Bartlesville, Oklahoma City, Sand Springs, and Tulsa who had available both reimbursable and non-reimbursable business education programs. One class of reimbursable business education students and one class of non-reimbursable students was selected from each of the eight high schools to participate in the study.

A student data sheet was completed by each of 291 students. Questionnaires were mailed to each of the students approximately seven months

from the date of their graduation. An employee questionnaire was mailed to first and second employees as indicated on the student questionnaire.

Summary

The following paragraphs contain a summary of the important data obtained in this study:

1. Two hundred and ninety-one graduates were included in the study from eight different high schools.

2. One hundred and twenty reimbursable graduates responded to the survey. Three of the graduates were male, and 117 were female.

3. Forty-four non-reimbursable graduates responded to the survey. Forty-three were female graduates.

4. Sixty-four per cent of the reimbursable graduates obtained full-time employment after graduation compared to 51 per cent of the non-reimbursable graduates. Thirty-six per cent of the reimbursable graduates obtained part-time employment compared to 41 per cent of the non-reimbursable graduates.

5. Sixty-six of the 69 reimbursable graduates were employed full-time at the time the study was conducted compared to 18 of the 19 non-reimbursable graduates.

6. Forty-six per cent of 103 reimbursable graduates obtained their first jobs through the schools compared to eight per cent of the 36 non-reimbursable graduates. Most of the non-reimbursable graduates had obtained their first jobs through a friend or relative.

7. Thirty-five per cent of the reimbursable graduates were employed in companies with more than 500 employees compared to 11 per cent of the non-reimbursable graduates. Thirty-two per cent of the non-reimbursable graduates were employed in companies with six to 25 employees.

8. Most of the graduates found employment before they left school. Seventy per cent of the reimbursable found employment before they left school compared to 39 per cent of the non-reimbursable graduates.

9. Approximately one-half of both reimbursable and non-reimbursable graduates had held only one job; about 25 per cent had held two; and 26 per cent of the reimbursable graduates reported that they had held no job titles.

10. Approximately 75 per cent of both reimbursable and non-reimbursable graduates reported that they had not received a promotion at the time of the survey. Twenty per cent of both reimbursable and non-reimbursable graduates had received one promotion.

11. Twenty-six per cent or 25 of 97 reimbursable graduates reported a job title of secretary for their first job compared to 14 per cent or five of the non-reimbursable graduates. Secretary was the job title most frequently reported by all graduates responding to the survey.

12. Sixteen of 69 reimbursable graduates reported their present job title as secretary compared to one of 17 non-reimbursable graduates. Steno-clerk and typist were the job titles most frequently reported by non-reimbursable graduates.

13. There were more graduates employed in the clerical type of occupation than any of the other types as reported in Tables XI and XIa.

14. Twenty-three per cent or 17 of 75 reimbursable graduates held the present job title of secretary as reported by employers compared to one of 19 non-reimbursable graduates. The job title most frequently reported by employees for non-reimbursable was that of a salesgirl.

15. There was considerable disagreement regarding the comparison of job titles as reported by all graduates and their employees.

16. Thirty-six per cent of both reimbursable and non-reimbursable graduates received additional training while 64 per cent received none.

17. Forty-six per cent of both reimbursable and non-reimbursable graduates received additional training in order to perform the duties of their regular jobs.

18. Fifty-six of the reimbursable graduates received 16 hours or less of additional training compared to 54 per cent of the non-reimbursable graduates who received less than eight hours of additional training.

19. Seventy-six per cent of the non-reimbursable graduates received an hourly salary range for their first jobs of $1.50-$1.74 compared to 53 per cent of the reimbursable graduates. The monthly salary range was larger for the reimbursable graduates compared to the non-reimbursable graduates.

20. Fifty per cent of both reimbursable and non-reimbursable graduates received an hourly salary range for their present jobs of $1.50-$1.74. However, a larger percentage of reimbursable graduates received a higher monthly range of pay for their present jobs compared to the non-reimbursable graduates.

21. The hourly range of pay, the weekly range of pay, and the monthly range of pay for first and present job as reported by reimbursable graduates were practically the same.

22. The number and percentage of reimbursable graduates reporting needed skills and knowledges as listed in Table XXVII was lower on their present job as compared to their first job.

23. Practically all of the non-reimbursable graduates reported the same information contained in paragraph 22.

24. Reimbursable graduates reported that for most skills and knowledges, preparation was believed to be excellent or good. Very few indicated poor preparation. No preparation was indicated by a high percentage of reimbursable graduates for unit record equipment, and for several of the marketing and distribution skills.

25. Non-reimbursable graduates reported the same information contained in paragraph 24.

26. A high percentage of employers reported the following tasks performed by both reimbursable and non-reimbursable graduates: typing memos, letters, and tables; filing; answering and placing telephone calls; and, posting to various records.

27. The majority of employers rated each personal trait possessed by reimbursable graduates in the above average category. Very few employers rated graduates in the below average category.

28. The majority of employers rated each personal trait possessed by non-reimbursable graduates in the average category. Very few employers rated the graduates in the below average category.

29. Employees reported that graduates were weak in spelling, mathematics, shorthand, lack of initiative, and English.

Conclusions

On the basis of the data obtained in this study, the following conclusions are made:

1. High school business education departments will probably need to be content with students who are predominantly female. Since practically all the respondents in this study were female, probably most business workers who seek employment following high school graduation also are female.

2. Reimbursable graduates were more reliable in completing and returning the questionnaires. There was a need for more response from the non-reimbursable graduates.

3. From the evidence presented in this study, both reimbursable and non-reimbursable graduates have little difficulty in obtaining either part-time or full-time employment.

4. More reimbursable graduates obtain employment through their schools than non-reimbursable graduates.

5. Reimbursable graduates are employed by larger companies than non-reimbursable graduates.

6. Most business graduates do not receive a promotion within six months of initial employment.

7. Most graduates with occupational preparation for business will obtain employment in secretarial and clerical positions. A small percentage of graduates will be employed in bookkeeping and accounting, data processing, and marketing and distribution positions.

8. Almost half of the graduates who obtain employment in business occupations can expect to receive some kind of additional training to be able to perform the tasks that are assigned to them.

9. Reimbursable graduates received more hours of additional training compared to the non-reimbursable graduates.

10. Non-reimbursable graduates received a higher hourly salary range for their first jobs compared to the reimbursable students. However, a larger percentage of reimbursable graduates received a higher monthly range of pay for their present jobs compared to the non-reimbursable graduates.

11. Both reimbursable and non-reimbursable students needed more skills and knowledges on their first jobs as compared to their present jobs.

12. Both reimbursable and non-reimbursable graduates reported that for most skills and knowledges, preparation was believed to be excellent or good.

13. Both reimbursable and non-reimbursable graduates were not prepared for unit record equipment, and for several of the marketing and distribution skills.

14. The tasks most often performed by business graduates include: typing memos, letters and tables; filing; answering and placing telephone calls; and, posting to various records.

15. Employers rated personal traits higher for reimbursable graduates as compared to non-reimbursable graduates.

16. Business graduates are weak in spelling, mathematics, shorthand, and English.

17. The additional funds provided by the Vocational Act of 1963 and the Vocational Amendments of 1968 have improved business education programs in Oklahoma.

Recommendations

Based upon the findings and conclusions of this study, the following recommendations are made:

1. High schools should maintain and extend strong reimbursable business education programs. Additional resources should be channeled into these programs. This should be done, however, without neglecting the non-reimbursable programs.

2. Continued emphasis should be placed on non-reimbursable programs. Many students prefer this program over the reimbursable program.

3. The secretarial and clerical occupations should receive strong emphasis in both reimbursable and non-reimbursable business education programs.

4. Business education graduates should be told that additional training will be needed beyond the high school to help them perform some of the tasks that they are required to perform.

5. Both reimbursable and non-reimbursable graduates should receive training in unit record equipment.

6. Training in the marketing and distribution occupations should be included in the distributive education curriculum.

7. Additional emphasis should be placed on spelling, mathematics, and English usage in both reimbursable and non-reimbursable programs.

8. Additional research is needed in the areas of both reimbursable and non-reimbursable programs. This could include a similar study but with different schools involved. It could also include a comparative study where business students from the area vocational-technical schools are involved.

APPENDIX A

_____
(Name of School)

STUDENT DATA SHEET

I. Name _____ Student Number _____ Other Identification _____
Last First Middle

Present Address: _____

_____
Zip Code

II. Courses Completed:

(Each school should list below business education courses completed during the year when the graduates being surveyed were enrolled.)

Courses	Check If Completed	Check If Federally Reimbursed

III. Sequence(s) Completed (if applicable): _____

IV. I understand that I will be requested to complete a questionnaire during the month of October 1971, and that my employer(s) will also be requested to complete a questionnaire regarding my performance on the job.

Signed _____

APPENDIX B

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STUDENT QUESTIONNAIRE

PART I--STUDENT INFORMATION

1. Name _____
   Address _____
   City _____ State _____ Zip Code _____
   High School Attended _____
2. Check one:
   _____ Male
   _____ Female

2a. Check one:
   _____ COE Graduate
   _____ Non-COE Graduate

3. Check one or more:
   _____ Employed full time for pay
   _____ Employed part time for pay
   _____ In military service
   _____ Not employed due to illness
   _____ Homemaker
   _____ Seeking employment
   _____ Not seeking employment
   _____ Going to school or college
   _____ Have never held full- or part-time employment since graduation. (If you check this item, please sign questionnaire on last page and return.)
   _____ Other _____
   please specify

PART II--EMPLOYMENT INFORMATION

1. Was your first job after graduation full time or part time?
   _____ Full time
   _____ Part time

2. How did you get your first job after graduation?
   _____ Through a friend or relative
   _____ Through your school or college
   _____ Through another school
   _____ Through a Civil Service Exam
   _____ Through a State Employment Service
   _____ Through a private employment agency
   _____ By answering an advertisement
   _____ By applying directly to a person or company that might be hiring
   _____ Other _____
   please specify

3. How long did it take you to find the first job you had after graduation?
   _____ I found it before I left school
   _____ Less than a month
   _____ 1 to 3 months
   _____ 4 to 6 months
   _____ Longer than 6 months

4. What was the job title of your first position after graduation? _____
   - List name and address of employer.
   Name of Supervisor _____
   Company _____
   Street Address _____
   City _____ State _____ Zip Code _____

5. What is your present job title? _____
List name and address of employer.
Name of Supervisor _____
Company _____
Street Address _____
City _____ State _____ Zip Code _____

6. How many different job titles have you had since you left high school?
_____ None
_____ One
_____ Two
_____ Three or more

7. What was your pay (before deductions) on your first full-time job after graduation? (Please fill in ONE of the lines below)
$_____per hour
$_____per week
$_____per month

8. What is your pay (before deductions) on your present job? (Please fill in ONE of the lines below)
$_____per hour
$_____per week
$_____per month

9. How many promotions (not salary increases) have you received since graduation?
_____ None
_____ One
_____ Two
_____ Three or more

10. Since graduation have you received additional formal training from an employer?
_____ Yes
_____ No

11. If you received additional training on the job, what was the purpose of this training?
_____ To do the regular job
_____ To perform special tasks
_____ For promotion
_____ Other _____
please specify

12. List the amount and kinds of training, if any, you have received through an employer:
Amount:
_____ Less than 8 hours
_____ 8 to 16 hours
_____ 16 to 24 hours
_____ More than 24 hours
Kinds:
_____
_____
_____

PART III--JOB REQUIREMENTS AND PREPARATION

Check the business skills and knowledges needed in your first and present positions after graduation. Rate how well you were prepared by your school to perform those business applications checked.

Business Skill or Knowledge	First Job	Present Job	Excellent	Good	Average	Poor	No Preparation
1. Typewriting							
manual typewriter operation							
electric typewriter operation							
IBM Selectric typewriter operation							
IBM Executive typewriter operation							
MTST operation							
2. Shorthand and transcription							
3. Dictation machine transcription							
4. Filing							
5. Bookkeeping or accounting							
6. Business mathematics							
7. Duplicating equipment operation							
offset duplicator							
stencil duplicator (mimeograph)							
spirit-process duplicator (ditto)							
photocopy equipment							
IBM Selectric composer or varityper							
8. Unit Record Equipment							
keypunch							
verifier							
sorter							
collater							
reproducer							
accounting machines							
other ( )							
9. Adding and calculating machines							
ten-key adding							
full-key adding							
rotary calculator							
key-driven calculator(comptometer)							
printing calculator							
electronic calculator							
10. Bookkeeping machines							
11. Communication skills							
telephone usage							
business English (spelling, punctuation, grammar)							
written business communications							
12. Marketing skills and distributive skills and knowledges							
salesmanship fundamentals							
cash register operation							
take inventories							
price markups and markdowns							
stock displays							
buying techniques							
advertising fundamentals							
product knowledge							

EMPLOYER QUESTIONNAIRE

EMPLOYEE DATA

Name _____

The individual listed above gave us the following information concerning his employment with your company. Please make any needed corrections.

Job Title: _____

Corrected Job Title: _____

Span of Employment: From -- _____

To -- _____

Corrected Span of Employment: From -- _____

To -- _____

COMPANY DATA

Size of Company (check one)

_____ 1 - 5 employees
_____ 6 - 25 employees
_____ 26 - 100 employees
_____ 101 - 500 employees
_____ over 500 employees

Standard Industrial Classification (SIC)

SIC Code: _____

Type of firm if SIC Code is unknown: _____

EMPLOYER QUESTIONNAIRE

Tasks Performed on the Job

Please rate these tasks as to their importance for the job indicated on page 1. Use this code:

Very important task -3 Minor task -1
Moderately important task-2 Task of no importance-0

For tasks rated 3, 2, or 1, please indicate how well the employee performs the task. Do this by placing a check in the appropriate column.

Tasks	Rating 3, 2, 1 or 0	Employee Performance: Out-standing	Above Average	Average	Below Average
1. Typing memos, letters, tables, etc.					
2. Filing.					
3. Answer and place telephone calls.					
4. Post to various records.					
5. Pick up, sort, and distribute mail.					
6. Sell to customers.					
7. Operate cash register.					
8. Stock shelves.					
9. Perform calculations by machine.					
10. Operate telephone switchboard.					
11. Verify reports.					
12. Order supplies and equipment.					
13. Take inventory.					
14. Mark price changes.					
15. Wrap or bag merchandise.					
16. Prepare invoices.					
17. Operate key punch.					
18. Take in money.					
19. Operate duplicating equipment.					
20. Take dictation and transcribe.					
21. Deliver messages.					
22. Approve customer credits.					
23. Prepare and make bank deposits.					
24. Make out checks.					
25. Billing/bookkeeping machine.					
26. Operate copying machine.					
Other:					
27.					
28.					
29.					
30.					

EMPLOYER QUESTIONNAIRE

Employers' Rating Sheet

Rate the employee only on those characteristics that are applicable to his job.

Characteristics	Employee Performance			
	Out-standing	Above Average	Average	Below Average
1. Personal appearance--appropriate dress and grooming.				
2. Dependability.				
3. Initiative and/or resourcefulness.				
4. Ability to maintain harmonious working relations with others.				
5. Neatness and orderliness in maintenance or arrangement of physical surroundings, such as a desk, files, floor, etc.				
6. Strict observance of company rules.				
7. Speed in performing operations--amount of acceptable work produced.				
8. Accuracy in performing operations.				
9. Ability to follow instructions accurately and without repetition.				
10. Ability to organize his work.				
11. Ability to work under pressure or at the normal conditions, such as meeting deadlines, multiple assignments, extra work, etc.				

NOTE: Now we would like to ask you about job applicants in general. Please list below the strengths and weaknesses that you have observed in recent job applicants.

Strengths	Weaknesses

APPENDIX C

Oklahoma State University
COLLEGE OF BUSINESS ADMINISTRATION
STILLWATER, OKLAHOMA 74074
(405) 372-6211, EXT. 258

January 3, 1972

Dear Business Education Graduate:

During the Spring of 1971, just before your graduation from high school, you were asked by your business teacher or me to participate in a research study being conducted by the Business Education Department, Oklahoma State University, and the State Department of Vocational-Technical Education.

Your response will help us give assistance to future high school business education graduates. The information gathered will remain strictly confidential and in no instance will your name be used.

Won't you take about ten minutes of your time to answer this questionnaire. Your cooperation in the collection of this data is essential to the success of this study. Please complete this questionnaire and return it to us in the enclosed stamped envelope as soon as possible.

Sincerely yours,

Bob Griffith

Bob Griffith. Teacher Educator
Vocational Business and Office Education

BBG:jap

Enclosures

Oklahoma State University
COLLEGE OF BUSINESS ADMINISTRATION
STILLWATER, OKLAHOMA 74074
(405) 372-6211, EXT. 258

January 24, 1972

Dear Business Education Graduate:

A few weeks ago a questionnaire was mailed to you requesting certain personal and professional information that would be used in a research study being conducted by the Business Education Department, Oklahoma State University, and the State Department of Vocational-Technical Education.

We need your assistance in returning the completed questionnaire to insure the validity of the study. Remember that this information will remain confidential and your name will not be used.

Please take a few minutes to complete the questionnaire and return it to us.

Sincerely yours,

Bob Griffith

Bob Griffith, Teacher Educator
Vocational Business and Office Education

BBG:cw

Oklahoma State University

COLLEGE OF BUSINESS ADMINISTRATION

STILLWATER, OKLAHOMA 74074
(405) 372-6211, EXT. 258

The Business Education Department of Oklahoma State University and the State Department of Vocational-Technical Education is trying to evaluate how well high school graduates perform on the job. If they have been trained to meet your needs, we would like to know this. If the graduates have not developed certain skills that you consider important, or if they have poor work habits and attitudes, we want to know this too. We are sending you this short questionnaire in hopes that you will help us gather this information.

The questionnaire concerns a particular employee that graduated from high school in 1971. His name and job title are indicated on the first page. It also asks for your general impression of recent applicants and new employees. If someone else in your organization is more familiar with this specific individual or with applicants, we would appreciate your passing this document along to him.

Thank you for your assistance. A self-addressed, stamped envelope is enclosed for your convenience in returning the questionnaire.

Sincerely yours,

Bob Griffith

Bob Griffith, Teacher Educator
Vocational Business and Office Education

BBG:cw

Enclosure

APPENDIX D

TABLE II - REIMBURSABLE

Full-Time and Part-Time Status of First Jobs Held by 102 Graduates

SCHOOL	NO. OF GRADUATES RESPONDING	FULL-TIME No.	FULL-TIME %	PART-TIME No.	PART-TIME %
A	18	13	72.2	5	27.8
B	10	6	60.0	4	40.0
C	8	4	50.0	4	50.0
D	15	6	40.0	9	60.0
E	15	11	73.3	4	26.7
F	9	4	44.4	5	55.6
G	15	13	86.6	2	13.4
H	12	8	66.7	4	33.3

TABLE IIa - NON-REIMBURSABLE

Full-Time and Part-Time Status of First Jobs Held by 35 Graduates

SCHOOL	NO. OF GRADUATES RESPONDING	FULL-TIME No.	FULL-TIME %	PART-TIME No.	PART-TIME %
A	9	5	55.6	4	44.4
B	2	0	0.0	2	100.0
C	3	1	33.3	2	66.7
D	2	0	0.0	2	100.0
E	12	6	50.0	6	50.0
F	0	0	0.0	0	0.0
G	4	4	100.0	0	0.0
H	3	2	66.7	1	33.3

TABLE III - REIMBURSABLE

PRESENT FULL-TIME AND PART-TIME JOBS HELD BY 69 GRADUATES

SCHOOL	NO. OF GRADUATES RESPONDING	FULL-TIME		PART-TIME	
		No.	%	No.	%
A	14	14	100.0	0	0.0
B	4	3	75.0	1	25.0
C	3	3	100.0	0	0.0
D	10	9	90.0	1	10.0
E	9	9	100.0	0	0.0
F	6	5	83.3	1	16.7
G	12	12	100.0	0	0.0
H	11	11	100.0	0	0.0

TABLE IIIa - NON-REIMBURSABLE

PRESENT FULL-TIME AND PART-TIME JOBS HELD BY 19 GRADUATES

SCHOOL	NO. OF GRADUATES RESPONDING	FULL-TIME		PART-TIME	
		No.	%	No.	%
A	5	5	100.0	0	0.0
B	2	1	50.0	1	50.0
C	1	1	100.0	0	0.0
D	1	1	100.0	0	0.0
E	5	5	100.0	0	0.0
F	0	0	0.0	0	0.0
G	3	3	100.0	0	0.0
H	2	2	100.0	0	0.0

TABLE IV - REIMBURSABLE

METHODS BY WHICH RESPONDING GRADUATES RECEIVED FIRST JOBS

METHOD	NO. OF GRADUATES	%
Through Friend or Relative	15	14.7
Through School or College	47	45.6
Through Another School	1	.978
Through Civil Service Exam	2	1.9
Through State Employment Service	4	3.88
Through Private Employment Agency	2	1.9
By Answering Advertisement	3	2.9
By applying directly to a Person or Company that might be hiring	18	17.5
Other	11	10.8
TOTALS	103	100.0

TABLE IVa - NON-REIMBURSABLE

METHODS BY WHICH RESPONDING GRADUATES RECEIVED FIRST JOBS

METHOD	NO. OF GRADUATES	%
Through Friend or Relative	11	30.6
Through School or College	3	08.3
Through Another School	0	0.0
Through Civil Service Exam	0	0.0
Through State Employment Service	2	05.5
Through Private Employment Service	2	05.5
By Answering Advertisement	1	03.6
By Applying directly to a person or Company that might be hiring	12	33.3
Other	5	13.9
TOTALS	36	100.0

TABLE V - REIMBURSABLE

SIZE OF COMPANIES IN WHICH GRADUATES ARE EMPLOYED AS INDICATED BY 75 EMPLOYERS

NUMBER OF EMPLOYEES	NO. OF FIRMS RESPONDING	% RESPONDING
Over 500	26	34.7
101 - 500	8	10.7
26 - 100	17	22.7
6 - 25	16	21.3
1 - 5	8	10.7

TABLE Va - NON-REIMBURSABLE

SIZE OF COMPANIES IN WHICH GRADUATES ARE EMPLOYED AS INDICATED BY 19 EMPLOYERS

NUMBER OF EMPLOYEES	NO. OF FIRMS RESPONDING	% RESPONDING
Over 500	2	10.5
101 - 500	3	15.8
26 - 100	4	21.1
6 - 25	6	31.5
1 - 5	4	21.1

TABLE VI - REIMBURSABLE

LENGTH OF TIME FROM GRADUATION TO FIRST JOB AS REPORTED BY 96 GRADUATES

TIME PERIOD	NO.	%
Found before left school	67	69.8
Less than a Month	13	13.5
1 - 3 months	11	11.5
4 - 6 months	2	2.1
Longer than 6 months	3	3.1

TABLE VIa - NON-REIMBURSABLE

LENGTH OF TIME FROM GRADUATION TO FIRST JOB AS REPORTED BY 36 GRADUATES

TIME PERIOD	NO.	%
Found before left school	14	38.9
Less than a month	10	27.8
1 - 3 months	6	16.7
4 - 6 months	3	08.3
Longer than 6 months	3	08.3

TABLE VII - REIMBURSABLE

NUMBER OF JOB TITLES HELD AS REPORTED BY 105 GRADUATES

JOB TITLES	NO. OF GRADUATES	%
None	27	25.7
One	51	48.5
Two	26	24.8
Three or More	1	1.0

TABLE VIIa - NON-REIMBURSABLE

NUMBER OF JOB TITLES HELD AS REPORTED BY 36 GRADUATES

JOB TITLES	NO. OF GRADUATES	%
None	3	08.3
One	21	58.3
Two	6	16.7
Three or More	6	16.7

TABLE VIII - REIMBURSABLE

NUMBER OF PROMOTIONS RECEIVED AS REPORTED BY 90 GRADUATES

No. OF PROMOTIONS	NO. OF GRADUATES	%
None	65	72.2
One	18	20.0
Two	4	04.4
Three or More	3	03.4

TABLE VIIIa - NON-REIMBURSABLE

NUMBER OF PROMOTIONS RECEIVED AS REPORTED BY 33 GRADUATES

NO. OF PROMOTIONS	NO. OF GRADUATES	%
None	24	72.7
One	6	18.2
Two	1	03.0
Three or More	2	06.1

TABLE IX - REIMBURSABLE

JOB TITLES FOR FIRST JOBS OF GRADUATES AS REPORTED BY 97 GRADUATES

JOB TITLE	NO. OF GRADUATES	%
Secretary	25	25.8
Coding Clerk	1	1.0
Credit Card Worker	1	1.0
Receptionist	9	9.2
Teller	1	1.0
Proof Clerk	1	1.0
Factory Worker	1	1.0
Accounting Clerk	1	1.0
File Clerk	4	4.1
Offset Operator	1	1.0
Jr. Claims Examiner	2	2.1
Stenographer	1	1.0
Librarian	1	1.0
Computer Operator	1	1.0
Trainee-Full-Time	1	1.0
Clerk-typist	12	10.3
Key Punch Operator	1	1.0
Batching Clerk	1	1.0
Cashier	1	1.0
Ticket Clerk	1	1.0
Clerk	5	5.2
Check Filer	1	1.0
Mail Clerk	1	1.0
General Office	3	3.1
Library Page	1	1.0
Posting Clerk	1	1.0
Directory Compillation Clerk	1	1.0
Inventory Clerk	1	1.0
Cafeteria Worker	1	1.0
Salesgirl	3	3.1
Nurses Aide	1	1.0
Admitting Clerk	1	1.0
Record Keeper	1	1.0
Dietary Aide	1	1.0
Supply Clerk	1	1.0
Student Aide	1	1.0
Waitress	1	1.0
Teleprocessor	1	1.0
Clerical Assistant	1	1.0
Teacher's Aide	2	2.1
Postal Assistant	1	1.0

TABLE IXa - NON-REIMBURSABLE

JOB TITLES FOR FIRST JOBS OF GRADUATES AS REPORTED BY 35 GRADUATES

JOB TITLE	NO. OF GRADUATES	%
Mail Clerk	1	02.9
Clerk	1	02.9
Frycook	1	02.9
Typist	3	08.8
Cashier	3	08.8
Ticket-sorter	1	02.9
Secretary	5	14.3
Counter-Office Girl	1	02.9
Key Punch Trainee	1	02.9
Babysitter	2	05.7
Assistant Manager	1	02.9
Summer Aide	1	02.9
Receptionist	2	05.7
Medical Specialist	1	02.9
Steno-Clerk	2	05.7
Credit Investigator	1	02.9
Sales Clerk	4	11.3
Computer-typist	1	02.9
Dental Technician Trainee	1	02.9
Data Clerk	1	02.9
Personnel Specialist	1	02.9

TABLE X - REIMBURSABLE

PRESENT JOB TITLES HELD BY GRADUATES AS REPORTED BY 69 GRADUATES

JOB TITLES	NO. OF GRADUATES	%
Postal Assistant	1	1.4
Stenographer	1	1.4
Typist	3	4.3
Secretary	16	23.2
Clerk-Typist	7	10.1
Teacher-Aide	2	2.9
Clerical Assistant	2	2.9
File Clerk	1	1.4
Receptionist	7	10.1
Billing Clerk	1	1.4
Registration Clerk	1	1.4
Proof Clerk	1	1.4
Teleprocessor	1	1.4
Salesgirls	2	2.9
Key Punch Operators	5	7.2
Dietary Aide	1	1.4
Nurses Aide	2	2.9
Cafeteria Worker	1	1.4
Factory Worker	1	1.4
Directory Compillation Clerk	1	1.4
Credit Reporter	1	1.4
Mail Clerk	1	1.4
Student Aide	1	1.4
Account Clerk	2	2.9
Batching Clerk	1	1.4
Computer Operator	1	1.4
Librarian	1	1.4
Waitress	1	1.4
Claims Examiner	2	2.9
PBX Operator	1	1.4

TABLE Xa - NON-REIMBURSABLE

PRESENT JOB TITLES HELD BY GRADUATES AS REPORTED BY 17 GRADUATES

JOB TITLES	NO. OF GRADUATES	%
Auto-typist	1	05.9
Receptionist	2	11.7
Micro-filmer	1	05.9
Typist	2	11.7
Key Punch Operator	1	05.9
Babysitter	1	05.9
Assistant Manager	1	05.9
Kitchen Worker	1	05.9
Steno-Clerk	2	11.7
Secretary	1	05.9
Salesgirl	1	05.9
Technician Trainee	1	05.9
Data Clerk	1	05.9
Personnel Specialist	1	05.9

TABLE XI - REIMBURSABLE

PRESENT JOB TITLES OF GRADUATES DISTRIBUTED BY TYPES OF OCCUPATIONS AS REPORTED BY 69 GRADUATES

TYPES OF OCCUPATION AND JOB TITLE	GRADUATES IN SPECIFIC JOB TITLE		GRADUATES IN TYPE OF OCCUPATION	
	No.	%	No.	%
SECRETARIAL & STENOGRAPHIC			17	24.6
Stenographer	1	1.4		
Secretary	16	23.2		
CLERICAL (NON-STENOGRAPHIC)			34	49.4
Postal Assistant	1	1.4		
Clerk Typist	7	10.1		
Teacher's Aide	2	2.9		
Clerical Assistant	2	2.9		
File Clerk	1	1.4		
Receptionist	7	10.1		
Billing Clerk	1	1.4		
Registration Clerk	1	1.4		
Proof Clerk	1	1.4		
PBX Operator	1	1.4		
Teleprocessor	1	1.4		
Typist	3	4.3		
Directory Compillation Clerk	1	1.4		
Credit Reporter	1	1.4		
Mail Clerk	1	1.4		
Batching Clerk	1	1.4		
Claims Examiner	2	2.9		
BOOKKEEPING & ACCOUNTING			2	2.9
Accounting Clerk	2	2.9		
SALES & DISTRIBUTION			2	2.9
Salesgirls	2	2.9		
DATA PROCESSING			6	8.7
Key Punch Operator	5	7.2		
Computer Operator	1	1.4		
SERVICE			7	10.1
Dietary	1	1.4		
Nurses Aide	2	2.9		
Cafeteria	1	1.4		
Student Aide	1	1.4		
Librarian	1	1.4		
Waitress	1	1.4		
INDUSTRIAL			1	1.4
Factory Worker	1	1.4		

TABLE XIa - NON-REIMBURSABLE

PRESENT JOB TITLES OF GRADUATES DISTRIBUTED BY TYPES OF OCCUPATIONS AS REPORTED BY 17 GRADUATES

TYPES OF OCCUPATION AND JOB TITLE	GRADUATES IN SPECIFIC JOB TITLE No.	%	GRADUATES IN TYPE OF OCCUPATION No.	%
SECRETARIAL & STENOGRAPHIC			3	17.7
Steno-Clerk	2	11.7		
Secretary	1	5.9		
CLERICAL (NON-STENOGRAPHIC)			6	35.3
Auto-typist	1	5.9		
Receptionist	2	11.7		
Typist	2	11.7		
Data Clerk	1	5.9		
BOOKKEEPING & ACCOUNTING			0	0.0
SALES & DISTRIBUTION			1	5.9
Sales girl	1	5.9		
DATA PROCESSING			2	11.7
Micro-filmer	1	5.9		
Key Punch Operator	1	5.9		
ADMINISTRATION			2	11.7
Assistant Manager	1	5.9		
Personnel Specialist	1	5.9		
SERVICE			3	17.7
Babysitter	1	5.9		
Kitchen worker	1	5.9		
Technician Trainee	1	5.9		

TABLE XII - REIMBURSABLE

PRESENT JOB TITLES OF 75 GRADUATES AS REPORTED BY EMPLOYERS OF THESE GRADUATES

JOB TITLE	NO. OF GRADUATES	%
Legal Secretary	1	1.3
Receptionist	6	8.0
Secretary	17	22.8
Asst. Secretary	1	1.3
Typist	3	4.0
General Office	3	4.0
Inventory Clerk	1	1.3
Registration Clerk	1	1.3
Salesgirl	3	4.0
Waitress	1	1.3
File Clerk	4	5.3
OCR Typist	1	1.3
Summer Clerk	1	1.3
Student Aide	2	2.8
Teacher's Aide	1	1.3
Librarian	1	1.3
Clerk Typist	11	14.7
Credit Reporter	2	2.8
Cafeteria Worker	1	1.3
Proof Clerk	1	1.3
PBX Operator	1	1.3
Teller	1	1.3
Accounting Clerk	1	1.3
Stenographer	2	2.8
Mail Clerk	1	1.3
Key Punch Operator	2	2.8
Coding Clerk	1	1.3
Medical Specialist	1	1.3
Claims Examiner	1	1.3
Credit Card Clerk	1	1.3
Teleprocessor	1	1.3

TABLE XIIa - NON-REIMBURSABLE

PRESENT JOB TITLES OF 19 GRADUATES AS REPORTED BY EMPLOYERS OF THESE GRADUATES

JOB TITLE	NO. OF GRADUATES	%
Cashier-Clerk	1	5.3
Assistant Manager	1	5.3
Stenographer	1	5.3
Clerk	1	5.3
File Clerk	1	5.3
Salesgirl	2	10.4
Secretary	1	5.3
Typist	1	5.3
Mail Clerk	1	5.3
Auto-Typist	1	5.3
Sampler	1	5.3
Cashier	1	5.3
Computer-typist	1	5.3
Dental Technician Trainee	1	5.3
Credit Investigator	1	5.3
Receptionist	1	5.3
Babysitter	1	5.3
Medical Assistant	1	5.3

TABLE XIII - REIMBURSABLE

COMPARISON OF JOB TITLES REPORTED BY EMPLOYERS AND BY GRADUATES

JOB TITLES	REPORTED BY EMPLOYERS		REPORTED BY GRADUATES	
	No. Grads.	%	No. Grads.	%
Secretary	17	22.8	16	23.2
Clerk-typist	11	14.7	7	10.1
Receptionist	6	8.0	7	10.1
File Clerk	4	5.3	1	1.4
Typist	3	4.0	3	4.3
General Office	3	4.0	0	0.0
Salesgirl	3	4.0	2	2.9
Student Aide	2	2.8	1	1.4
Credit Reporter	2	2.8	1	1.4
Stenographer	2	2.8	1	1.4
Key Punch Operator	2	2.8	5	7.2
Legal Secretary	1	1.3	0	0.0
Asst. Secretary	1	1.3	0	0.0
Inventory Clerk	1	1.3	0	0.0
Registration Clerk	1	1.3	1	1.4
Waitress	1	1.3	1	1.4
OCR Typist	1	1.3	0	0.0
Summer Clerk	1	1.3	0	0.0
Teacher's Aide	1	1.3	2	2.9
Librarian	1	1.3	1	1.4
Cafeteria Worker	1	1.3	1	1.4
Proof Clerk	1	1.3	1	1.4
PBX Operator	1	1.3	1	1.4
Teller	1	1.3	0	0.0
Accounting Clerk	1	1.3	2	2.9
Mail Clerk	1	1.3	1	1.4
Coding Clerk	1	1.3	0	0.0
Medical Specialist	1	1.3	0	0.0
Claims Examiner	1	1.3	2	2.9
Credit Card Clerk	1	1.3	0	0.0
Teleprocessor	1	1.3	1	1.4
Postal Assistant	0	0.0	1	1.4
Clerical Assistant	0	0.0	2	2.9
Billing Clerk	0	0.0	1	1.4
Dietary Aide	0	0.0	1	1.4
Nurses Aide	0	0.0	2	2.9
Factory Worker	0	0.0	1	1.4
Directory Compillation Clerk	0	0.0	1	1.4
Batching Clerk	0	0.0	1	1.4
Computer Operator	0	0.0	1	1.4

TABLE XIIIa - NON-REIMBURSABLE

COMPARISON OF JOB TITLES REPORTED BY EMPLOYERS AND BY GRADUATES

JOB TITLES	REPORTED BY EMPLOYERS No. Grads.	%	REPORTED BY GRADUATES No. Grads.	%
Salesgirl	2	10.4	1	5.9
Cashier-clerk	1	5.3	0	0.0
Assistant Manager	1	5.3	1	5.9
Stenographer	1	5.3	0	0.0
Clerk	1	5.3	0	0.0
File Clerk	1	5.3	0	0.0
Secretary	1	5.3	1	5.9
Typist	1	5.3	2	11.7
Mail Clerk	1	5.3	0	0.0
Auto-typist	1	5.3	1	5.9
Sampler	1	5.3	0	0.0
Cashier	1	5.3	0	0.0
Computer Typist	1	5.3	0	0.0
Dental Technician Trainee	1	5.3	1	5.9
Credit Investigator	1	5.3	0	0.0
Receptionist	1	5.3	2	11.7
Babysitter	1	5.3	1	5.9
Medical Assistant	1	5.3	0	0.0
Micro-filmer	0	0.0	1	5.9
Key Punch	0	0.0	1	5.9
Kitchen Worker	0	0.0	1	5.9
Steno-Clerk	0	0.0	2	11.7
Data Clerk	0	0.0	1	5.9
Personnel Specialist	0	0.0	1	5.9

TABLE XIV - REIMBURSABLE

ADDITIONAL TRAINING RECEIVED BY 106 GRADUATES

	NO. OF GRADUATES	%
Yes	39	36.8
No	67	63.2

TABLE XIVa - NON-REIMBURSABLE

ADDITIONAL TRAINING RECEIVED BY 36 GRADUATES

	NO. OF GRADUATES	%
Yes	13	36.1
No	23	63.9

TABLE XV - REIMBURSABLE

PURPOSE OF ADDITIONAL TRAINING AS REPORTED BY 39 GRADUATES

PURPOSE	NO. OF GRADUATES	%
To do the Regular Job	18	46.2
To Perform Special Task	16	41.0
For Promotion	2	5.1
Other	3	7.7

TABLE XVa - NON-REIMBURSABLE

PURPOSE OF ADDITIONAL TRAINING AS REPORTED BY 13 GRADUATES

PURPOSE	NO. OF GRADUATES	%
To do the Regular Job	6	46.2
To Perform Special Task	4	30.8
For Promotion	3	23.0
Other	0	0.0

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TABLE XVI - REIMBURSABLE

AMOUNT OF ADDITIONAL TRAINING RECEIVED BY GRADUATES AS REPORTED BY 39 GRADUATES

AMOUNT OF TRAINING	NO. OF GRADUATES	%
Less than 8 hours	11	28.2
8 - 16 hours	11	28.2
16 - 24 hours	3	7.7
More than 24 hours	14	35.9

TABLE XVIa - NON-REIMBURSABLE

AMOUNT OF ADDITIONAL TRAINING RECEIVED BY GRADUATES AS REPORTED BY 13 GRADUATES

AMOUNT OF TRAINING	NO. OF GRADUATES	%
Less than 8 hours	7	53.8
8 - 16 hours	1	7.7
16 - 24 hours	0	0.0
More than 24 hours	5	38.5

TABLE XVII - REIMBURSABLE

ON-THE-JOB TRAINING RECEIVED BY GRADUATES

TYPE OF TRAINING	NO. OF GRADUATES INDICATING
Auto and Life Insurance Routine	3
Teller training	1
Switchboard Operator	2
NCR Proof Machine	1
Bank Operations	1
Processing Insurance Claims	1
Blueprint Machine	1
Computer Operation	3
IBM Transcriber	1
Filing Prints	1
Collating Magazines	1
Dictaphone	1
Ticket sorter (Long distance phone calls by minutes)	1
Extend Prices	1
Key Punch Training	1
Xerox Machine	2
Ozilad Duplication	1
Answering Service	1
Public Relations	1
Nurses Aide	1
X-Ray	1
Bookkeeping	1
Posting Machine	2
Filing - Tinker AFB System	1
Microfilming & Stuffing Microfilm	1
Telegraph operation	1
Photocopy Machine	1
TWX Machine	1
Payroll Procedures	1
Teleprocessor	1
Opaque Negatives	1
Display Advertising	1
Transcribing Machine	1
Sales Training	1

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TABLE XVIIa - NON-REIMBURSABLE

ON-THE-JOB TRAINING RECEIVED BY GRADUATES

TYPE OF TRAINING	NO. OF GRADUATES INDICATING
Rank Advancement	1
Computer typing	1
PBX	1
Filing	2
Letter Writing	1
Making out Reports	1
Key Punch	1
Dry Cleaning	1
Checking	1
Bookkeeping	1
Abstracting	1
Posting Deeds, Mortgages, etc.	1
Checking Taxes on Land	1
Run Chains on Land in Abstracting	1
Ticket-sorting (by minutes)	1
Micro-filming	1
Cash Register	1
Display	1
Waxing -Dental Procedure	1
Answering Phone	1
Filling out Medical Records	1

TABLE XVIII - REIMBURSABLE

HOURLY RANGE OF PAY FOR FIRST JOB AS REPORTED BY 47 GRADUATES

HOURLY SALARY RANGE	NO.	%
$3.00	1	2.1
2.75 - 2.99	1	2.1
2.50 - 2.74	0	0.0
2.25 - 2.49	1	2.1
2.00 - 2.24	2	4.3
1.75 - 1.99	12	25.5
1.50 - 1.74	25	53.2
1.25 - 1.49	3	6.4
1.00 - 1.24	2	4.3

TABLE XIX - REIMBURSABLE

WEEKLY RANGE OF PAY FOR FIRST JOB AS REPORTED BY 4 GRADUATES

WEEKLY SALARY RANGE	NO.	%
$100 - 124	1	25.0
75 - 99	1	25.0
50 - 74	1	25.0
0 - 49	1	25.0

TABLE XX - REIMBURSABLE

MONTHLY RANGE OF PAY FOR FIRST JOB AS REPORTED BY 38 GRADUATES

MONTHLY SALARY RANGE	NO.	%
$450 - 500	1	2.6
400 - 449	2	5.3
350 - 399	7	18.4
300 - 349	20	52.7
250 - 299	3	7.9
200 - 249	4	10.5
150 - 199	0	0.0
100 - 149	1	2.6

TABLE XVIIIa - NON-REIMBURSABLE

HOURLY RANGE OF PAY FOR FIRST JOB AS REPORTED BY 21 GRADUATES

HOURLY SALARY RANGE	NO.	%
$2.50 - 2.75	0	0.0
2.25 - 2.49	0	0.0
2.00 - 2.24	0	0.0
1.75 - 1.99	3	14.3
1.50 - 1.74	16	76.1
1.25 - 1.49	1	4.8
1.00 - 1.24	1	4.8

TABLE XIXa - NON-REIMBURSABLE

WEEKLY RANGE OF PAY FOR FIRST JOB AS REPORTED BY 2 GRADUATES

WEEKLY SALARY RANGE	NO.	%
$150 - 174	0	0.0
125 - 149	0	0.0
100 - 124	0	0.0
75 - 99	1	50.0
50 - 74	1	50.0

TABLE XXa - NON-REIMBURSABLE

MONTHLY RANGE OF PAY FOR FIRST JOB AS REPORTED BY 6 GRADUATES

MONTHLY SALARY RANGE	NO.	%
$500 - 549	0	0.0
450 - 499	0	0.0
400 - 449	0	0.0
350 - 399	2	33.3
300 - 349	2	33.3
250 - 299	0	0.0
200 - 249	1	16.7
150 - 199	0	0.0
100 - 149	1	16.7

TABLE XXI - REIMBURSABLE

HOURLY RANGE OF PAY FOR PRESENT JOB AS REPORTED BY 29 GRADUATES

HOURLY SALARY RANGE	NO.	%
$2.61 - UP	0	0.0
2.50 - 2.60	0	0.0
2.25 - 2.49	3	10.3
2.00 - 2.24	3	10.3
1.75 - 1.99	7	24.1
1.50 - 1.74	14	48.4
1.25 - 1.49	2	6.9
1.00 - 1.24	0	0.0

TABLE XXII - REIMBURSABLE

WEEKLY RANGE OF PAY FOR PRESENT JOB AS REPORTED BY 4 GRADUATES

WEEKLY SALARY RANGE	NO.	%
$150 - 174	0	0.0
125 - 149	0	0.0
100 - 124	1	25.0
75 - 99	1	25.0
50 - 74	1	25.0
0 - 49	1	25.0

TABLE XXIII - REIMBURSABLE

MONTHLY RANGE OF PAY FOR PRESENT JOB AS REPORTED BY 29 GRADUATES

MONTHLY SALARY RANGE	NO.	%
$450 - 500	0	0.0
400 - 449	1	3.4
350 - 399	11	37.9
300 - 349	14	48.4
250 - 299	1	3.4
200 - 249	2	6.9
150 - 199	0	0.0
100 - 149	0	0.0

TABLE XXIa - NON-REIMBURSABLE

HOURLY RANGE OF PAY FOR PRESENT JOB AS REPORTED BY 10 GRADUATES

HOURLY SALARY RANGE	NO.	%
$2.50 - 2.75	0	0.0
2.25 - 2.49	0	0.0
2.00 - 2.24	0	0.0
1.75 - 1.99	4	40.0
1.50 - 1.74	5	50.0
1.25 - 1.49	1	10.0
1.00 - 1.24	0	0.0

TABLE XXIIa - NON-REIMBURSABLE

WEEKLY RANGE OF PAY FOR PRESENT JOB AS REPORTED BY 2 GRADUATES

WEEKLY SALARY RANGE	NO.	%
$150 - 174	0	0.0
125 - 149	0	0.0
100 - 124	0	0.0
75 - 99	1	50.0
50 - 74	0	0.0
0 - 49	1	50.0

TABLE XXIIIa - NON-REIMBURSABLE

MONTHLY RANGE OF PAY FOR PRESENT JOB AS REPORTED BY 6 GRADUATES

MONTHLY SALARY RANGE	NO.	%
$500 - 549	0	0.0
450 - 499	1	16.7
400 - 449	0	0.0
350 - 399	1	16.7
300 - 349	3	50.0
250 - 299	0	0.0
200 - 249	0	0.0
150 - 199	0	0.0
100 - 149	1	16.6

TABLE XXIV - REIMBURSABLE

COMPARISON OF HOURLY RANGES OF PAY ON FIRST JOB AND ON PRESENT JOB

Hourly Range of Pay for First Job As Reported by 47 Graduates			Hourly Range of Pay for Present Job As Reported by 29 Graduates		
Range	No.	%	Range	No.	%
$3.00	1	2.1	$3.00	0	0.0
2.75 - 2.99	1	2.1	2.75 - 2.99	0	0.0
2.50 - 2.74	0	0.0	2.50 - 2.74	0	0.0
2.25 - 2.49	1	2.1	2.25 - 2.49	3	10.3
2.00 - 2.24	2	4.3	2.00 - 2.24	3	10.3
1.75 - 1.99	12	25.5	1.75 - 1.99	7	24.1
1.50 - 1.74	25	53.2	1.50 - 1.74	14	48.4
1.25 - 1.49	3	6.4	1.25 - 1.49	2	6.9
1.00 - 1.24	2	4.3	1.00 - 1.24	0	0.0

TABLE XXV - REIMBURSABLE

COMPARISON OF WEEKLY RANGES OF PAY ON FIRST JOB AND ON PRESENT JOB

Weekly Range of Pay for First Job As Reported by 4 Graduates			Weekly Range of Pay for Present Job As Reported by 4 Graduates		
Range	No.	%	Range	No.	%
$100 - 124	1	[illegible].0	$100 - 124	1	25.0
75 - 99	1	25.0	75 - 99	1	25.0
50 - 74	1	25.0	50 - 74	1	25.0
0 - 49	1	25.0	0 - 49	1	25.0

TABLE XXVI - REIMBURSABLE

COMPARISON OF MONTHLY RANGES OF PAY ON FIRST JOB AND ON PRESENT JOB

Monthly Range of Pay for First Job As Reported by 38 Graduates			Monthly Range of Pay for Present Job As Reported by 29 Graduates		
Range	No.	%	Range	No.	%
$450 - 500	1	2.6	$450 - 500	0	0.0
400 - 449	2	5.3	400 - 449	1	3.4
350 - 399	7	18.4	350 - 399	11	37.9
300 - 349	20	52.7	300 - 349	14	48.4
250 - 299	3	7.9	250 - 299	1	3.4
200 - 249	4	10.5	200 - 249	2	6.9
150 - 199	0	0.0	150 - 199	0	0.0
100 - 149	1	2.6	100 - 149	0	0.0

TABLE XXIVa - NON-REIMBURSABLE

COMPARISON OF HOURLY RANGES OF PAY ON FIRST JOB AND ON PRESENT JOB

Hourly Range of Pay for First Job As Reported by 21 Graduates			Hourly Range of Pay for Present Job As Reported by 10 Graduates		
Range	No.	%	Range	No.	%
$1.75 - 1.99	3	14.3	$1.75 - 1.99	4	40.0
1.50 - 1.74	16	76.1	1.50 - 1.74	5	50.0
1.25 - 1.49	1	4.8	1.25 - 1.49	1	10.0
1.00 - 1.24	1	4.8	1.00 - 1.24	0	0.0

TABLE XXVa - NON-REIMBURSABLE

COMPARISON OF WEEKLY RANGES OF PAY ON FIRST JOB AND ON PRESENT JOB

Weekly Range of Pay for First Job As Reported by 2 Graduates			Weekly Range of Pay for Present Job As Reported by 2 Graduates		
Range	No.	%	Range	No.	%
$75 - 99	1	50.0	$75 - 99	1	50.0
50 - 74	1	50.0	50 - 74	0	0.0
0 - 49	0	[illegible]	0 - 49	1	50.0

TABLE XXVIa - NON-REIMBURSABLE

COMPARISON OF MONTHLY RANGES OF PAY ON FIRST JOB AND ON PRESENT JOB

Monthly Range of Pay for First Job As Reported by 6 Graduates			Monthly Range of Pay for Present Job As Reported by 6 Graduates		
Range	No.	%	Range	No.	%
$450 - 499	0	0.0	$450 - 499	1	16.7
400 - 449	0	0.0	400 - 449	0	0.0
350 - 399	2	33.3	350 - 399	1	16.7
300 - 349	2	33.3	300 - 349	3	50.0
250 - 299	0	0.0	250 - 299	0	0.0
200 - 249	1	16.7	200 - 249	0	0.0
150 - 199	0	0.0	150 - 199	0	0.0
100 - 149	1	16.7	100 - 149	1	16.6

TABLE XXVII - REIMBURSABLE

SKILLS AND KNOWLEDGES NEEDED ON FIRST AND PRESENT JOBS AS REPORTED BY 86 GRADUATES

SKILL/KNOWLEDGE	First Job No.	First Job %	Present Job No.	Present Job %
TYPEWRITING				
Manual	35	40.7	26	30.2
Electric	35	40.7	26	30.2
IBM Selectric	21	24.4	18	20.9
IBM Executive	11	12.8	6	6.9
MTST Operation	1	1.2	1	1.2
Shorthand and Transcription	20	23.3	16	18.6
Dictation Machine Transcription	16	18.6	9	10.5
Filing	49	57.0	33	38.4
Bookkeeping or Accounting	19	22.1	13	15.1
Business Mathematics	14	16.3	9	10.5
DUPLICATING MACHINE OPERATION				
Offset	12	14.0	7	8.1
Stencil	15	17.4	7	8.1
Spirit Process	17	19.8	9	10.5
Photocopy Equipment	30	34.9	25	29.1
IBM Selectric composer or varityper	2	2.3	1	1.2
UNIT RECORD EQUIPMENT				
Keypunch	7	8.1	5	5.8
Verifier	5	5.8	5	5.8
Sorter	6	7.0	4	4.6
Collater	5	5.8	2	2.3
Reproducer	3	3.5	1	1.2
Accounting Machines	9	10.5	4	4.6
Other (Teleprocessor)	1	1.2	1	1.2
ADDING & CALCULATING MACHINES				
Ten-key Adding	46	53.5	28	32.6
Full-key Adding	17	19.8	13	15.1
Rotary calculator	14	16.3	9	10.5
Key-driven Calculator (comptometer)	7	8.1	2	2.3
Printing Calculator	7	8.1	4	4.6
Electronic Calculator	6	7.0	4	4.6
Bookkeeping Machines	6	7.0	0	0.0
COMMUNICATION SKILLS				
Telephone Usage	49	57.0	36	41.9
Business English	36	41.9	29	33.7
Written Business Communications	25	29.1	25	29.0

TABLE XXVII - REIMBURSABLE CONTINUED

SKILL/KNOWLEDGE	First Job No.	First Job %	Present Job No.	Present Job %
MARKETING/DISTRIBUTIVE				
Salesmanship Fundamentals	8	9.3	5	5.8
Cash Register Operation	8	9.3	4	4.6
Take Inventories	13	15.1	6	6.9
Price Markups and Markdowns	5	5.8	3	3.5
Stock Displays	5	5.8	4	4.6
Buying Techniques	4	4.7	1	1.2
Advertising Fundamentals	5	5.8	1	1.2
Product Knowledge	8	9.3	4	4.6

TABLE XXVIIa - NON-REIMBURSABLE

SKILLS AND KNOWLEDGES NEEDED ON FIRST AND PRESENT JOBS AS REPORTED BY 38 GRADUATES

SKILL/KNOWLEDGE	First Job No.	First Job %	Present Job No.	Present Job %
TYPEWRITING				
Manual	9	23.7	5	13.2
Electric	14	36.8	9	23.7
IBM Selectric	4	10.5	3	7.9
IBM Executive	3	7.9	1	2.6
MTST Operation	0	0.0	0	0.0
Shorthand and Transcription	3	7.9	2	5.3
Dictation Machine Transcription	0	0.0	0	0.0
Filing	17	44.7	11	28.9
Bookkeeping and Accounting	3	7.9	4	10.5
Business Mathematics	3	7.9	1	2.6
DUPLICATING EQUIPMENT OPERATION				
Offset	1	2.6	3	7.9
Stencil	3	7.9	2	5.3
Spirit Process	2	5.3	1	2.6
Photocopy Equipment	3	7.9	4	10.5
IBM Selectric composer or varityper	1	2.6	0	0.0
UNIT RECORD EQUIPMENT				
Keypunch	2	5.3	1	2.6
Verifier	1	2.6	1	2.6
Sorter	2	5.3	1	2.6
Collater	0	0.0	0	0.0
Reproducer	1	2.6	2	5.3
Accounting Machines	2	5.3	1	2.6
Other	0	0.0	0	0.0
ADDING AND CALCULATING MACHINES				
Ten-key adding	7	18.4	5	13.3
Full-key adding	1	2.6	1	2.6
Rotary Calculator	2	5.3	1	2.6
Key-driven Calculator (comptometer)	1	2.6	0	0.0
Electronic Calculator	1	2.6	0	0.0
Printing Calculator	0	0.0	0	0.0
Bookkeeping Machines	1	2.6	1	2.6
COMMUNICATION SKILLS				
Telephone Usage	11	28.9	6	15.8
Business English	8	21.1	7	18.4
Written Business Communications	6	15.8	5	13.2

TABLE XXVIIa - NON-REIMBURSABLE CONTINUED

SKILL/KNOWLEDGE	First Job No.	First Job %	Present Job No.	Present Job %
MARKETING/DISTRIBUTIVE				
Salesmanship Fundamentals	3	7.9	1	2.6
Cash Register Operation	7	18.4	2	5.3
Take Inventories	4	10.5	2	5.3
Price Markups and Markdowns	4	10.5	1	2.6
Stock Displays	3	7.9	1	2.6
Buying Techniques	1	2.6	1	2.6
Advertising Fundamentals	1	2.6	1	2.6
Product Knowledge	5	13.2	3	7.9

TABLE XXVIII - REIMBURSABLE

ADEQUACY OF PREPARATION FOR PERFORMING JOB SKILLS AS REPORTED BY GRADUATES

Skill/Knowledge	No. of Graduates Indicating Adqcy	Adequacy of Preparation: Excellent No.	Excellent %	Good No.	Good %	Average No.	Average %	Poor No.	Poor %	No. Prep. No.	No. Prep. %
TYPEWRITING											
Manual	52	23	44.3	23	44.3	5	9.6	0	0.0	1	1.9
Electric	54	29	53.2	18	33.3	7	12.9	0	0.0	0	0.0
IBM Selectric	44	22	50.0	19	43.2	3	6.8	0	0.0	0	0.0
IBM Executive	18	7	38.8	5	27.8	2	11.1	0	0.0	4	22.2
MTST Operation	4	0	0.0	0	0.0	0	0.0	0	0.0	4	100.0
Shorthand and Transcription	36	11	30.6	9	25.0	10	27.8	2	8.3	4	11.1
Dictation Machine Transcription	28	8	28.6	9	32.1	8	28.6	2	7.1	1	30.6
Filing	67	30	44.8	28	41.8	4	5.9	1	1.5	4	5.9
Bookkeeping or Accounting	36	9	25.0	15	41.7	7	19.4	0	0.0	5	13.9
Business Mathematics	24	4	16.7	11	45.8	6	25.0	0	0.0	3	12.5
DUPLICATING EQUIPMENT OPERATION											
Offset	29	11	37.9	6	20.7	3	10.3	2	6.9	7	24.1
Stencil	26	10	38.5	8	30.8	5	19.2	1	3.8	2	7.7
Spirit Process	26	12	46.2	8	30.8	6	23.1	0	0.0	0	0.0
Photocopy Equipment	33	17	51.5	5	15.2	2	6.1	0	0.0	19	27.3
IBM Selectric composer/varityper	6	0	0.0	0	0.0	0	0.0	0	0.0	6	100.0
UNIT RECORD EQUIPMENT											
Keypunch	14	1	7.1	1	7.1	1	7.1	1	7.1	10	71.4
Verifier	12	1	8.3	1	8.3	0	0.0	0	0.0	10	83.3
Sorter	10	1	10.0	1	10.0	0	0.0	0	0.0	8	80.0
Collater	9	2	22.2	0	0.0	0	0.0	0	0.0	7	77.8
Reproducer	7	0	0.0	1	14.2	0	0.0	0	0.0	6	85.7
Accounting Machines	14	1	7.1	2	14.2	4	28.6	0	0.0	7	50.0
Other	3	0	0.0	0	0.0	0	0.0	0	0.0	3	100.0
ADDING AND CALCULATING MACHINES											
Ten-key Adding	62	40	64.5	15	24.2	5	8.1	1	1.6	1	1.6
Full-Key Adding	27	12	44.4	11	40.7	2	7.4	1	3.7	1	3.7
Rotary Calculator	21	6	28.6	9	42.9	5	23.8	0	0.0	1	4.8
Key-driven calculator	12	1	8.3	2	16.7	4	33.3	0	0.0	5	41.7
Printing Calculator	12	1	8.3	6	50.0	0	0.0	1	8.3	4	33.3
Electronic Calculator	14	5	35.7	3	21.4	0	0.0	1	7.1	5	35.7

TABLE XXVIII - REIMBURSABLE CONTINUED

ADEQUACY OF PREPARATION FOR PERFORMING JOB SKILLS AS REPORTED BY GRADUATES

Skill/Knowledge	No. of Graduates Indicating Adqcy.	Adequacy of Preparation: Excellent No.	Excellent %	Good No.	Good %	Average No.	Average %	Poor No.	Poor %	No. Prep. No.	No. Prep. %
Bookkeeping Machines	9	1	11.1	2	22.2	2	22.2	0	0.0	4	44.4
COMMUNICATION SKILLS											
Telephone Usage	71	27	38.0	21	29.6	15	21.1	2	2.8	6	8.5
Business English	53	19	35.8	19	35.8	13	24.5	1	1.9	1	1.9
Written Business Communications	43	18	41.8	13	30.2	9	20.9	1	2.3	2	4.7
MARKETING/DISTRIBUTIVE											
Salesmanship fundamentals	17	5	29.4	4	23.5	2	11.8	1	5.8	5	29.4
Cash register operation	14	5	35.7	2	14.2	2	14.2	0	0.0	5	35.7
Take Inventories	18	5	27.8	3	16.7	2	11.1	0	0.0	8	44.4
Price Markups & Markdowns	11	2	18.2	1	9.9	2	18.2	0	0.0	6	54.5
Stock displays	10	2	20.0	2	20.0	0	0.0	0	0.0	6	60.0
Buying Techniques	9	0	0.0	3	33.3	0	0.0	0	0.0	6	66.6
Advertising Fundamentals	11	1	9.1	3	27.3	0	0.0	1	9.1	6	54.5
Product Knowledge	12	2	16.7	2	16.7	2	16.7	1	8.3	5	41.7

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TABLE XXVIIIa - NON-REIMBURSABLE

ADEQUACY OF PREPARATION FOR PERFORMING JOB SKILLS AS REPORTED BY GRADUATES

Skill/Knowledge	No. of Graduates Indicating Adqcy.	Adequacy of Preparation: Excellent No.	Excellent %	Good No.	Good %	Average No.	Average %	Poor No.	Poor %	No. Prep. No.	No. Prep. %
TYPEWRITING											
Manual	12	2	16.7	6	50.0	3	25.0	0	0.0	1	8.3
Electric	14	5	35.7	8	57.1	1	7.1	0	0.0	0	0.0
IBM Selectric	5	0	0.0	3	60.0	1	20.0	0	0.0	1	20.0
IBM Executive	3	1	33.3	0	0.0	2	66.7	0	0.0	0	0.0
MTST Operation	2	0	0.0	0	0.0	0	0.0	0	0.0	2	100.0
Shorthand and Transcription	4	4	100.0	0	0.0	0	0.0	0	0.0	0	0.0
Dictation Machine Transcription	3	0	0.0	1	33.3	0	0.0	0	0.0	2	66.7
Filing	18	8	44.4	6	33.3	2	11.1	1	5.5	1	5.5
Bookkeeping or Accounting	7	3	42.9	0	0.0	2	28.6	0	0.0	2	28.6
Business Mathematics	5	2	40.0	0	0.0	2	40.0	0	0.0	1	20.0
DUPLICATING EQUIPMENT OPERATION											
Offset	4	0	0.0	0	0.0	3	75.0	0	0.0	1	25.0
Stencil	5	0	0.0	0	0.0	3	60.0	0	0.0	2	40.0
Spirit-Process	4	0	0.0	1	25.0	1	25.0	0	0.0	2	50.0
Photocopy Equipment	4	0	0.0	1	25.0	1	25.0	0	0.0	2	50.0
IBM Selectric Composer/Varityper	2	0	0.0	1	50.0	0	0.0	0	0.0	1	50.0
UNIT RECORD EQUIPMENT											
Keypunch	5	0	0.0	1	20.0	0	0.0	0	0.0	3	60.0
Verifier	4	0	0.0	0	0.0	1	25.0	0	0.0	3	75.0
Sorter	4	0	0.0	2	50.0	0	0.0	0	0.0	2	50.0
Collater	2	0	0.0	0	0.0	0	0.0	0	0.0	2	100.0
Reproducer	4	0	0.0	1	25.0	0	0.0	0	0.0	3	75.0
Accounting Machines	5	2	40.0	0	0.0	1	20.0	0	0.0	2	40.0
Other	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ADDING AND CALCULATING MACHINES											
Ten-key Adding	11	5	45.5	3	27.3	2	18.2	0	0.0	1	9.9
Full-key Adding	4	1	25.0	2	50.0	1	25.0	0	0.0	0	0.0
Rotary Calculator	4	1	25.0	1	25.0	2	50.0	0	0.0	0	0.0
Key-driven calculator	3	0	0.0	2	66.7	0	0.0	0	0.0	1	33.3
Printing Calculator	2	0	0.0	1	50.0	0	0.0	0	0.0	1	50.0
Electronic Calculator	3	0	0.0	2	66.7	0	0.0	0	0.0	1	33.3

TABLE XXVIIIa - NON-REIMBURSABLE CONTINUED

ADEQUACY OF PREPARATION FOR PERFORMING JOB SKILLS AS REPORTED BY GRADUATES

Skill/Knowledge	No. of Graduates Indicating Adqcy.	Adequacy of Preparation: Excellent No.	Excellent %	Good No.	Good %	Average No.	Average %	Poor No.	Poor %	No. Prep. No.	No. Prep. %
Bookkeeping machines	3	1	33.3	0	0.0	0	0.0	0	0.0	2	66.7
COMMUNICATION SKILLS											
Telephone Usage	12	5	41.7	1	8.3	3	25.0	2	16.7	1	8.3
Business English	9	5	55.6	3	33.3	1	11.1	0	0.0	0	0.0
Written Business Communications	9	2	22.2	6	66.7	0	0.0	0	0.0	1	11.1
MARKETING/DISTRIBUTIVE											
Salesmanship Fundamentals	6	0	0.0	1	16.7	1	16.7	1	16.7	3	50.0
Cash Register Operation	9	1	11.1	2	22.2	1	11.1	1	11.1	4	44.4
Take Inventories	8	0	0.0	2	25.0	1	12.5	1	12.5	4	50.0
Price Markups & Markdowns	7	0	0.0	3	42.9	0	0.0	1	14.3	3	42.9
Stock Displays	6	0	0.0	1	16.7	1	16.7	1	16.7	3	50.0
Buying Techniques	4	0	0.0	0	0.0	1	25.0	0	0.0	3	75.0
Advertising Fundamentals	4	0	0.0	0	0.0	1	25.0	0	0.0	3	75.0
Product Knowledge	8	0	0.0	2	25.0	0	0.0	2	25.0	4	50.0

APPENDIX E

TABLE XXIX REIMBURSABLE

TASKS PERFORMED BY GRADUATES AS INDICATED BY 75 EMPLOYERS

TASK	EMPLOYERS INDICATING TASK PERFORMED No.	%
Typing memos, letters, tables, etc.	60	80.0
Filing	60	80.0
Answer and place telephone calls	59	78.7
Post to various records	41	54.7
Pick up, sort, & distribute mail	37	49.3
Type Data from Microfilm	1	01.3
Sell to customers	13	17.3
Operate cash register	3	04.0
Stock shelves	10	13.3
Perform calculations by machine	21	28.0
Operate telephone switchboard	8	10.7
Check meal tickets	1	01.3
Verify reports	15	20.0
Order supplies and equipment	14	18.7
Take inventory	12	16.0
Mark price changes	4	05.3
Wrap or bag merchandise	4	05.3
Serve food	1	01.3
Prepare invoices	12	16.0
Operate key punch	5	06.7
Take in money	17	22.7
Operate duplicating equipment	22	29.3
Take dictation and transcribe	16	21.3
Decollate & distribute printouts	1	01.3
Deliver messages	35	46.7
Prepare and make bank deposits	8	10.7
Make out checks	6	08.0
Billing/bookkeeping machine	4	05.3
Operate copying machine	30	40.0
NCR Proof Machine	1	01.3
Customer Inquiry	1	01.3
Enter Information on computer	3	04.0
Making plane Reservations	1	01.3
Order taking	1	01.3
Ordering Credit Cards	1	01.3
Mailing credit cards	1	01.3
Operate Microfilm Machine	1	01.3
Microfilm Jacketing Machine	1	01.3
Edit Microfilm	1	01.3
Title Jackets & maintain records	1	01.3

TABLE XXIXa NON-REIMBURSABLE

TASK PERFORMED BY GRADUATES AS INDICATED BY 19 EMPLOYERS

TASK	EMPLOYERS INDICATING TASK PERFORMED NO.	%
Typing memos, letters, tables, etc.	9	47.3
Filing	8	42.1
Answer and place telephone calls	9	47.3
Post to various records	4	21.1
Pick up, sort, and distribute mail	6	31.5
Sell to Customers	4	21.1
Operate cash Register	6	31.5
Stock shelves	5	26.3
Perform calculations by machine	4	21.1
Operate telephone switchboard	2	10.5
Verify reports	4	21.1
Order supplies and equipment	3	15.7
Take Inventory	3	15.7
Mark price Changes	4	21.1
Wrap or Bag Merchandise	3	15.7
Handed Flowers to Customers	1	5.3
X-Ray work	1	5.3
Take in money	5	26.3
Operate duplicating equipment	3	15.7
Take Dictation and Transcribe	1	5.3
Deliver messages	7	36.8
Lab Work	1	5.3
Prepare and make bank deposits	1	5.3
Make out checks	1	5.3
Conversion Typist	1	5.3
Operate copying machine	2	10.5
Assemble Data	1	5.3
Prepare Reports	1	5.3

TABLE XXX REIMBURSABLE

IMPORTANCE OF TASKS AS RATED BY EMPLOYERS

TASK	# INDICATING IMPORTANCE	Employers' Ratings of Task Importance							
		VERY IMPOR.		MODERATELY		MINOR IMPOR.		NO. IMPOR.	
		No.	%	No.	%	No.	%	No.	%
Typing memos, letters, tables, etc.	58	27	46.6	24	41.4	6	10.3	1	1.7
Filing	60	29	48.3	24	40.0	5	8.3	2	3.3
Answer & place telephone calls	56	26	46.4	20	35.7	9	16.1	1	1.8
Post to various records	42	16	38.1	18	42.9	5	11.9	3	7.1
Pick up, sort, & distribute mail	42	13	31.0	13	31.0	8	19.0	8	19.0
Sell to customers	18	5	27.8	2	11.1	3	16.7	8	44.4
Operate cash register	14	3	21.4	0	0.0	1	7.2	10	71.4
Stock shelves	20	2	10.0	5	25.0	4	20.0	9	45.0
Perform calculations by machine	26	7	26.9	7	26.9	7	26.9	5	19.3
Operate telephone switchboard	16	3	18.8	4	25.0	2	12.5	7	43.8
Verify reports	21	6	28.6	7	33.3	1	4.8	7	33.3
Order supplies and equipment	20	3	15.0	4	20.0	7	35.0	6	30.0
Take inventory	20	3	15.0	5	25.0	2	10.0	10	50.0
Mark price changes	13	1	7.7	0	0.0	1	7.7	11	84.6
Wrap or bag merchandise	13	1	7.7	3	23.1	0	0.0	9	69.2
Make plane Reservations	1	1	100.0	0	0.0	0	0.0	0	0.0
Prepare invoices	14	7	50.0	3	21.4	0	0.0	4	28.6
Operate key punch	13	1	7.7	2	15.4	1	7.7	9	69.2
Take in money	18	10	55.5	2	11.1	3	16.7	3	16.7
Operate duplicating equipment	26	6	23.1	10	38.5	5	19.2	5	19.2
Take dictation and transcribe	22	10	45.5	5	22.7	2	9.1	5	22.7
Mailing credit cards	1	1	100.0	0	0.0	0	0.0	0	0.0
Deliver messages	40	12	30.0	14	35.0	8	20.0	6	15.0
Approve customer credits	9	0	0.0	0	0.0	0	0.0	9	100.0
Prepare and make bank deposits	14	4	28.6	2	14.3	1	7.1	7	50.0
Make out checks	13	2	15.4	1	7.7	2	15.4	8	61.5
Billing/bookkeeping machine	12	2	16.7	0	0.0	1	8.3	9	75.0
Operate copying machine	30	8	26.7	13	43.3	6	20.0	3	10.0
Ordering credit cards	1	1	100.0	0	0.0	0	0.0	0	0.0
Serve Food	1	1	100.0	0	0.0	0	0.0	0	0.0
Type Data From Microfilm	1	1	100.0	0	0.0	0	0.0	0	0.0
Checking Meal Tickets	1	1	100.0	0	0.0	0	0.0	0	0.0
NCR Proof Machine	1	1	100.0	0	0.0	0	0.0	0	0.0
Operate Computer	1	1	100.0	0	0.0	0	0.0	0	0.0
Decollate & distribute printouts	1	1	100.0	0	0.0	0	0.0	0	0.0
Operate Microfilm Machine	1	1	100.0	0	0.0	0	0.0	0	0.0
Operate Microfilm Jacketing Machine	1	1	100.0	0	0.0	0	0.0	0	0.0
Edit Microfilm	1	1	100.0	0	0.0	0	0.0	0	0.0
Title Jackets & Maintain Records	1	1	100.0	0	0.0	0	0.0	0	0.0

TABLE XXXa NON-REIMBURSABLE

IMPORTANCE OF TASK AS RATED BY EMPLOYERS

TASK	NO. INDICATING IMPORTANCE	Employers' Ratings of Task Importance							
		VERY IMPOR.		MODERATELY		MINOR IMPOR.		NO. IMPOR.	
		NO.	%	NO.	%	NO.	%	NO.	%
Typing memos, letters, tables, etc.	9	5	55.6	3	33.3	0	0.0	1	11.1
Filing	8	5	62.5	2	25.0	0	0.0	1	12.5
Answer and place telephone calls	8	6	75.0	1	12.5	1	12.5	0	00.0
Post to various records	4	3	75.0	0	0.0	0	0.0	1	25.0
Pick up, sort, & distribute mail	6	3	50.0	1	16.7	1	16.7	1	16.6
Sell to customers	5	3	60.0	1	20.0	0	0.0	1	20.0
Operate Cash Register	6	6	100.0	0	0.0	0	0.0	0	0.0
Stock shelves	5	3	60.0	1	20.0	1	20.0	0	0.0
Perform calculations by machine	4	2	50.0	2	50.0	0	0.0	0	0.0
Operate telephone switchboard	3	2	66.7	0	0.0	0	0.0	1	33.3
Verify reports	4	2	50.0	1	25.0	0	0.0	1	25.0
Order supplies and equipment	5	0	0.0	1	20.0	2	40.0	2	40.0
Take inventory	5	1	20.0	2	40.0	0	0.0	2	40.0
Mark Price Changes	3	3	100.0	0	0.0	0	0.0	0	0.0
Wrap or bag Merchandise	4	2	50.0	1	25.0	0	0.0	1	25.0
Prepare invoices	1	0	0.0	0	0.0	0	0.0	1	100.0
Operate key punch	1	0	0.0	0	0.0	0	0.0	1	100.0
Take in money	5	5	100.0	0	0.0	0	0.0	0	0.0
Operate duplicating equipment	3	0	0.0	1	33.3	1	33.3	1	33.4
Take dictation and transcribe	2	0	0.0	1	50.0	0	0.0	1	50.0
Deliver Messages	7	5	71.4	0	0.0	1	14.3	1	14.3
Approve customer credits	1	0	0.0	0	0.0	0	0.0	1	100.0
Prepare and make bank deposits	2	1	50.0	0	0.0	0	0.0	1	50.0
Make out Checks	2	1	50.0	0	0.0	0	0.0	1	50.0
Billing/bookkeeping machine	1	0	0.0	0	0.0	0	0.0	1	100.0
Operate copying machine	2	0	0.0	1	50.0	1	50.0	0	0.0
Lab Work	1	0	0.0	1	100.0	0	0.0	0	0.0
X-Ray work	1	0	0.0	1	100.0	0	0.0	0	0.0

TABLE XXXI REIMBURSABLE

QUALITY OF TASK PERFORMANCE BY GRADUATES AS EVALUATED BY EMPLOYERS

TASK	# INDICATING PERFORMANCE	OUTSTANDING		ABOVE AVERAGE		AVERAGE		BELOW AVERAGE	
		No.	%	No.	%	No.	%	No.	%
Typing memos, letters, tables, etc.	62	11	17.8	24	38.7	24	38.7	3	04.8
Filing	59	11	18.6	18	30.5	28	47.5	2	3.4
Answer and place telephone calls	58	12	20.7	24	41.4	22	37.9	0	0.0
Post to various records	41	8	19.5	18	43.9	14	34.1	1	2.5
Pick up, sort, and distribute mail	38	4	10.5	18	47.4	16	42.1	0	0.0
Sell to customers	14	3	21.4	5	35.7	6	42.9	0	0.0
Operate cash register	4	0	0.0	1	25.0	2	50.0	1	25.0
Stock shelves	10	0	0.0	3	30.0	7	70.0	0	0.0
Perform calculations by machine	23	5	21.7	4	17.4	13	56.5	1	4.4
Operate telephone switchboard	8	3	37.5	3	37.5	2	25.0	0	0.0
Verify reports	15	2	13.3	7	46.7	4	26.7	2	13.3
Order supplies and equipment	14	2	14.3	7	50.0	4	28.6	1	7.1
Take inventory	13	1	7.7	7	53.8	4	30.8	1	7.7
Mark price changes	5	0	0.0	1	20.0	4	80.0	0	0.0
Wrap or bag merchandise	4	0	0.0	1	25.0	3	75.0	0	0.0
Prepare invoices	12	4	33.3	4	33.3	3	25.0	1	8.4
Operate key punch	5	1	20.0	0	0.0	3	60.0	1	20.0
Take in money	18	6	33.3	6	33.3	5	27.8	1	5.6
Operate duplicating equipment	23	7	30.4	5	21.7	11	47.9	0	0.0
Take dictation and transcribe	17	4	23.5	9	52.9	2	11.8	2	11.8
Deliver messages	35	7	20.0	19	54.3	9	25.7	0	0.0
Prepare and make bank deposits	7	3	42.8	1	14.2	3	42.8	1	14.2
Make out checks	6	2	33.3	1	17.7	2	33.3	1	17.7
Billing/bookkeeping machine	4	1	25.0	1	25.0	0	0.0	2	50.0
Operate copying machine	30	9	30.0	8	26.7	13	43.3	0	0.0
Make plane reservations	1	1	100.0	0	0.0	0	0.0	0	0.0
Operate NSR Machine	2	0	0.0	1	50.0	1	50.0	0	0.0
Order Taking	1	0	0.0	1	100.0	0	0.0	0	0.0
Customer Inquiry Handling	1	0	0.0	1	100.0	0	0.0	0	0.0
Ordering credit cards	1	0	0.0	1	100.0	0	0.0	0	0.0
Mailing Credit Cards	1	0	0.0	1	100.0	0	0.0	0	0.0
Microfilm Machine	1	0	0.0	0	0.0	1	100.0	0	0.0
Microfilm Jacketing Machine	1	0	0.0	0	0.0	1	100.0	0	0.0
Edit Microfilm	2	0	0.0	0	0.0	0	0.0	2	100.0
Title Microfilm Jackets & Maintain Records	1	0	0.0	0	0.0	0	0.0	1	100.0
Decollates & Distributes printouts	1	0	0.0	1	100.0	0	0.0	0	0.0
Operate computer equipment	3	1	33.3	1	33.3	1	33.4	0	0.0
Serving Food to Students	1	0	0.0	1	100.0	0	0.0	0	0.0
Checking Meal Tickets	1	0	0.0	1	100.0	0	0.0	0	0.0

TABLE XXXIa NON-REIMBURSABLE

QUALITY OF TASK PERFORMANCE BY GRADUATES AS EVALUATED BY EMPLOYERS

TASK	No. Indicating Performance	Employers' Evaluation of Task Performance							
		Outstanding		Above Average		Average		Below Average	
		No.	%	No.	%	No.	%	No.	%
Typing memos, letters, tables, etc.	9	3	33.3	3	33.3	2	22.2	1	11.2
Filing	8	2	25.0	4	50.0	1	12.5	1	12.5
Answer and place telephone calls	10	4	40.0	3	30.0	2	20.0	1	10.0
Post to Various Records	4	0	0.0	3	75.0	0	0.0	1	25.0
Pick up, sort, and distribute mail	6	0	0.0	3	50.0	3	50.0	0	0.0
Sell to customers	4	1	25.0	1	25.0	2	50.0	0	0.0
Operate Cash Register	6	2	33.3	1	16.7	3	50.0	0	0.0
Stock Shelves	5	2	40.0	0	0.0	3	60.0	0	0.0
Perform calculations by machine	4	2	50.0	1	25.0	1	25.0	0	0.0
Operate telephone switchboard	2	1	50.0	1	50.0	0	0.0	0	0.0
Verify reports	4	2	50.0	1	25.0	0	0.0	1	25.0
Order supplies and Equipment	3	0	0.0	0	0.0	3	100.0	0	0.0
Take inventory	3	0	0.0	1	33.3	2	66.7	0	0.0
Mark price Changes	4	2	50.0	0	0.0	2	50.0	0	0.0
Wrap or bag Merchandise	3	1	33.3	0	0.0	2	66.7	0	0.0
Take in money	5	2	40.0	0	0.0	3	60.0	0	0.0
Operate duplicating equipment	3	0	0.0	1	33.3	2	66.7	0	0.0
Take dictation and transcribe	1	1	100.0	0	0.0	0	0.0	0	0.0
Deliver Messages	7	3	42.9	3	42.9	0	0.0	1	14.2
Prepare and make bank deposits	1	0	0.0	0	0.0	1	100.0	0	0.0
Make out Checks	1	0	0.0	0	0.0	1	100.0	0	0.0
Operate copying machine	2	0	0.0	1	50.0	1	50.0	0	0.0
Assemble Data	1	0	0.0	1	100.0	0	0.0	0	0.0
Prepare Reports	1	0	0.0	1	100.0	0	0.0	0	0.0
Conversion Typist	1	0	0.0	1	100.0	0	0.0	0	0.0
Lab Work	1	1	100.0	0	0.0	0	0.0	0	0.0
X-Ray Work	1	1	100.0	0	0.0	0	0.0	0	0.0

TABLE XXXII REIMBURSABLE

EMPLOYER RATING OF PERSONAL TRAITS POSSESSED BY GRADUATES

PERSONAL QUALITIES	NO. INDICATING TRAIT	Employers' Rating of Traits: OUTSTANDING No.	%	ABOVE AVERAGE No.	%	AVERAGE No.	%	BELOW AVERAGE No.	%
Personal Appearance	72	13	18.1	32	44.4	26	36.1	1	1.4
Dependability	73	19	26.0	32	43.8	21	28.8	1	1.4
Initiative and/or Resourcefulness	72	11	15.3	30	41.7	24	33.3	7	9.7
Ability to Maintain Harmonious Relations	63	19	30.2	35	55.6	16	25.4	3	4.8
Neatness, etc.	71	13	18.3	29	40.8	24	33.8	5	7.1
Observance of Company Rules	70	11	15.7	28	40.0	28	40.0	3	4.3
Speed in Performing Operations	72	14	19.4	26	36.1	27	37.5	5	7.0
Accuracy in Performing Operations	70	13	18.6	27	38.6	24	34.2	6	8.6
Ability to Follow Instructions	73	13	17.8	34	46.6	19	26.0	7	9.6
Ability to Organize Work	69	9	13.0	29	42.0	27	39.2	4	5.8
Ability to Wrok Under Pressure	70	10	14.3	30	42.9	26	37.1	4	5.7

TABLE XXXIIa NON-REIMBURSABLE

EMPLOYER RATING OF PERSONAL TRAITS POSSESSED BY GRADUATES

PERSONAL QUALITIES	NO. INDICATING TRAIT	OUTSTANDING		ABOVE AVERAGE		AVERAGE		BELOW AVERAGE	
		No.	%	No.	%	No.	%	No.	%
Personal Appearance	16	6	37.5	3	18.8	7	43.7	0	0.0
Dependability	15	5	33.3	5	33.3	5	33.4	0	0.0
Initiative and/or Resourcefulness	15	4	26.7	2	13.3	7	46.7	2	13.3
Ability to maintain harmonious relations	17	4	23.5	6	35.3	6	35.3	1	5.9
Neatness, etc.	16	4	25.0	6	37.5	6	37.5	0	0.0
Observance of company rules	16	7	43.7	3	18.8	5	31.2	1	6.3
Speed in performing operations	17	4	23.5	6	35.3	6	35.3	1	5.9
Accuracy in performing	17	4	23.5	7	41.2	5	29.4	1	5.9
Ability to follow instructions	16	6	37.5	4	25.0	5	31.2	1	6.3
Ability to organize work	16	4	25.0	5	31.2	6	37.5	1	6.3
Ability to work under pressure	16	2	12.5	6	37.5	6	37.5	2	12.5

TABLE XXXIII REIMBURSABLE

PERSONAL QUALITY STRENGTHS OF GRADUATES AS IDENTIFIED BY EMPLOYERS

PERSONAL QUALITY STRENGTHS	NO. OF EMPLOYERS INDICATING
Neat	9
Good typing ability	6
Answer & Place Calls	1
Good English	1
Good Shorthand	1
Good on Business Machines	2
Independent	1
Good business Training background	6
Self-confidence	1
Aggressiveness	3
Dependable	6
Honesty	1
Cooperative	4
Meets people Well	1
Personality	3
Works Well with others	1
Willing	7
Pleasant	2
Good test scores	1
Good attitudes	1
Conscientious	1
Finishes Work on time	2
Takes instructions	3
Flexible	1
Quiet	1
Loyalty	1
Well Qualified	1
Attention to Detail	1
Courteous	1
Eager to Work	1
Intelligence	1
Well Organized	1
Alert	2
Cheerful	2
On Time	1
Ask Questions when does not Understand	1
Good Work Habits	1
Friendly	2

TABLE XXXIIIa NON-REIMBURSABLE

PERSONAL QUALITY STRENGTHS OF GRADUATES AS IDENTIFIED BY EMPLOYERS

PERSONAL QUALITY STRENGTHS	NO. OF EMPLOYERS INDICATING
Self-confidence	1
Poise	1
Dress	1
Good Skills	2
Communication	2
Eagerness to Wrok	1
Fast	1
Reliable	1
Shows Initiative	1
Personality	1
Sincere	1
Flexible	1
Neat & Clean	1
Maturity	1
Intelligence	1
Aggressive	1
Good Background	1
Outgoing	1
Education	1

TABLE XXXIV REIMBURSABLE

PERSONAL QUALITY WEAKNESSES OF GRADUATES AS IDENTIFIED BY EMPLOYERS

PERSONAL QUALITY WEAKNESSES	NO. OF EMPLOYERS INDICATING
Shorthand	4
Mathematics	5
Spelling	6
English	4
Unable to meet Public	1
Lack of Neatness	4
Undependable	1
Dishonesty	1
Poor Telephone Usage	1
Habits (Tobacco-Beverages)	1
More Interested in Personal Gain	2
Lack initiative	6
Afraid to Accept Responsibility	1
Shyness	3
Lack interest in Work	4
Lack of Maturity	3
Typing Speed	1
Knowledge of Business Practices	2
Lacks Self-confidence	1
Personal Appearance	1
Too many outside distractions	2
Observation of Company Rules	1
Poor Attitude	1
Handwriting	1
Inexperienced	1
Strike-over instead of correcting	1
Feels job is insignificant	1
Business Dress	1
Impatience	1

TABLE XXXIVa NON-REIMBURSABLE

PERSONAL QUALITY WEAKNESSES OF GRADUATES AS IDENTIFIED BY EMPLOYERS

PERSONAL QUALITY WEAKNESSES	NO. OF EMPLOYERS INDICATING
Anxiety	1
Lack of Interest in Little task	1
Appearance	2
Handwriting	1
Absent too much	1
Late	1
Spelling	1
Does not correct errors	1
Shy	1
Lacks motivation	1
Lacks Interest	1
Lacks Tact	1
Distrust	1

VT 017 592

VT 017 592
CAREER EDUCATION WORKSHOP FOR ELEMENTARY SCHOOL PRINCIPAL (CORVALLIS, OREGON, JUNE 19-23, 1972).

OREGON STATE UNIV., CORVALLIS. DEPT. OF ELEMENTARY EDUCATION.
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DESCRIPTORS - *SUMMER WORKSHOPS; EDUCATIONAL PROGRAMS; PROGRAM DEVELOPMENT; GUIDELINES; *CAREER EDUCATION; *PRINCIPALS; *ELEMENTARY EDUCATION; ELEMENTARY SCHOOL CURRICULUM
IDENTIFIERS - *OREGON; CAREER AWARENESS

ABSTRACT - CAREER EDUCATION IN OREGON IS INTENDED TO BE A LEARNING PROGRAM TO MEET THE LIFE ROLE NEEDS OF ALL LEARNERS AT EVERY LEVEL. TO DESIGN GUIDELINES FOR THE PLANNING AND DEVELOPMENT OF THIS PROGRAM AT THE ELEMENTARY LEVEL, 40 ELEMENTARY SCHOOL PRINCIPALS ATTENDED A WEEK-LONG WORKSHOP, INCLUDING A FULL SCHEDULE OF LECTURES AND WORK SESSIONS. TWENTY-ONE STATEMENTS DEVELOPED BY THE WORKING GROUPS RELATE TO SUCH MATTERS AS: (1) THE NEED FOR PUBLIC SUPPORT OF THE PROGRAM, (2) EMPHASIS ON THE SUCCESS AND DIGNITY OF THE INDIVIDUAL, (3) THE LASTING QUALITIES OF A GOOD PROGRAM, (4) THE WEAKNESSES OF THE EXISTING CAREER EDUCATION PROGRAM. THE WORKSHOP REPORT CONTAINS THE PROGRAM OUTLINES FORMULATED BY EACH PRINCIPAL FOR IMPLEMENTATION IN HIS SCHOOL AND A LISTING OF COMMON CONCEPTS TO SERVE AS GUIDELINES IN THE DEVELOPMENT OF A NEW CURRICULUM. (KH)

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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CAREER EDUCATION WORKSHOP

FOR

ELEMENTARY SCHOOL PRINCIPAL

Department of Elementary Education
Oregon State University
Summer 1972

VT017592

Career Education in Oregon is dedicated to the task of designing and implementing a comprehensive career-centered learning program, which has the capacity for meeting the life role needs of all learners at every level, whatever their age or position. Such a system requires the full support and active involvement of educators, parents, businessmen and women and students from every walk of Oregon's life.

Career Education - The Oregon Way - will provide career awareness experiences for all elementary students, career exploration opportunities for every learner in grades 7 through 10, vocational cluster preparation for no less than 70% of our 11th and 12th grade students, and specialized career programs for students and adults from grades 13-14 and on.

The guidelines and concepts suggested by this booklet can point the way for on-the-ground planning of new and useful programs for the elementary career awareness dimension of Oregon's pace-setting program of Career Education.

Leonard Kunzman
State Director
Career Education

Forty Elementary School Principals assembled on the campus at O.S.U. to become aware of Career Education. The outcome of the workshop (which was sponsored by the Oregon Board of Education, Oregon State University, and the Elementary School Principals Association) was a projected program that would affect 40 elementary schools in the State of Oregon.

A follow-up and an evaluation will be held during the early part of 1973 on the campus at O.S.U., to finish our summer workshop.

Bob Weaver, 1st Vice-President Elect
Oregon Elementary Principals Assoc.

Ours was a successful workshop! Much of the success can be attributed to the quality and dedication of the participants. The fifty elementary school principals who attended the week long session arrived on the Oregon State University Campus expecting to become better equipped to initiate and maintain programs of elementary career education and they were willing to work unconditionally toward that end. It is evident that the children who attend the schools represented in the workshop are fortunate indeed to be reaping the rewards of dynamic educational leadership.

Special recognition and appreciation must be given to Dr. Anna Meeks, Mr. Leonard Kunzman, Henry Ten Pas, Dr. James Armitage, Dr. Cas Heilman, and Dr. Richard Gardner for the excellent job they did in bringing valuable in-put to the workshop. Our girls Friday, Cathy Hutchings Kidby, and Lou Anne Nebeker must also be recognized for the many contributions they made to the success of the program.

Frank Cross, Ed.D
Associate Professor
Workshop Director

OREGON STATE UNIVERSITY
School of Education
Division of Elementary Education

THE PRINCIPAL, CAREER EDUCATION AND COMMUNICATION
Dr. Frank Cross, Workshop Director

Workshop Schedule
All Activities will be at McNary Hall

Monday, June 19, 1972

10:00	Registration
12:00	Lunch Speaker, Dr. Jim Armitage, Division Director, Elementary Education, OSU "The Principal Communicates to Effect Change"
1:30 - 3:00	First Session: Orientation, Assignments, Work Groups
3:00	Complete registration, add courses, etc.
6:00	Banquet: Speaker, Mr. Leonard Kunzman, Director of Career Education, Oregon Board of Education "The Oregon Story"

Tuesday, June 20, 1972

8:30 - 11:30	Second Session: Elementary Career Education Work Session
12:00	Lunch Speaker, Dr. Cas Heilman, Asst. Professor, Vocational Education, OSU "Resolving the Difference Between Career Education and Vocational Education"
1:30 - 4:00	Third Session: Elementary Career Education Work Session

Wednesday, June 21, 1972

8:30 - 11:30	Fourth Session: Elementary Careers Education Work Session Speaker: Dr. Henry TenPas, Director, Vocational Education, OSU Work Session

Wednesday, June 21 cont.

12:00	Lunch Speaker, Dr. Anna Meeks, Professor, Elementary Guidance, CSU
1:30 - 4:00	Fifth Session: Communication and Implementation Work Session

Thursday, June 22, 1972

8:30 - 11:30	Sixth Session: Curriculum Work Session
12:00	Lunch Speaker, Dr. Dick Gardner, Asst. Professor, Vocational Education "Curriculum"
1:30 - 4:00	Seventh Session: Curriculum Work Session

Friday, June 23, 1972

8:30 - 11:30	Eighth Session: Inservice Work Session
12:00	Lunch Speaker, Workshop Participants "Implementing and Maintaining the Program"
1:30 - 3:00	Ninth Session, Evaluation
3:00	End of Conference

CAREER EDUCATION WORKSHOP

DEFINITIONS OF CAREER EDUCATION MADE BY EACH PARTICIPANT

Career education becomes the concept of providing a more meaningful education so that each student will be helped to develop a sound decision-making procedure based upon his values, will be able to evaluate alternatives of directions and understand his rights and responsibilities as a member of society and to fulfill his careers (roles of family, citizen, vocation and avocation) in a meaningful manner. At the elementary level of career education, the vocation role focuses on the awareness level of vocations. This awareness can be integrated into the present curriculum by changing the emphasis of how workers are discussed and presented. The emphasis becomes on the role of the worker as a whole person not on the product of the worker.

A process whereby education is made relevant, so that the student can apply facts and concepts acquired to his desired life role. Through this educational process he will be assisted in acquiring and maintaining a positive self-image while recognizing the real environment confronting him and thereby becoming a positive and worthwhile element within this environment.

The process of providing through the elementary public schools opportunities throughout the total school curriculum for children to prepare themselves for the life roles they will play or perform as adults.

Career education is the total effort of the school, working with the community, to prepare the student for roles as a family member, as a citizen, in a vocation and an avocation. This is to be done through the existing curriculum. It will equip the student with the attitudes, values, skills and knowledge to function successfully in the above roles according to his ability and desires.

Career education in the elementary school becomes that part of the educational program that relates all education to the interests and needs of students for fulfilling their life roles. The major impact will be made in helping students develop positive attitudes toward the personal, psychological, social and economic significance of work as he develops his own awareness, self-esteem, and self-identity.

Careers education will encompass the understanding of aspects of the "world of living" such as aesthetics, leisure time, and work. Children in the elementary school should be (1) introduced to the world of living, (2) able to experiment and explore with the world of living, (3) able to apply the world of living to all areas of the curriculum, (4) able to understand and use the skills of observation of the world of living, and (5) be able to evaluate and begin to make choices of the world of living.

Careers Education, I believe, is the sum total of the individual's learning experiences that enable him to develop and grow to the maximum of his potential for self-satisfaction and service to society, to the end that his work, whether vocation or avocation, may be self-fulfillment and "love made visible".

Career education is the program of development of an individual through experiences that broaden the ability to respond to various life situations.

The emphasis on the worth of every individual and the how's and why's he must relate to the world of living through productive use of attitudes, skills and knowledge.

Career education is a movement to cause people to look upon and accept all needed skills and services as being honorable, worthy, and rewarding kinds of work if they free the individual's potential.

Within the total school community direct the resources and the thrust of the instructional program into those hands-on and intellectual learning activities that will develop within each human those habits and attitudes and skills that will assure him self-fulfillment as a productive, integrated member of society.

Helping young people understand themselves in regards to the four life roles. Through this experience children will understand the natural relationship that exists between these life roles and realize the importance of dignity in all work, and the necessity of learning through involvement in a series of human experiences.

Each person must be exposed to the many opportunities of life so he will seek from each moment of his life as many priceless, meaningful, rewarding and sincere experiences as possible.

Career education is a concept in which the life roles of each individual become the integral part of the total educational process. It encompasses the systematic development of attitudes, interests, and values into the lives of every individual so that what they do throughout life becomes meaningful and satisfying to themselves and others.

Career education is the adequate preparation of all individuals for the responsibilities and expectations of life's careers so they can function in each to the level of their desires and capabilities.

Process of involvement of people in the life roles of vocation, citizenship, family and avocation.

Careers education is a dominant philosophy that permeates throughout ones entire life. Its purpose is to prepare the individual to meet his needs in an ever-changing world. It attempts to develop a person who is flexible and has a strong self-concept that is able to cope with life's many opportunities.

Career education is an all inclusive educational delivery system that permits a child to develop according to his abilities and interests his citizenship responsibilities, occupational readiness and moral and physical development. The child is exposed to educational experience that will help him enjoy full, functional living in the present and in the future.

To assist development of a functional, relating individual within his world of reality (family, citizen, avocation, vocation) as a fulfilled human being.

Career education can be defined as the successful preparation for the four life roles in a work-oriented society. It must emphasize the worth of the individual, the <u>how</u> and <u>why</u> he must relate to the world around him through the productive use of skills, knowledge, and attitudes. Career education is basic to all education, for it is the fundamental answer to "why" we have schools - the preparation and training for successful careers.

When the major purpose of the school curriculum is to help each child recognize, appreciate, and adopt positive and productive life roles, it can be called "career education".

Should be developed around a sound philosophy of the four life roles, involving attitude, career awareness, career exploration, and career development, as well as reflecting the needs of the individual child.

Establishment of a program through the cooperative efforts of the school and community that will develop a flexible, continuous, positive self-concept within a student; a student who can cope with an ever changing society. The program must reach the immediate and the long range needs of the individual thereby providing servicable, meaningful satisfying total life experiences.

A program of studies or process of education through which elementary students become aware of the life roles of society - such as occupational, family, citizen and avocational roles.

The emphasis of the worth of an individual and how and why he must relate to the world that surrounds him through the productive use of attitudes, skills, and knowledge.

Career education is a measurable, productive activity which is influenced by the economy in which people live. It begins with the family as the nucleus and should provide learning experiences from early childhood which may result in a productive occupation, life and home. It may also provide an opportunity for the person to achieve and enjoy the things in life which are, at least, somewhat commensurate with his ability to attain.

Career education is a developmental process designed to help all individuals prepare for their life roles in the world of work: family, citizenship, vocation, avocation. This process provides each student an opportunity to examine his or her abilities and aptitudes, interests, and attitudes and relate them to careers enabling each to make valid decisions regarding their future education and productive life roles.

Career education is a program of educational emphasis and experiences which encourages students in a general way to recognize the role of workers to enlarge each child's understanding of vocational choice and develop a degree of economic competence in our changing world of work. The elementary accent on career awareness specifically accents positive attitudes about the personal and social importance of work, develops each child's self-awareness, develops and expands the pupil's knowledge about a wide variety of occupations and assists students in developing their own career wishes.

Career education is a program that helps equip all students with attitudes, habits, skills, and understandings necessary to function in the world-of-work.

Careers education is the emphasis of the worth of every individual and how and why he must relate to the people and world that surrounds him through the productive use of attitudes, skills, and knowledge.

Career education is helping every student to cope with an ever-changing society. It should help all individuals develop work and humanistic values that will become personally satisfying. It encompasses the educational experiences from early childhood through the productive life of the individual.

Career education is a program to give the student an opportunity to learn about himself, his family, and his ever-enlarging community, to learn to live with himself, his family and in the community. To learn to communicate with others, and learn to do his share in supporting the well being of himself and others.

Careers education in the elementary school is a process of giving direction to the planned learning experiences in such a way that each child is helped to grow more competent as a family member, as a citizen of the world, as a worker and as a person with interests and talents requiring an avocational outlet.

Career education is a combination of the academic and vocational elements. It meets the needs of all students in the four major life roles of family, citizenship, vocation, and avocation. For this reason, it is best called Careers Education to emphasize the multiple life roles involved. Learning in each of these roles stresses self-concept, human relationships, intellectual power, continuous learning, and acquiring knowledge, and recognizes the influence of aesthetic, moral, and spiritual values. Elementary students are encouraged to develop awareness of themselves as a human being in relation to the four life roles and familiarity with many different vocations without commitment to a specific choice.

A philosophy of teaching is which the total school program is built around the major goal of preparing children to be successful as productive members of society. To as large a degree as possible the particular communities should be involved and especially the human resources.

Career education is a concept which in working with the community fosters relevant and meaningful educational experiences from early childhood through the productive life of the individual. The existing curriculum will provide the student with a positive self-concept, with good human relationships, with intellectual powers, with continuous learning and the acquiring of knowledge so as to provide him with occupational readiness and eventual responsible productivity according to his ability and desires.

Career education is the combined effort of school and community in (1) helping a child learn (become more aware) about himself, others, and how he interacts with others; (2) helping a child learn about vocation and how his competency skills will aid him in tackeling the world of vocation; (3) it is helping a child learn about avocation, its importance and how he will be able to enjoy avocation; (4) helping a child better understand citizenship, his role in becoming and remaining a good world citizen. It is a major obligation of the school and the community to attempt to combine these values and help mold these values into a child's own value system so that he can live peacefully and respectfully with them.

Career education is a developmental process which is designed to help all individuals prepare for their life roles: vocational, economic, community home and avocational. Career education enables students to examine their abilities, interests, and aptitudes; relate them to career opportunities; and make valid decisions regarding further education and/or work. Career education becomes a part of all levels of education from kindergarten through adult life. The elementary school years will provide an awareness of the world of work and an understanding of the value of work to the individual and family. Through the junior high years, the student will explore and try out his talents and interests and make tentative occupational and educational choices. The high school years will provide an opportunity for the student to prepare for entry into a broad occupational area and/or advanced educational programs after high school. Post-secondary programs will provide for specialized training, upgrading of skills, and retraining opportunities. Career education is not a separate course in the school curriculum, nor is it an isolated activity. It is a current, ongoing, activity-oriented process incorporated throughout the curriculum, and designed to help the individual develop the skills and knowledge for effective participation in all his life roles.

CAREER EDUCATION WORKSHOP

Statements By Evaluation Groups

SUPPORT OF CAREER EDUCATION

1. Career education can best be supported by considering its relevance in terms of the present and future needs of children within our economic and humanistic society.

2. Career education is not an additional curricular offering. Its emphasis is on success oriented life roles. It lends itself to the dignity and worth of the individual. It will humanize teaching.

3. Career education is preparation for the world of living, that is the closest to the individual and yet the most inclusive process of continuous learning.

4. Career education offers a vehicle for a timely and much needed change in a curriculum that is more relevant to the needs of children and society.

5. Career education is based on the needs of children and the Reasons for "doing" -- the why.

6. It is a program for all children which has a majority public support with threads tying all areas together.

7. Our present curriculum has failed to adequately prepare students for the life roles. Career education is needed to adequately equip the student with the attitudes, values, skills and knowledges to function in the roles of a family member, as a citizen, in a vocation and an avocation.

LASTING QUALITIES

1. It will have a lasting quality because when properly utilized, it will constantly change in terms of the children's and society's needs.

2. Primary emphasis on success not failure -- contributes to the dignity of self.

3. Because career education includes all of life's roles - not just the world of work, it will be eternal.

4. It focuses on the life role of people.

5. (A) On going -- continuous program. Answers question of the why in education. (B) Fulfills the need for every person and society.

6. A venture to provide meaningful content in life from birth to death - that require little re-teaching - perhaps re-emphasis.

7. Careers education will continue as a lasting influence because of its relevancy to students interests and their needs.

WEAKNESS

1. The very nature of the flexible program and consequent lack of documentation creates for many teachers a feeling of insecurity and frustration which may well cause the program to be slighted or ignored by those teachers.

2. It is a difficult concept to internalize and takes time - some staffs may not take the time to do this. It is difficult for middle class teachers to relate the program to minority groups, welfare, etc.

3. Over or under - emphasis on any one facet of the world of living is, we believe, the greatest weakness.

4. The total society willingness to accept and make changes.

5. Weaknesses are: (a) could become a vocational education program, (b) non-commitment of total staff (lack of pre-planning), (c) could be labeled just another educational fad!

6. A strong minority feeling desiring academic excellence - 'book learning' - 'I want better for my kids than I had.'

7. Apparent weaknesses would seem to be commitment by staff and central administration and also a lack of understanding by staff and parents.

INCORPORATING A CAREER EDUCATION PROGRAM AT SENECA SCHOOL

By Reed Pennell

My basic premiss and goal is the effective implementation of career education into our existing program, emphasizing the pupils role as citizen, marriage partner, and worker.

A. Preliminary Groundwork
   1. Communication with district superintendent and school board
      a. acceptance of, and support for, the programs philosophy
      b. obtaining funds, if possible for a comprehensive staff workshop
   2. Staff activities in the preliminary stages
      a. arriving at a common accepted definition of what career ed. is and what it is all about
      b. establish relevant K-8 goals for career education for the Seneca area
         (1) program goals to come from staff where possible
      c. arriving at methods of modification of the curriculum along with methods of effectively integrating career education into the existing program
         (1) adapting goals on grid to curriculum
         (2) brainstorm with staff to come up with methods and heirarchy of goals
         (3) emphasizing need for total integration of program into total curriculum
         (4) final outcome to be a fully capacitated individual with a solid self esteem and success motivation
      d. acquisition of various district curriculum guides and other relevant professional publications, to assist in implementation

B. Actual Program Implementation Procedures
   1. Community
      a. Communication with the community as to the philosophy of career education, and what we hope to improve by implementing thid program
   2. Parents
      a. select a group to work with the staff and to be a communication link with other parents and the community
   3. Resource Persons
      a. involved for academic gains to pupils and for public relations
   4. Students
      a. listening to ideas of todays students in this area
      b. forming student curriculum groups from grades 4-8
      c. making sure students know <u>why</u> in career education
      d. establish proper disciplines and goals commensurate with professional philosophy

C. Program Evaluation
   1. To be a continuous process
   2. Staff meetings
      a. regular meetings to critique, modify, and evaluate the reality of the on-going program

3. Administrative meeting
   a. sharing of upper level ideas and impressions
4. Modifications as needed
   a. Communication with parents
      (1) reactions
      (2) ideas for changes of improvement
      (3) analysis of community support
   b. meetings with student groups for reactions and ideas
5. Non-Grading as a necessary aspect of the program
   a. again the need for community acceptance

D. Meeting of Career Education Goals
   1. Staff meetings
      a. personal reactions to behavior modifications, if any present
      b. establish accepted standards for evaluation after program in progress to assure relevancy
   2. Basic Goals for pupil behavior
      a. self image
      b. personal worth
      c. respect for others
      d. environmental awareness
      e. realistic look at life goals and roles
      f. greater involvement of pupils in school due to program

E. Administrative analysis and Evaluation
   1. Is program supported at all levels, including school board
      a. methods of showing progress in:
         (1) interest factor of pupils
         (2) effective program integration into curriculum
         (3) greater awareness of pupils of realities of the working world and its requirements
         (4) reactions of teachers to program effectiveness
   2. Formal implementation of program into district curriculum guide at end of first year
      a. involve community and resource persons, staff, and administration
         (1) also include pupil ideas of pupil group

F. Prior Cycle Repeated With Greater Efficiency
   1. Evaluation again an on-going process

CAREER EDUCATION

By Blanche Peters - Springfield, Oregon

I. While many teachers do teach about life roles it is generally haphazard and unorganized in that it is not incorporated into the curriculum.

II. The major goal for the elementary school then would be to provide awareness and actual experiences related to the variety of careers available to young people today. Some of the steps that will need to be taken will be:

A. Make assessment or inventory to get base line data. This assessment among other things, would point up the learning experiences that are now being given our students which relate to careers education.

B. Plan with staff steps that will need to be taken to put this program into effect.

C. Teachers will have submitted their ideas and felt needs for inservice related to career awareness as of June 5th.

D. District elementary Principals will complete the O.S.U. workshop.

E. Staff will designate a building coordinator for Career Awareness whose responsibility will be to meet and plan with other building coordinators of the district.

F. Each building will designate a planning team composed of the Principal, Counselor, a primary teacher and an intermediate teacher.

G. A District Careers Awareness Advisory Committee will be formed - This committee will consist of community members, District Career Education members and others.

H. Each building team will have a written plan for program development in Career Awareness which is consistent with district guidelines.

I. It is planned that a minimum of 1/3 of staff of each elementary building will visit a school with an on-going program in Career Awareness.

J. A one-week workshop for building coordinators will meet to plan full implementation.

K. Some behavioral objectives which we will plan to incorporate will be:

1. Every child at first and second will be able to identify his parents occupation or occupations.
2. Every child will be able to describe what his parents do in that occupation.
3. Every child will be able to identify where his parents work.
4. Students at third and fourth will be able to identify all occupations represented by people working in his particular school; custodians, secretary, etc.
5. Every student will be able to describe the cluster of jobs or job family in which these particular occupations are taken.
6. Establish appropriate on-going evaluation techniques.

DEFINITION OF CAREERS EDUCATION AND BEGINNING OUTLINE OF A CAREERS EDUCATION PROGRAM FOR SCIO, OREGON

by Agnes Virginia Koos
Tangent, Oregon

The Role of the Schools:

The role of the schools in careers education is to enlarge the horizon of each individual student, combining the experiences of home and community with skills, attitudes, and knowledge added from the repertoire of others. Opportunities should be available for every child for vocational awareness, exploration, decision making, preparation, and specialization.

Careers Awareness:

Careers Awareness is an aspect of Careers Education that involves understanding of one's self and of others in relationships of societal responsibility and of self-fulfillment through work.

Elementary School Careers Education for Scio, Oregon, Public Schools

Learning/Living Experiences are continuous with these major areas of emphasis:

Grade K - Self-Awareness
1 - Awareness of Others in Family
2 - Awareness of Others in Community
3 - Awareness of Others in County
4 - Awareness of Others in State
5 - Awareness of Others in Nation
6 - Awareness of Others in World

Questions to consider in each:

What work is done? Who does the jobs? How many workers are there? Do they have to dress any special way for their work? What do they have to do to prepare for their work? What safety precautions are taken? Is there a service or a product involved? What common likes or dislikes are found among workers in this type of job? How does this work benefit the community and society as a whole?

The Careers Education program will be continued in the Junior High school with the involvement of students in Exploration and Decision Making and in the High School with Preparation for specific Careers and Work Experiences, according to the plan suggested by the Oregon Board of Education.

Objectives:

1. To provide each child in our system opportunities to explore and develop awareness of his own interests, abilities, aptitudes, and personality strengths and weaknesses, recognizing individual differences.

2. To assist each child to recognize the value and dignity of all work, vocational or avocational, and pride in work well done.

3. To arouse understanding in each child of the world of work and the multiplicity of ways by which man earns a living.

4. To enable each child to see the relationship between his vocational role and his other life roles as family member, citizen, and participant in avocations.

5. To utilize family and community resources to broaden the perspectives of each child, to increase his educational experiences, and to meet his individual needs. A wide variety of experiences may help him to select those meaningful for him.

6. To develop in each child an awareness that decisions made now may have significance for many later decisions he may make, that choosing an occupation is a developmental task (subject to continuous change), and that he has a personal responsibility for making his own decisions.

7. To allow the child to become an active participant in setting conditions in the classroom so that he may see it as a part of his life, not something separate, and learn basic principles of democracy.

8. To enable the child to understand the contribution of work to happiness.

9. To give relevance to the gaining of basic skills through enabling the child to see the purpose and the need for such learning.

10. To furnish direction for the total education program.

Implementation:

The first step in implementation, that of securing support of all administrators and their commitment to the concept of Careers Education, has been accomplished. The second step, the selection of a teachers' committee for Careers Education, has also been taken. Other steps will be:

3. Secure the support of the local board of school directors now.
4. Secure the support of all members of the faculties of the three schools in our district and their understanding of Careers Education, through inservice training and informal faculty discussions, Fall 1972.
5. Select an advisory council from the community for the overall Careers Education program, Fall 1972.
6. Begin operating a job placement office by and for students by June 1973.
7. Involve teachers in planning co-ordinated learning activities that will be meaningful for each child in terms of motivation to learn and of occupational information, 1972-73.
8. Add to the curriculum a new impetus by refocusing it on Careers.
9. Add another counselor in the elementary system by the 1973-74 school year.
10. Provide a one-year follow-up of each student after high school, beginning 1973.
11. Seek to provide entry-level job skills for each student graduating, by 1974.
12. Seek to make the facilities of the schools available to the community and the facilities of the community available to the schools, the resultant interaction directed toward increased learning experiences for all.

IMPLEMENTING CAREER EDUCATION

C. J. Cardiff
Mark Twain School
Silverton, Oregon

1. Include four life roles

2. New programs -- Awareness should be taught through the regular curriculum to 7th and 8th graders as well as the exploratory.

   a. Adequate awareness program should provide educational experience in which students will:

      1) Have awareness of the many occupational careers available
      2) Have awareness of self in relation to occupations in their potential careers
      3) Develop foundations for wholesome attitudes toward work and society
      4) Develop attitudes of respect and appreciation toward workers in all fields
      5) Have greater choice of course selections
      6) Have increased activity or elective course offering
      7) Have staff members who will teach courses more nearly in line with their own interests rather than a traditionally prescribed program
      8) Have a positive attitude toward school and an allegiance to the modified program that is high (Activities offered are by student request or interest)

3. Career exploratory program should provide common experience in a multitude of broad career preparation areas. Emphasis should be placed on understanding one's interests, aptitudes, and abilities in relationship to the various career requirements and compensations as a basis for a tentative career choice. Experience and opportunity to:

   a. Explore key occupational areas
   b. Familiar with occupational classifications
   c. Awareness of relevant factors to be considered in decision making
   d. Tentative occupational plans

OBJECTIVES OF THE 1-6 CAREER AWARENESS PROGRAM ARE TO:

Develop in each student positive attitudes about the personal and social significance of work
Develop each pupil's self-awareness
Develop and expand the pupils' knowledge about a wide variety of occupations
Assist students in developing their career aspirations
Improve overall student performance in the basic subjects by relating them around a career development theme.

OBJECTIVES OF THE 7-8 CAREER AWARENESS PROGRAM ARE TO:

Provide experience for students to assist them in evaluating their interests, abilities, values and needs as they relate to occupational roles

Provide students with opportunities for further and more detailed exploration of selected occupational clusters leading to the tentative selection of a particular cluster for indepth exploration at the 9th grade level.

Improve the performance of students in basic subject areas by making the subject matter more meaningful and relevant through unifying and focusing it around a career development theme.

Make education more relevant, the entire school program must be restructured focusing on the theme of career development.

Junior high students explore specific clusters of occupations through "hands on" type of experiences, observations in the field and through related classroom instruction.

SUGGESTIONS FOR DEVELOPMENT OF AN EXPLORATORY CAREER EDUCATION PROGRAM

1. Rationale and basic goals
2. Administrative support
3. Consultant help
4. Board of education endorsement
5. Staff oriented and involved
   a. Purpose for in-service or retaining of teachers with a career education emphasis is to effect a definite and meaningful change in the content and methods of teaching
   b. To achieve commitment on the part of the teachers, there must be involvement.
6. Parent and community participation and understanding
7. Guidance oriented
8. Responsibility for coordination and direction
9. Program objectives
10. Evaluation

IMPLEMENTING CAREER AWARENESS AT THE BUILDING LEVEL

by Bob Post
James Templeton School

Career Awareness - Definition

Helping young people understand themselves in regards to the four life roles. Through this experience children will understand the natural relationship that exists between these life roles and realize the importance of dignity in all work, and the necessity of learning through involvement in a series of human experiences.

I. Staff Inservice

A. Understanding philosophy of career education
   1. internalization - changing attitudes
   2. dignity in all work
   3. importance of students being able to internalize
   4. importance of four life roles and their inter-relationships

B. Importance of Communication
   1. with children
   2. with peers
   3. with community

C. Curricular Emphasis
   1. does not add to but enhances existing curriculum
   2. refocuses use of field trips and resource people
   3. can be included in unit approach but much more meaningful in problem solving through teachable moments

D. Importance of Person-to-Person Involvement
   1. student to teacher
   2. student to student
   3. patrons to teacher
   4. parents to student
   5. patrons of community to students
   6. student and careers in community

II. Community

A. Educating Community in the Careers Concept
   1. select parent advisory committee representing total attendance area
      a. involve advisory parents with staff so that a "feel" exists for careers program
      b. train committee to act as: liaison with community; liaison with industry; liaison with school board (as to progress)
      c. train committee to act as welcoming committee for all visitors to program
      d. train committee to evaluate industry in regards to whether or not our students can become involved in field experiences
      e. train committee to evaluate resource people before visits made to school

2. communicate with total community
   a. use of advisory committee
   b. open forum and PTA
   c. local news media
   d. school news letter
   e. student excitement

III. Incorporate Into Curriculum

A. Pre and Post Testing in Regards to Attitudes
   1. teachers
   2. students
   3. parents
   4. resource people

B. Establish Scope and Sequence in Unit Planning
   1. social studies
   2. science
   3. health

C. Emphasize Problem Solving Through Teachable Moments
   1. five minutes a day in basic subjects

D. Focal Point of Class Meetings in Regards To:
   1. internalization
   2. human relationships
   3. dignity in all vocations
   4. importance of avocations

E. Refocusing Field Trips
   1. people vs products
   2. involvement vs observation
   3. identification of various careers included in one industrial complex or business

F. Avocation
   1. mini course offering
      a. students decide offerings through expression of interest
      b. patrons become involved as resource teachers through hobbies, etc.

G. Inter-Relationships in Business World
   1. learning through earning
      a. intermediate corporation
         1) 4th grade - banking and finance
         2) 5th grade - sales and marketing
         3) 6th grade - manufacturing and design

IMPLEMENTING PROGRAM
PETERSON ELEMENTARY SCHOOL

By Harvey Denham

Introduction:

The first step would be to discuss this with the Klamath County School District Supt., James Conroy. I assume the idea would be to use Peterson School as a Pilot Project. His O.K. and support would have to be secured.

The second step would be to secure the approval of the school board, provided the staff of Peterson School acted favorably. I can see no difficulty in securing the support of the school board, if I have a thorough, well thought out master plan to present to them.

The Peterson School staff, as it now exists, is rather well balanced as to age and experience. They are a good staff with one possible exception. I know from experience that they are willing to try new, innovative ideas. At the present time we are planning a new approach to the teaching of reading in the first grade with the possibility that it could be expanded to the second grade.

The enrollment is approximately 500 boys and girls. Each grade level has 3 sections and three teachers. The teachers on each grade level work very close together in their planning.

Staff:

1. Talk to the entire staff
   A. Mr. Conroy, the Supt. would introduce the plan and explain that it had the approval of the board.
   B. The Principal's Role
      1. overall plan
      2. handout selected readings
      3. Use book - "Career Education: What It Is and How To Do It."
      4. Discuss the plan with teachers
   C. Each teacher work with other teachers on her grade level (6 groups of 3)
      1. Grade level plan
      2. Master plan
   D. Try to bring in resource people
      1. College level
      2. State Department
      3. Some one from a school with a plan. (As Springfield)

Parents:

1. Involve entire Peterson Community
2. Invite everyone to come to an initial meeting
   a. Discuss the proposed program
3. Get reactions and feed-back
4. Set up parent advisory committee
   a. key people to act as liason within community, business, and industry

5. Get names and assign them to grade levels
   a. Give their names to teachers of that level.
6. Set times and places for future meetings
   a. General
   b. Grade level

Scope & Sequence:

1. Scope and sequence for each grade level
   A. Written by the three teachers of each grade level
   B. Tentative O.K. by Principal
   C. All teacher's meeting to blend all 6 together
   D. Adjustments to meet limitations of:
      1. staff
      2. facilities
      3. budget
      4. time, etc.
2. Get reports of pilot programs of other schools - Tigard, Springfield,
   A. Pick out good, useable ideas

Resource People:

1. Get lists of people involved in vocations we would like to study
2. Write letters to them to see if they will cooperate
3. Have an initial meeting to explain our careers education project
4. Interviewed by each teacher
   A. Set goals
   B. Set dates, times, promptness
   C. Plan agreeable to both resource person and teacher
   D. Content

Units, Projects, Field Trips:

1. Units, projects and field trips are to be planned on a grade level basis.
   A. Planned by the 3 teachers on each grade level.
2. Student Involvement
3. Correlate with present curriculum offerings
   A. Not a new curriculum - but integrated in
4. Meaningful to children - offers a "now" reward
5. Planned to involve parents
   A. Parents on all field trips
   B. Parents on some projects
6. Samples by grade:
   A. 1st grade - family, father, mother
   B. 2nd grade - community service
      1. Fireman
      2. Postman
      3. Grocer

C. Third Grade - (Science Approach)
   1. Life cycle of animals
      a. Dairy
      b. Hogs
      c. Sheep
   2. Klamath's Main Crop
      a. Potato Growing
D. Fourth Grade - (Social Studies & Science)
   1. Forestry
      a. Speakers
      b. Visit Timber Company
         1. Particle Board Plant
         2. Hardboard Plant
         3. Saw Mill
E. Fifth Grade - (Sales - Marketing)
   1. Salesmen - Insurance, Cars, Boats, etc.
   2. Clerks - grocer, clothing, hardware, etc.
   3. Bring into schools and show how sales are made
      a. importance of selling
      b. honesty in merchandising
F. 6th Grade - (manufacturing & processing)
   1. Lumber mills
   2. Carpenters
   3. Creameries
   4. Machine Shop
   5. Potato shed packing
   6. Visit these plants
   7. Bring in resource people

Equipment & Supplies:

1. Budget necessary expenditures in 1973-74 budget
2. Get estimates from other pilot programs
3. Budget items that can be used in a typical classroom
4. See if some supplies and equipment can be donated by parents, business, industry, teachers, school district
   A. This would allow us to start program on a limited basis <u>one</u> year early

Avocation:

1. Offer a series of mini courses in various avocations
2. Examples
   A. Fly tying
   B. baseball
   C. Stamp collecting
      1. Other collecting - coins, shells, etc.
   D. Swimming
   E. Skiing
   F. Boating
   G. Foreign language (?)
   H. Gardening
   I. Beef and Cattle
   J. Poultry
3. Use community resource people

Evaluation:

1. Pre-Test
2. Post Test
3. How does the teacher feel about the program?
4. How do the pupils feel and react to the program
5. Poll parents as to their reaction
6. Poll business and industry for their reaction
7. Try to get new ideas from all parties or groups concerned

CAREER EDUCATION

By Gordon G. Rands
Salem, Oregon

Implementation:

I would use the following procedure in implementing a career education program:

1. Coordinate plans with district plans and procedures
2. Write an overall plan that includes objectives, activities, and evaluation procedure
3. Community involvement
   A. Work with the Local School Advisory Committee to:
      1. Recognize the need for a career education program
      2. Fully acquaint them with program
      3. Suggest procedures and activities they could use to reach total community
         A. Programs
         B. Letters, bulletins
         C. Small group meetings
         D. Provide them with materials as to what other areas of State and county are doing
4. District and State involvement
   A. Use district consultant and supervisors as resource people
   B. Use State, O.S.U., and other district people as consultants
5. Staff involvement
   A. Acquaint total staff with overall program and need for career education as a part of the educational program
   B. Provide time for staff to visit other schools who have a program started.
   C. Use "grade" level committees to:
      1. Write objectives, activities, and evaluation procedures for each level. (This would be necessary if district did not already have it done. If district had guide we would need to adjust it to fit the needs of our community.)
   D. Provide inservice time for staff to study and write program
   E. I would not force any teacher to include career education in their teaching until they felt the need and were capable.
6. Materials
   A. Have as much material available as possible for staff and community to use
7. Budget
   A. Provide inservice and travel for staff
   B. Provide resource people for staff and community
8. I would make myself available at each step to coordinate and provide the assistance necessary to see that the program was in accordance with my overall plan of implementation.

9. I would see included in the pupil goals the following:
   A. Awareness of careers and clusters of careers
   B. Recognition that there are specific tools for each career
   C. Identification of social, physical, and economic aspects of careers
   D. Understanding of the function of personal satisfaction and gratification
   E. Awareness of interrelatedness of careers
   F. Awareness of the interrelatedness of academic skills with careers
   G. Identification of training requirements for entry into a career.
   H. Observation and comparison of the responsibilities, duties, and interpersonal relationships that exist within specific careers
   I. Identification of some of the nomenclature and terms peculiar to selected careers
   J. Development of appropriate attitudes toward the dignity of work
   K. Awareness of need for and acceptance of all workers
   L. Recognition of the demands by specific careers upon family life, social activities, and economic position
   M. Application of identified data and academic concepts of the classroom to selected careers

AN INSERVICE PLAN FOR IMPLEMENTING CAREER EDUCATION AT GUY LEE ELEMENTARY SCHOOL

By William D. Mitchell

Our building inservice plans will follow closely the Springfield District Timeline Plan as proposed by the Career Awareness Steering Committee of which I am a member.

1. Evaluate the results of the Career Awareness Inservice Needs Assessment form. (Timeline June 5, 1972) (Summer project)

2. At the first staff meeting this fall (August 30) we will select a Building Coordinator for Career Awareness whose responsibility will be, in part, to meet with the other building coordinators and with the District Steering Committee to communicate ideas, problems and procedures of program development and implementation.

3. At the first fall meeting of the Unit Leaders (three people, representing a leader from the 1st-2nd grades, 3rd-4th grades, and 5th-6th grades) will serve as a planning team along with the counselor and myself.

4. The planning team and building Career Coordinator will meet with the Guy Lee Citizens Advisory Committee to enlist their assistance and help in communicating our plans to the community.

5. During the August general Inservice days the staff will be provided with information and materials based on"What is Career Education"? and the results of the "Needs Assessment Form", done in June.

6. On August 30th, Dr. Dan Dunham from the O.B.E., will speak to our staff about Career Education and assist us in planning our program.

7. During September our Staff will meet weekly by Unit teams to determine the "Guy Lee Career Education philosophy". (All staff members must agree in principle on the definition and philosophy of Career Education)

8. By October 30th, the building Career Ed. team will have developed a written plan for program development in Career Awareness.

9. By December 15th, a student "Needs Assessment Instrument" for determining student readiness and level of understanding will be developed and administered with results tabulated. (We will probably use the instruments being developed this summer by Dr. Virginia Jepperson at Moffitt School)

10. During the Fall we will accumulate and draw upon information and materials already produced by other Career Education projects and programs for developing our own program.

11. During the winter months we will work on identifying performance goals and desired student outcomes.

12. During the spring months we will identify desirable concepts and activities at each grade level from materials collected.

13. By the end of March each staff member will have visited a Career Awareness project in either Oregon or Washington.

14. A series of meetings will be held in the Spring to involve and inform our students, parents, and community about our Career Awareness Program.

15. A D. C. E. course will be offered to all staff members at District expense both fall and winter terms on Career Education.

16. By May 1st, an inservice project assessment will take place so that further project planning can take place.

17. The principal and building coordinator will be involved in May in a one-week workshop to complete planning for full impelementation including identification of future inservice needs.

18. The above plans call for full implementation during the 1973-74 school year.

*Note

Our staff has worked with C.A.S.E.A. for the past two years at the University of Oregon in communication skills training and in developing a Unitized School Organization. Because of our communication training and total staff involvement in the decision making process, the procedures for curriculum innovation in Career Awareness should not be to difficult to accomplish. (I hope)

PROPOSED IDEAS FOR A CAREERS AWARENESS PROGRAM
AT LAUREL HILL SCHOOL

By Gerald Keener

1. Begin fall pre-school all staff inservice with an informative session reviewing Careers Workshop at OSU and one sponsored by Eugene School District. Session to be handled by curriculum associate attending District Workshop and myself. Include ways we are presently implementing Careers and have staff brainstorm other ideas involving family, citizen, avocations, vocations, aesthetics, spiritual, etc.

2. During all staff inservice session ask staff: If they would be interested in participating in District sponsored workshops during the school year? If they would be interested in having Laurel Hill School become a pilot school for district in Careers Education if we have the option?

3. Continue dissemination and communication of information, progress and activities to staff throughout year.

4. Form advisory committee from instructional staff and interested parents.

5. Explore ways and implement use of community in careers awareness.

6. Encourage staff participation in continuing formulation of a district, as well as, building program.

7. Encourage staff to become involved with HUMAN DEVELOPMENT TRAINING PROGRAM as being proposed by our school district through the Human Development Training Institute, San Diego, California.

8. Continue to emphasize the need to improve and utilize communication skills among staff.

9. With improved communication skills among school adults should come improved verbal communications with all students and an understanding of themselves.

10. Teachers will be encouraged to assist students in gaining additional skill in communication similar to tentative design attached.

11. Encouragement will also be given teachers to give children opportunities in the large community of playing a "responsible role" and of being trusted. This could be done in terms of community work projects that involved reading, writing and other forms of communications.

12. Community projects could be planned in conjunction with the Chamber of Commerce, city officials, Department of Parks and Recreation, etc. Children would work toward a goal and for a reward, i.e. a movie ticket, hamburger, etc. after they had completed a contracted job. This should involve math.

13. Encourage instructional teams to periodically throughout year brainstorm ways to incorporate and emphasis the four/or five areas of careers into our curriculum.

14. Evaluation: a. Pre and Post attitude goals as used by School District Differentiated Staffing Office administered to our students. b. Ancedotal records used to record any changes/or growth observable resulting from above efforts.

Program for Staff and Students

GOALS: 1) to improve communication between staff and students.
2) to help staff and students better understand themselves and others.

Tentative Design

Event #1 - All students and staff would assemble in one place. Students would participate in an exercise:
A) 5-square puzzle
B) mural with chalk exercise
C) tinkertoy exercise
After the activity each small group would discuss the exercise, did it show anything, and what things meant that happened.

The total-group leader would then discuss the goals, the reasons for assembling together, and why the staff agreed to do the program.

Each small group would then be asked to discuss how they felt about proposed program, would it help to make their school a better place, etc.

The total-group leader would talk about the next step. Assuming no great negative reaction occurs from the students.

Comments:

Event #2 - Introduce the skill of paraphrasing to students. Practice paraphrasing with one-to-one relationship. Teacher gives a phrase and students paraphrase it to each other. Some should be done so the total class can hear the paraphrasing.

The class would develop two lists of behaviors:
A. Things I really like about this class....
B. Things about this class that really bug me...

As students suggest items for the list, some of them could be used to practice paraphrasing. It is probably important that the teacher use the exact words of the students on the lists.

Lists should be put on butcher or newspaper, so they can be saved for further reference. Introduce brainstorming.

Students should be asked to think overnight about some ways that the class might be able to get rid of the things that bug them. What are some actions that might happen?

Comments:

Event #3 - Talk about the lists that were developed the previous day. Generate a new list with the title:

"How we might change the things that bug us in this class."

Briefly discuss what students think are practical and impractical solutions. This should be done after the total list is generated. Use brainstorming.

Have the class select one or two of the practical solutions. The goal would be to try those solutions for 2-3 days to see if they make any difference in the class. Some of these solutions might involve behavioral change on the part of the teacher, and the teacher should be open to try the new behavior.

Discuss how each student and the teacher will participate in the solution, and what each will be expected to do.

Comments:

Event #4 - Review the goal, the changes that the class wanted to make, and what actually happened during the last 2-3 days.

A. Did the changes really happen?
B. If not, what caused it to not happen?
C. If so, what happened to help it happen?
D. How did everyone feel about what happened?
E. Was it a practical solution?
F. Was it easy or difficult to do?

Introduce description of feelings.
Everyone has feelings. It is difficult to talk about them.
We often say "I feel" but we really don't talk about a feeling.
Think of a word that describes a feeling.

Generate a list of the words offered by the students.
List the words that really describe feelings. What do you act like when you have each of those feelings? Are there any that you have never had? Is it OK to have those kinds of feelings? How do you think others feel when you act a certain way? Can we match feelings? If you know that I feel mad, will it make you feel the same or different?

Take a check and see if the students can describe their feelings at that very moment. Discuss again how difficult it is to express feelings in words.

Select some new changes from the "bugs me" list for the next 2-3 days.

Comments:

OUTLINE OF IMPLIMENTATION PLAN FOR CAREER EDUCATION by Darrell Wilson

A. Selection of a committee to help with:

1. Work with teachers in orientation and implimentation
2. Help construct curriculum outline
3. Suggest activities for teaching
4. Help with selection of teaching materials

B. Informational program for committee members who will lead the program

1. Speakers
2. Films
3. Visitation to other districts
4. Send to conferences and workshops

C. Workshop for committee where members of four schools will meet during two weeks this summer to:

1. Construct curriculum outline (tentative) and activities
2. Make outline of scope and sequence
3. Plan orientation for faculty in the fall
4. Plan and be able to lead implimentation

D. Secure instructional materials necessary to create interest and information such as books, films, field trips, A.V. materials, resource people, etc.

E. Plan program for making parents aware of what the program is.

F. Evaluation and revision will be done at frequent intervals.

THE UNIT METHOD IN PRESENTING OCCUPATIONAL INFORMATION by Duane Whitten

My concern as an administrator is to get a starting point for my teachers in initiating some general program in career awareness to run through the whole school. As a way to get an occupational or career awareness program initiated into the curriculum, I have chosen the unit approach in social studies as a starting place for all grades.

It is probably the part of the curriculum best suited to initiate the program. It includes geography, history, and civics -- subject areas that somewhat parallel those involved in a study of the world of work.

Social Studies Program for Elementary Schools

Kindergarten	--	Living in the Immediate Environment
Grade 1	--	Living in the Home and School
Grade 2	--	Living in the Neighborhood and Community
Grade 3	--	Living in the Community
Grade 4	--	Life in Other Communities/or Life in Our State
Grade 5	--	Living in the United States
Grade 6	--	Our American Neighbors

This program of occupational information divides into two classifications: The early elementary (kindergarten through grade 3), in which the child is concerned

with work in the familiar setting of home and community, and the later elementary (grade 4 through 6), in which the child's concept of work expands to include large geographical areas and abstract ideas.

This occupational information program as part of social studies might be organized as follows:

Kindergarten The child learns about the work activities of his mother, his father, and other members of his household.

Grade 1 The child learns about work in his immediate environment -- his home, school, church, and neighborhood.

Grade 2 The child learns about community helpers who protect and serve him as well as about familiar stores and businesses in the community.

Grade 3 The child studies the expanding community. Emphasis is placed on transportation, communication, and other major indusiries.

Grade 4 The child learns about the world of work at the same level, including the main industries of the state.

Grade 5 The child's studies broaden to cover the industrial life of the nation. Major industries of the various sections of the United States are selected for study.

Grade 6 The child's program is expanded to include the entire Western Hemisphere. Life in Canada and South and Central America is contrasted with life in the United States.

Other subjects can be used as well as social studies in presenting occupational information in the elementary school. A few examples follow:

Language Arts Occupational Information can be easily related to listening, writing, reading, and speaking. Children can read and report on books and poems about an occupational or industrial area. They can hold discussions, prepare outlines, give reports, and hold mock interviews. They can tape-record discussions or interviews with workers during field trips. Older elementary pupils can write letters for permission to make a field trip, or gather facts about local industries. Committees can be selected to dramatize what workers do on the job.

Arithmetic During arithmetic classes, pupils can study the differences in weekly, hourly, or monthly wages of various kinds of workers, and compute withholding taxes. Buying and selling of products and services can be explored, according to the competence of the children. They can make up arithmetic problems involving the different kinds of workers or industries they are studying.

Health and Safety Pupils can study the physical, mental, and other requirements of a job, and discuss the safety precautions needed on various jobs.

Arts and Crafts A teacher has many opportunities for relating art work to the study of the occupational world. She can display posters showing the relation between school subjects and occupations, and have pupils prepare posters depicting workers on the job. Pictures of workers can be cut from magazines or drawn by pupils. Clay figures can be made of the equipment or products used or produced on the job.

Music Many school songbooks have songs about different kinds of workers. Children may even make up their own songs. Some recordings of workers on the job are available. Small children may portray to music the movements of workers as they perform their daily duties.

All of these avenues of presenting occupational information can be tied together, using the unit method. This method can be adopted to any grade level. The suggested steps in developing a unit plan follows:

I. Selection of a Unit
From group experience, pupil ideas, teacher resource guide, course of study.

II. Preplanning by the Teacher (flexible)

A. Purposes
1. Concepts
2. Attitudes
3. Skills and special abilities
4. Subject-matter outcomes

B. Possible resources
1. Books and references for pupils
2. Books and references for teachers
3. Audio-visual aids available -- filmstrips, films, pictures, equipment, etc.
4. Resource persons
5. Community

C. Approach -- possible motivating devices
1. Discussion
2. Conversations
3. Exhibits
4. Magazines
5. Pictures
6. Stories
7. Newspapers
8. Books
9. Television, radio
10. Films
11. Trips
12. Special needs or experiences of the group

D. Content
1. List major problems
2. List major topics around which a unit may be organized
3. List stimulating questions
4. Identify the unit with scope and sequence of total work: relate to what preceded and what will follow
5. Provide for correlation
6. List possible culminating activities
   a. Dramatization of highlights of the unit
   b. Puppet show
   c. Radio broadcast
   d. Open house for parents, exhibits, individual and group reports, bulletin board displays, movies, original plays, murals, etc.
   e. Movies or slides made by the children
   f. Tape recordings
7. Reference to resource units--planned units from which to draw information and helps. See your principal for help.

E. Evaluating
   1. In terms of this unit
      a. Observation
      b. Anecdotal records
      c. Rating scales
      d. Sample of work
      e. Planned tests
      f. Group and individual activities
      g. Discussion
      h. Conferences -- parent, teacher, child
   2. In terms of grade concepts, attitudes, and skills
   3. In terms of the entire social studies program. Has this unit built on previous learnings and prepared a foundation for those to follow?

III. Developing the Unit Together

Pupil participation is very important. Group planning may take a different avenue from the preplanning by the teacher.

A. Planning with children
   1. Helping children set up their purposes for the unit which are often stated as broad questions to be answered.
   2. How and where to answer questions

a. Excursions	c. audio-visual materials
b. Interviews	d. reports
e. maps, globes	m. pictures
f. movies	n. stories
g. radio	o. books
h. observation	p. magazines
i. encyclopedias	q. bulletins
j. libraries	r. factories
k. television	s. museums
l. newspapers	t. business firms and manufacturing firms
	u. transportation terminals

   3. Individual and group activities planned with definite responsibilities
   4. Plan culminating activity
   5. Work period
      a. Research (finding)
      b. Recording information (finding and doing)
      c. Presentation of materials (doing)
   6. Evaluation (finding and doing are simultaneous and continuous)

<u>Teacher</u> Keeps in continuous contact with and guides each committee. Frequency of group planning depends upon the children's maturity and skills in self-direction.

<u>Pupils</u> Make charts, collect pictures, make visits, dramatize, see demonstrations, interpret maps, perform experiments, arrange exhibits, prepare and give oral and written reports, prepare murals, charts, maps, diagrams, and posters, take field trips, write for information, consult encyclopedias and reference books

B. Evaluating with children (a continuous process)
   1. Have we reached our objectives?
   2. What have we learned?
   3. How can we improve?
   4. Objectives evidence -- reports, pictures, plays, charts

CAREERS EDUCATION by Ferne Ethridge - MacFarland School

Objective To integrate the careers education program into the first grade curriculum in such a manner as to emphasize attitudes of change, and developing a positive self-concept. This should help the child to cope with our ever changing society, both in the present and future.

1. Family Life
   a. Child's place in family.
      1. in relation to other members.
   b. Child's personal responsibilities in family
   c. Child should consider school workers as a family
      1. Child assumes place in family

2. Workers child may relate to
   a. Custodian
      1. Keep school clean
         a. Child can cooperate--use wastebasket, not floor
      2. Make school safe for children
         a. child cooperates
   b. Secretary
      1. records
         a. child cooperates by not being tardy
         b. he assumes responsibility for buying milk tickets before school
   c. Bus driver
      1. enter bus promptly
      2. be tolerant of your seatmate
      3. Accept assigned seatmate as friend
      4. Observe bus rules
   d. Librarian
      1. Observe library rules
      2. Take turn in checking out books
      3. Help other children in selection of books
   e. Teacher's aide
      1. playground monitor
         a. play with all children
         b. ask shy children to join in games.
         c. play fairly
         d. be a good loser, or winner
         e. respect playground rules
         f. use playground equipment in a safe manner

IMPLEMENTATION OF CAREER AWARENESS PROGRAM by Gordon L. Corner

1. Establish a building career awareness committee composed of the principal, a teacher and the counselor. The counselor will be the chairman. All of these people will have been in a summer workshop on Career Awareness this summer.

2. Have a meeting/meetings of the committee to plan a faculty presentation. I would invision some of the ingredients of the staff presentation containing:
   a. Sharing what is taking place in Career Awareness in the Nation, State, and locally.
   b. Clarify what is Career Awareness and come up with a mutually acceptable definition
   c. Get a commitment from the staff to be involved in a workshop with the District Elementary Career Education Coordinator.

3. Set up a staff workshop with Jan Scholander, the District Coordinator for Career Education. I would hope to see some of the following outcomes of the workshop
    a. Further clarifying of the term careers education with emphasis on awareness
    b. Establishing a staff philosophy about career awareness. Much written material would be shared in this process
    c. Assess what is actually now being done in this area in the framework of our present curriculum, keeping in mind the four careers of Vocation, Family, Avocation, and Citizenship.
    d. Determine what additional needs to be done within the framework of our present curriculum.
    e. Each teacher sets up goals he would like to see accomplished with his students this year.
    f. Work out activities, by levels, that would help teachers reach goals previously determined.

CAREERS EDUCATION by Wes Peters

First Grade

I. Family
    1. home
    2. brothers-sisters
    3. parents
    4. school family
        a. custodian
        b. cooks
        c. secretary
        d. principal
        e. teacher
        f. school "brothers & sisters"

II. Objectives
    1. to instill a good self-image
    2. develop pride in our "family"
    3. develop positive human relationships
    4. recognize responsibilities and decision-making

Second Grade

I. Community
    1. Individuals in the community
    2. Family
    3. School as part of the community

II. Objectives
    1. Values of a positive self-image in community life
    2. Family functions in the community
    3. Family responsibilities in the community
    4. Decision making process
    5. Continuous learning
    6. Acquiring knowledge

Third Grade

I. Life Cycles
    1. Comparison of animal and plant kingdom to the human being
    2. Climate conditions
    3. Food supply & opportunities

II. Objectives
   1. Expand on human resourcefulness versus plant or that of animals
   2. Why do people congregate (live) where they do
      a. climatic
      b. work opportunities

Fourth Grade
I. Environment major emphasis in science
   1. Who causes it to be what it is?
   2. What can be done about it?
   3. Does it change?

II. Objectives
   1. What are our responsibilities?
   2. Job opportunities
   3. Avocational opportunities

Fifth Grade
I. Avocational
   1. Are they necessary?
   2. How do we choose?
   3. Are they recreational only?
II. Objectives
   1. Self-concept, pride
   2. Human relationships
   3. Decision making
   4. Continuous learning

Sixth Grade
I. Vocational
   1. Forestry unit
   2. Electrical unit
II. Objectives
   1. Communication
   2. Job opportunities
   3. Responsibilities

AN OUTLINE OF A CAREER EDUCATION PROGRAM FOR AN ELEMENTARY SCHOOL by Barbara St. Lawrence - Salem

I. Preliminary Plans to Implement Career Education
   A. Goals
      1. The child will acquire the concept that there are four main roles to his life careers (family, citizen, vocation and avocation).

      2. The child will explore and assess personal attitudes, aptitudes, attributes and interests and will acquire an improved self-image by becoming aware of his potential in roles of his careers.

      3. The child will acquire an awareness of the multiple occupational possibilities.

      4. The child will acquire an understanding that ALL workers contribute to the welfare of our society.

5. The child will acquire a positive attitude toward the dignity of work involved in all types of careers.

6. The child will acquire an awareness of the function and relationship of classroom academic skills to those needed for careers.

(These are tentative goals from which a beginning program can be started.)

B. Methods

1. Building inservices will be held for six 1 and 1½ hour sessions on early dismissal days.
   a. Sessions one and two will be used for orientation of the staff to Career Education. Resource personnel will be brought in to give presentations and answer questions.
   b. Session three - the tentative goals will be presented to the staff for their consideration and suggestions. Printed materials will be given to the staff which will broaden their understanding.
   c. Session four - Commercial materials such as the SRA World of Work materials, and materials developed by other districts will be available.
   d. Sessions five and six will be used to share some of the activities which can be used to implement the program and integrated into the curriculum.

2. Arrange for interested teachers to have visitations to observe on-going programs.

3. Send a letter to the parents and other local community residents informing them of the schools endeavor to develop a Career Education program. A form would be included asking them if they would be interested in participating and in what careers they would have a special interest.

4. Have the instructional materials specialist prepare a list of AV materials and books which would reinforce the roles of careers.

5. District Career Education Resource personnel would be scheduled to come and work with interested teachers.

6. Engage district and state Career Education personnel to speak to the Parent-Teachers Club at least twice during the year.

7. Grade level planning sessions twice a month to help emphasize and build the career program into the curriculum.

II. Organization and Evaluation

A. School Coordinating Team

1. Consisting of one teacher from each grade level and the principal.

2. Coordinate and lead the grade level planning sessions.

3. The team would meet bi-monthly to share and discuss the progress.

4. One person would serve on the District Career Education committee.

B. Evaluation

1. Evaluation would be an ongoing process throughout the year with the coordinating team.

2. Two building inservices scheduled in the spring term to evaluate as a total staff.

3. The District Career Education person would meet with the Coordinating team to discuss other programs and help analyze strengths and weaknesses of the program.

4. Request a three day curriculum planning session for the Coordinating team at the close of school to rewrite the goals and objectives and plan activities for a school guide.

CAREER AWARENESS PROGRAM IN THE ELEMENTARY SCHOOL by R. W. Cheadle
Beaverton, Oregon

I. Personal Assumptions

1. Career Education is to be an integrated part of the total curriculum presently in use (math, science, social studies, language arts) plus the total school environment and setting. Career Education is not an added subject.
2. The intent is to give depth meaning to the application of basic skills and attitudes relevant to student needs.
3. Activities and experiences will have "people" emphasis with scope to include values, attitudes, worth and dignity toward self and others.

II. Integral Phases include:

1. "Awareness phase whose objective is to help all individuals become familiar with the values of a work-oriented society...exposes individuals to a variety of work values." The process "does not seek to impose any particular set of work values or any individual. Rather, it simply assumes that a person cannot develop his own work values unless he is familiar with those held by others and understands their basic effects upon individuals and upon society."

2. Exploring and Personal Decision Making. The process will "help individuals integrate work values into their personal value systems." It will further allow individuals to identify and recognize their own personal aptitudes, skills, values and attitudes to themselves and others and continually test them and discover their relationship.

Setting: Suburban community, middle income (plus); 450 students grades one through six; staff of eighteen teachers plus physical education, music and library, one secretary, one teacher aide, two custodians, three cooks, three bus drivers plus other district personnel.

III. Procedure for Program Implementation:

First a determination of career development needs of students established. Second develop program and resources to meet needs. Third establish effective evaluative procedures to test program periodically and suggest ways to extend and

improve the program's impact.

1. Total staff meeting--purpose a) to define career education, what it is and its impact upon our goals and objectives for students. b) Staff decision as to direction regarding career education.

2. Communicate purpose and need and staff direction to community--P.T.A. Executive Committee, Local School Committee.

3. Assess staff needs and concerns through meetings, questionnaire and personal contacts.

4. Form committee to develop philosophy, plans, goals and objectives (guide for teachers).

5. Gather information: a) reference from texts, kits at each grade level and in each subject. b) assess staff background and special interests in career education. c) seek assistance from District C.M.C. and County I.E.D. services--kits, non-book materials, films, etc. d) community survey of resource people and facilities.

6. Staff involvement--grade level meetings--look at each area of curriculum; identify resources already available; plan activities and lessons focus upon desired career education objectives and goals.

7. Introduce public--P.T.A. and/or evening program using creative way to introduce project. Speaker, panel, student display, film or a combination of all.

8. Teacher inservice opportunities, visitations to schools and community, also sharing successful techniques and methods at various levels. Example: activities involving students in the decision making process, etc.

9. Feedback and evaluation should be continual. Periodic meetings to share experiences--guest speaker, creative evaluative devices.

10. Involve students with students by participating with junior high and high school student helpers. Also cross-grade level helpers--"buddy" adoption to assist other students in all aspects of school life (academic and social).

11. Encourage student council in greater leadership decision making roles. Allow a learning process related to community government, citizenship, etc.

IV. Conclusion and Summary:

This brief outline suggests a mere beginning to an already realized critical task ahead. I feel this is a direction needed for education that is long overdue. I enjoy the openness of its total scope and definitely agree to its focus.

(Reference: Kenneth B. Hoyt Career Education: What It is and How To Do It.)

-Cross

ELEMENTARY SCHOOL CAREER EDUCATION

LIVING LEARNING	A FAMILY	B CITIZEN	C VOCATION	D AVOCATION
1 SELF-CONCEPT	1A	1B	1C	1D
2 HUMAN RELATIONSHIPS	2A	2B	2C	2D
3 INTELLECTUAL POWER	3A	3B	3C	3D
4 CONTINUOUS LEARNING	4A	4B	4C	4D
5 ACQUIRING KNOWLEDGE	5A	5B	5C	5D

PERMEATING INFLUENCES

PERMEATING INFLUENCES

ASETHETIC
MORAL
SPIRITUAL

MATRIX CELLS - CONCEPTS

1A: Pride
Dignity
Communication
Physical Fitness
Understanding of the individual position within the family
Belonging
Adjustment
Responsibilities
Trust
Roles of members in a family
Each member has rights, priviledges, responsibilities to other members in a family
Child grows toward independence
Must function for good of family
Awareness of economic status
Basic unit of society
Financial responsibility
Parental responsibilities for basic necessities
Childs contribution to family
Interdependence of family members
Families have various components

1B: Understanding the rules is an obligation of every citizen
Comfortable, clean surroundings are desirable
Empathy and respect for the rights and opinions of others
Responsible understanding toward self and others
Priviledges bring corresponding responsibilities
Recognize the worth and dignity of the individual
Ability to communicate
Concept of rules, laws and mores of culture
Conserving natural resources
Productive
Attitude
Responsible
Respect
Contributing
Dignity
Pride
Decision making
Physical fitness

1C: Dignity
Pride
Physical fitness
Life style
Rewards
Contributions to society
Achievements
Productive
Satisfaction
Vocations can change many times in a lifetime
Each individual is a consumer and a producer

Value received from work (personal, monitary, service)
Traits of a good worker
(Honesty, integrity, dependability, punctuality)
Relevance of academic skills to vocations
Personal assessment as to ones potential
Societies needs for specific jobs to be accomplished
Some jobs require hard, manual labor
Some jobs require little physical exercise, almost all mental ability
Socially acceptable jobs should contribute to benefit of someone in addition of the worker
Self-fullfillment should result of the job
An honest days work for a day's pay
Many different occupations
Good interpersonal relationships
Awareness of acceptable occupational change.

1D: Ability to communicate
Awareness of avocational possibilities
Special skills necessary
Your avocation should make you better at your vocation - it should compliment your occupation
Your avocation should provide satisfaction or enjoyment apart from your occupation
Since avocations are becoming less time consuming, avocations are assuming less importance
Choice of activity for leisure must be individual
Choice of activity for leisure time should be pleasure for ourselves, but considerate of rights of others
Rules and regulations involved for protection
Acceptable productive self-fulfillment
Acceptable productive avocation is personal - respect others differences
Conserve the environment
Creating the appreciation of the asethetics in life (music, drama, art, etc.)
Relaxation
Dignity
Pride
Physical fitness

2A: Tolerance
Self-fulfillment
Getting along with others
Communication
Understanding
Acceptance
Consideration
Trust
Rapport
Roles of members of family
Each member has rights, priviledges and responsibilities to other members of family
Family role in society
Family activities
Families are different
Child grows toward independence.

Financial responsibility
Parental responsibilities for basic necessities
Child's contribution to family
Interdependence of family
Families have various components
Families vary in their method of decision making and problem solving
Tolerance of other family members is important

2B: Ability to communicate
Responsible understanding toward self and others
All units of society must operate under rules or regulations
If the majority of the citizens do not exert their rights, the minority will rule
Participation in making the rules is every citizen's obligation
Improvements in community should be for the benefit of all
Comfortable clean surroundings are desirable
Empathy and respect for rights of others
Concept of rules laws and mores of culture
Member of a group - group conscious
Participation in group is important
Each person's contribution is worthwhile, responsibilities to a group - sharing ideas, decisions to be made in group
Identification and recognition for need of varied roles
Helping others - humanism
Democratic process
Striving for the betterment of community
Supporting community services
Conserving natural resources
Flexibility
Acceptance
Sharing
Concern
Identification
Responsibilities
Dignity
Decision making
Tolerance

2C: Getting along
Communication
Tolerance
Consideration
Rapport
Flexibility
Respect
Understanding
Dignity of work and all workers
Vocations can change during lifetime
Value received from work
Traits of a good worker
Free enterprise system
Societies needs for specific jobs to be accomplished
Need for variety of jobs
Some jobs require hard, manual labor
Some jobs require little physical exercise, almost all mental ability
Jobs require all sorts of energies
All jobs require ability to follow directions
Socially acceptable jobs should contribute to benefit of someone in addition to the worker
An honest days work for a day's pay

Supply and demand
Work basic to occupational success

2D: Your avocations should provide satisfaction or enjoyment apart from your occupation
Choice of activity for leisure must be individual
Choice of activity should be pleasure for ourselves, but considerate for rights of others
Rules and regulations involved in many avocations for protection
There will be more and more leisure time
Avocation personal-respect others differences
Conserve the environment
Create appreciation of the asethetics in life (music, drama, art, etc.)
Sharing
Flexibility
Patience
Getting along
Communication

3A: Communication
Decision making
Problem solving
Acceptance of others
Awareness of economic place of the family within the community
Leadership
Followership
Organization
Family role in society
Child grows toward independence
Child learns about family - takes this learning with him to adult life
Families vary in methods of decision making methods
Tolerance of other family members is important

3B: All units of society must operate under rules or regulations
Understanding of rules is an obligation of every citizen
If the majority of citizens do not exert their rights the minority will rule
Participation in making rules is every citizen's obligation
Comfortable clean surroundings are desirable
Member of a group - group conscious participation in group is important
Each persons contribution is worthwhile-responsibilities to a group - sharing ideas, decisions to be made in a group
Recognition for need of varied roles
Democratic process
Striving for betterment of community
Conserving natural resources
Identification
Followership
Leadership
Organization
Decision making
Communication

3C: Communication
Associated life style
Rewards
Decision making
Creativity
Worth
Productive
Followership
Leadership
Selective
Dignity
Awareness of a broad range of careers
Interrelatedness of vocations
Interdependence of occupations in a community
Some occupations are unique to some regions
Each individual is a consumer and producer
Value received from work
Relevance of academic skills to vocations
Personal assessment as to one's potential, desires and ability
Free enterprise system
Some jobs require little physical exercise, almost all mental ability
Jobs require all sorts of energies
All jobs require ability to follow directions
Supply and demand
Flexibility and constand change
Basic skills

3D: Choice of activity for leisure must be individual
Rules and regulations involved in many avocations
Pleasure derived from doing the activity
Acceptable productive self-fullfillment
More and more leisure time
Avocation used to gain skill for vocation
Conserve the environment
Creating appreciation of the asethetics in life
Relaxation
Decision making
Selective
Communication
Creativity

4A: Communication
Improvement
Evaluation
Leadership
Decision making
Concern
Responsibilities of child to family
Family role in society
Family activities
Child learns about family - takes this learning with him to adult life
Families role within the school and community

4B: Improvements in community should be for the benefit of all
Concept of rules, laws and mores of culture
Member of a group
Democratic process
Striving for the betterment of community
Conserving natural resources
Evaluation
Leadership
Decision making
Concern
Responsibilities
Communication

4C: Need for variety of jobs
Jobs require all sorts of energies
All jobs require ability to follow directions
Flexibility and constant change
Dignity of work and all workers
Awareness of a broad range of careers
Interrelations of vocations
Interdependence of occupations in community
Some occupations are unique to some regions
Vocations can change many times in a lifetime
Each individual is a consumer and producer
Value received from work
Traits of a good worker (honesty, integrity, dependability, punctuality)
Relevance of academic skills to vocations
Personal assessment as to ones potential desires and ability
Free enterprise system
Satisfaction
Organization
Completion
Worth
Importance
Responsible
Communication
Associated life style
Rewards
Decision making
Creativity

4D: Communication
Personal satisfaction
Awareness of need
Creativity
Pleasure
Appreciation
Relaxation
Fulfilling
Rules and regulations involved in many avocations for protection
There will be more and more leisure time
Avocations ued to gain skills for vocation
Conserve the environment
Creating the appreciation of asethetics in life
Everyone should be aware of a variety of choices for use of leisure time

5A: Child's contribution to family
Responsibilities of child to the family
Family role in society
Family activities
Families are different
Child grows toward independence
Child learns about family - takes this with him to adult life
Participation
Feeling
Identification
Respect
Belonging
Improvement
Communication
Family health, hygiene, physical and mental

5B: Responsibilities
Decision making
Communication
Participation
Concern
Leadership
Followership
Concept of rules, laws and mores of cultures
Members of a group - group conscious
participation in a group is important
Each person's contribution is worthwhile responsibilities to a group - sharing ideas decisions to be made in a group
Identification of and recognition for need of varied roles
Democratic process
Striving for the betterment of community
Supporting community services
Conserving natural resources

5C: Society's needs for specific jobs to be accomplished
Some jobs require little physical exercise, almost all mental ability
Dignity of work and all workers
Awareness of broad range of careers
Interrelatedness of vocations
Interdependences of occupations in a community
Some occupations are unique to some regions
Vocations can change many times in a lifetime
Each individual is a producer and consumer
Value received from work
Traits of a good worker (honesty, integrity, dependability, punctuality)
Relevance of skills to vocations
Personal assessment as to one's potential
Free enterprise system
Productive worth
Achievement
Confidence
Completion
Communication
Associated life style
Decision making
Creativity

5D: Communication
Personal satisfaction
Awareness of need
Creativity
Concern
Pleasure
Participation
Flexibility
Relaxation
Rules and regulations involved
Acceptable productive self-fulfillment
There will be more leisure time
Avocation used to gain skills for vocation
Conserve the environment
Creating appreciation of the asethetics in life
Everyone should have a variety of choices for use of leisure time.

BIBLIOGRAPHY

Attitudes Toward Career Education, The Institute for Educational Development, New York: IED, February, 1972.

Berelson, Bernard, Graduate Education in the United States, New York: McGraw-Hill Book Company, Inc., 1960.

Bloom, Benjamin S. and others, ed., Taxonomy of Educational Objectives: The Classification of Educational Goals. Handbook I: The Cognitive Domain, New York: David McKay Company, Inc., 1956.

Bottoms, James E. and Kenneth B Matheny, A Guide for the Development, Implementation, and Administration of Exemplary Programs and Projects in Vocational Education, Atlanta, Georgia: Georgia State Department of Education, Division of Vocational Education, Georgia State University, September, 1969, ED 040301.

Brayfield, Arthur H. and John O. Crites, "Research on Vocational Guidance: Status and Prospect" in Man in a World of Work, Henry Borow, ed., Boston: Houghton Mifflin Company, 1964, pp. 311-312.

Brazziel, W. F., "Getting Black Kids Into College," Personnel and Guidance Journal, 48:747-751, 1970.

Brickell, Henry M. and Carol B. Aslanian, "Attitudes Toward Career Education," New York: The Institute for Educational Development, an affiliate of Educational Testing Service, February, 1972.

Briggs, Lloyd D., "Support From the Top," American Vocational Journal, 46: 42-44, November, 1971.

Budke, Wesley E. Review and Synthesis of Information on Occupational Exploration, Information Series 34. Columbus, Ohio: The Center for Vocational and Technical Education, The Ohio State University. 1971. 93 pp. (ED 056 165 MF $0.65 HC $3.29)

Burns, Tom and G. M. Stalker, The Management of Innovation, London, Tavistock, 1959.

Butler, Roy L., and York, Edwin G. What School Administrators Should Know about Cooperative Vocational Education. Information Series No. 37. Columbus, Ohio: The Center for Vocational and Technical Education, The Ohio State University.

Campbell, D. P. and Holland, J. L. "A Merger in Vocational Interest Research: Applying Holland's Theory to Strong's Data." Journal of Vocational Behavior, 1973, 3, in press.

Campbell, Robert E., and Vetter, Louise. Career Guidance: An Overview of Alternative Approaches. Columbus, Ohio: The Center for Vocational and Technical Education, The Ohio State University, 1971. 29 pp. (VT 013 479. See March 1972 RIE)

Canfield, Albert A., "A Rationale for Performance Objectives," Audio-Visual Instruction, Vol. 13, No. 2, February, 1968, pp. 127-129.

Bibliography 2

"Career Education: Equipping Education for the World of Work" College and University Business, 51:39-44, December 1971.

Carnegie Commission of Higher Education, The Capital and the Campus: State Responsibility for Post-Secondary Education, New Jersey: McGraw-Hill, 1970.

Carpenter, Harrell H. "Formal Organizational Structural Factors and Perceived Job Satisfaction of Classroom Teacher." Administrative Science Quarterly, December, 1971, 16:4, pp. 460-465.

Clark, Burton R. Educating the Expert Society, San Francisco: Chandler Publishing Company, 1962.

Clark, Burton R. The Open Door College: A Case Study, New York: McGraw-Hill Company, Inc., 1960, pp. 68-69.

Cohen, Arthur M. and F. Brawer, Measuring Faculty Performance, Wasington, D. C.: American Association of Junior Colleges, 1971, ERIC Monograph, No. 4.

Coleman, James, Equal Educational Opportunity, Washington, D. C.: U. S. Government Printing Office, 1966.

Cooley, W. W. "Interactions Among Interests, Abilities, and Career Plans." Journal of Applied Psychology Monograph Supplement, 1967, 51, Part 2.

Crites, J. O. "Measurement of Vocational Maturity in Adolescence: I. Attitude Test of the Vocational Development Inventory." Psychological Monographs, 1965, N. Y.: McGraw-Hill, 1969.

Crites, J. O. Vocational Psychology. N. Y.: McGraw-Hill, 1969.

Cross, Patricia K., Beyond the Open Door, San Francisco: Jossey-Bass, 1971.

Cutlip, Scott M. "A Program to Achieve Public Understanding of Comprehensive Career Education," Mimeographed, Columbus: The Center for Vocational and Technical Education, the Ohio State University, 1971.

Daugherty, Ronald D. and others. Highway Safety Occupational Program Development Guide, Columbus, Ohio: The Center for Vocational and Technical Education, The Ohio State University. July, 1971, 93 pp. (ED 052 329)

Elton, C. F. "Interaction of Environment and Personality: A Test of Holland's Theory." Journal of Applied Psychology, 1971, 55, 114-118.

Elton, C. F. and Harriet A. Rose, "Male Occupational Constancy and Change: Its Prediction According to Holland's Theory." Journal of Counseling Psychology Monograph Supplement, 1970, 17, part 2.

Fenwick, English and James K. Zaharis, "Internal Educational Contracting," in Emerging Patterns of Administrative Accountability, Lesley H. Browder, Jr. (ed), Berkeley: McCutchan, 1971, pp. 311-349.

Bibliography 3

Fenwick, English and James K. Zaharis, "Staff Differnetiation the Right Way," Arizona Teacher, November, 1971, 60:2, pp. 6-9, 35.

Fenwick, English, "AFT/NEA Reaction to Differentiated Staffing, to appear in the Spring of 1972 in Educational Forum.

Evans, Richard I. Resistance to Innovation, San Francisco: Jossey-Bass, 1967.

Feldman, Marvin J. "Comprehensive Education: Redefined for a Humanist Society" in Vocational Education: Today and Tomorrow, Gerald D. Somers and J. Kenneth Little, eds., Madison: Center for Studies in Vocational Technical Education, The University of Wisconsin, 1971.

Feldman, Marvin. Making Education Relevant, New York: The Ford Foundation, 1966.

Four Proposed Definitions of Career Education," a working paper. Bureau of Adult Vocational and Technical Education, U. S. Office of Education, 1971.

Gerth, H. H. and C Write Mills, eds., From Max Weber: Essays in Sociology, New York: Oxford University Press, 1946.

Ginzberg, E., S. W. Ginsberg, S. Axelrad, and J. L. Herma. Occupational Choice: An Approach To a General Theory. N. Y.: Columbia University Press, 1951.

Goldhammer, Keith. "A Careers Curriculum," mimeographed, Columbus: The Center for Vocational and Technical Education, The Ohio State University, 1971.

Goldhammer, Keith and Robert E. Taylor. Career Education: Perspectives and Promise, Charles E. Merrill Publishing Company, 1300 Alum Creek Drive, Columbus, Ohio. At Press. Available June 1, 1972.

Gribbons, W. D. and Lohnes, P. R. Emerging Careers. N. Y.: Teachers College Press, Columbia University, 1968.

Hansen, Lorraine S., et al. Career Guidance Practices in School and Community. Ann Arbor, Michigan: ERIC Clearinghouse on Counseling and Personnel Services, 1970. 200 pp. (Ed 037 595 MF $0.65 HC $6.58)

Herr, Edwin L. Review and Synthesis of Foundations of Career Education, Information Series No. 61, The Center for Vocational and Technical Education, The Ohio State University, March 1972; VT 014805.

Herr, Edwin L. "Unifying an Entire System of Education Around and Career Development Theme," Mimeographed, University Park; The Pennsylvania State University, not dated.

Hirt, M. L. "Aptitude Changes as a Function of Age." Personnel & Guidance Journal, 1964, 43, 174-177.

Holland, J. L. "A Theory of Vocational Choice." Journal of Counseling Psychology, 1959, 6, 35-45.

Holland J. L. The Psychology of Vocational Choice. Waltham, Mass.: Blaisdell, 1966.

Holland, J. L. "Explorations of a Theory of Vocational Choice: VI. A longitudinal Study Using a Sample of Typical College Students." Journal of Applied Psychology Monograph Supplement, 1968, 52.

Hoppock, R. Occupational Information. (1st edition), N. Y.: McGraw-Hill, 1957.

Huffman, Harry. Guidelines for Cooperative Education and Selected Materials from the National Seminar Held August 1-5, 1966, A Manual for the Further Development of Cooperative Education. Columbus, Ohio: The Center for Vocational and Technical Education, The Ohio State University. 1967. 245 pp. (Ed 011 044 MF $0.65 HC $9.87)

"Jobs are Scarce at Meetings of Scholars," Chronicle of Higher Education, Vol. 6, No. 13, January 3, 1972.

Laird, J. Garry. A Study to Identify Persons in Mesa, Arizona, Who Are Perceived to Influence Community Decision Making," Mesa Public Schools, Mesa, Arizona, May 26, 1971, 31 pp.

Law, Gordon, F. (ed.) Contemporary Concepts in Vocational Education. The First Yearbook of the American Vocational Association. Washington, D. C.: The American Vocational Association, Inc. 1510 H Street, N.W., 1971. 435 pp.

Lee, Sylvia L. and others. High School Senior Girls and the World of Work: Occupational Knowledge, Attitudes and Plans. January, 1971, 56 pp. Information series.

Little, J. Kenneth. Review and Synthesis of Research on the Placement and Followings of Vocational Education Students. Columbus, Ohio: The Center for Vocational and Technical Education. The Ohio State University. February, 1970, 48 pp. (ED 037 543 MF $0.65 HC $3.29)

Lombardi, John. Student Activism in Junior Colleges: An Administrator's View, Washington, D. C.: American Association of Junior Colleges, 1969, ERIC Monograph No. 6.

Lonsdale, Richard C. "Maintaining the Organization in Dynamic Equilibrium," In Behavioral Science and Educational Administration, Daniel E. Griffiths (Ed.) 63rd NSSE Yearbook, University of Chicago Press, 1964, pp. 142-177.

Mager, Robert F., Preparing Instructional Objectives, Palo Alto, Cal.: Fearon Publishers Inc., 1962.

"Marland on Career Education," American Education, November 1971, 7:9 pp 25-28.

Marland, Sidney P., Jr. "Career Education: More Than a Name." Speech delivered before Annual Meeting of the State Directors of Vocational Education, Washington, D. C., May, 1971. 14 pp. (Ed 050 295 MF $0.65 HC $3.29)

Bibliography 5

Marland, Sidney P., "Educating for the Real World," Business Education Forum, 26:3-5, November, 1971.

McCracken, J. David. "Work Experience for Broadening Occupational Offerings: A Selected Bibliography for Use in Program Development." Columbus, Ohio: ERIC Clearing-house on Vocational and Technical Education, The Ohio State University. November, 1969. 16 pp. (Ed 034 062 MF $0.65 HC $3.29)

Miles, Matthew B. "On Temporary Systems," In Innovation in Education, New York: Bureau of Publications, Teachers College, Columbia University, 1964, pp. 437-465.

Mills, E. W. "Career Development in Middle Life." In Bartlett, W. (Ed.) Evolving Religious Careers. Washington, D. C.: CARA, 1970.

Moore, William, Against the Odds: The High Risk Student in the Community College, San Francisco: Jossey-Bass, 1970.

"More Emphasis Required," School and Society, 98:136, March, 1970.

Osipow, S. H. Theories of Career Development. N. Y.: Appleton-Century-Crofts, 1968.

Osipow, S. H. What Do We Really Know About Career Development? Presented at the National Conference on Vocational Education, Columbia, Missouri, October, 1969.

Osipow, S. H. "Some Cognitive Aspects of Career Development." In Evans, E. (Ed.) Adolescence: Readings in Behavior and Development. Hinsdale, Illinois: Dryden, 1970.

Osipow, S. H. "Success and Preference: A Replication and Extention." Journal of Applied Psychology, 1972, 56, in press.

Osipow, S. H. and A. B. Scheid, "The Effects of Manipulated Success Ratios on Task Preferences." Journal of Vocational Behavior, 1971, 1, 93-98.

Park, Young, The Junior College Faculty: Their Values and Perceptions, Washington, D. C.: American Association of Junior Colleges, 1971, ERIC Monograph No. 12.

Pautler, Albert J., "Occupational Education in the Curriculum: Educational Leadership, 29:174-177, November, 1971.

Phillips, "Learning Materials and their Implementation," Review of Educational Research, Vol. 36, No. 3, June, 1966.

Pratzner, Frank C. "Career Education," Mimeographed, Columbus: The Center for Vocational and Technical Education, The Ohio State University, 1971.

Pucinski, Roman C. and Sharlene P. Hirsch. eds., The Courage to Change: New Directions for Career Education, Englewood Cliffs, New Jersey.

Report of the National Advisory Commission of Civil Disorders, Washington, D. C.: U. S. Government Printing Office, 1968.

Rhodes, James A. Vocational Education and Guidance: A System for the Seventies. Columbus, Ohio: Charles E. Merrill Publishing Company. 1970.

Roe, Anne, "Early Determinants of Vocational Choice." Journal of Counseling Psychology, 1957, 4, 212-217.

Roe, Anne and M. Siegelman, The Origin of Interests. APGA Inquiry Series, No. 1, Washington, D. C.: American Personnel and Guidance Association, 1964.

Siegel, J. P. and E. E. Ghiselli. "Managerial Talent, Pay, and Age." Journal of Vocational Behavior, 1971, 1, 129-137.

Starr, Harold, Et Al. A System for State Evaluation of Vocational Education. Final Report. Col., Ohio. The Center for Vocational and Technical Education. The Ohio State University, May, 1970. 185 pp. (Ed 041 121 MF $0.65 HC $6.58) This publication contains instruments and materials for follow up of students.

Stewart John M. "Making Project Management Work," In Emerging Patterns of Administrative Accountability, Lesley H. Browder, Jr. (ed.) Berkeley: McCutchan, 1971, pp. 331-349.

Super, D. E. The Psychology of Careers, New York: Harper and Row, 1957.

Super, D. E. "A Theory of Vocational Development." American Psychologist, 1953, 8, 185-190.

Super, D. E. Starishevsky, R., Matlin, N., and Jordaan, J. P. Career Development: Self-Concept Theory. N. Y.: College Entrance Examination Board Research Monograph No. 4, 1963.

Swain, Emeliza. "A Training Program for Career Exploration Teachers," American Vocational Journal, 46:81-2, November, 1971.

Thorndike, R. L. and Elizabeth Hagen. Ten Thousand Careers. N. Y.: Wiley, 1959.

Trow, Martin. "Two Problems in American Education" in The Sociology of Education: A Sourcebook, Robert R. Bell and Holger R. Strub, eds., Homewood: The Dorsey Press, 1968.

U.S. Department of Health, Education and Welfare, Office of Education, Statistics of Public Elementary and Secondary Schools, Fall, 1970. Catalog No. HE 5220-0007-70, Superintendent of Documents, U. S. Government Printing Office, 1971, pp. 44.

Udy, Stanley H., Jr. "The Comparative Analysis of Organizations," Handbook of Organizations, James G. March (ed.) Chicago: Rand McNally, 1965, pp. 678-709.

Bibliography 7

Valentine, Paul W. "Income Gap Widens Between Blacks and Whites," Washington Post, March 29, 1972.

Venn, Grant, Man, Education and Manpower, Washington, D. C.: American Association of School Administrators, 1970.

Venn, Grant, Man, Education and Work, Washington: American Council on Education, 1964.

Vetter, Louise, and Barbara J. Sethney. Planning Ahead for the World of Work Curriculum Materials. Columbus, Ohio: The Center for Vocational and Technical Education, The Ohio State University. January, 1971, 85 pp. (ED 050 272)

Viernstein, Mary Cowan, "THe extension of Holland's Occupational Classification To all Occupations in the Dictionary of Occupational Titles." Journal of Vocational Behavior, 1972, 2, in press.

Vroom, V. H. and B. Pahl, "The Relationship Between Age and Risk-Taking Among Managers." Journal of Applied Psychology, 1971, 55, 399-405.

Wallace, Harold R. Review and Synthesis of Research on Cooperative Vocational Education. Information Series No. 21, Columbus, Ohio: The Center for Vocational and Technical Education, The Ohio State University. June 1970. 124 pp. (Ed 040 274 MF $0.65 HC $6.57)

Walsh, W. B. and Lacey, D. W. "Perceived Change and Holland's Theory." Journal of Counseling Psychology, 1969, 16, 348-352.

Walsh, W. B. and D. W. Lacey. "Further Exploration of Perceived Change and Holland's Theory." Journal of Counseling Psychology, 1970, 17, 189-190.

Walsh, W. B., Vaudrin, Donna M., and Ruth A. Hummel. "The Accentuation Effect and Holland's Theory." Journal of Vocational Behavior, 1972, 2, 77-85.

York, Edwin G., and Roy L. Butler. What State Leaders Should Know about Cooperative Vocational Education. Information Series No. 38. Columbus, Ohio: The Center for Vocational and Technical Education, The Ohio State University. July, 1971 (VT 012 907, See May 1972 RIE).

_____. Abstracts of Instructional Materials in Vocational and Technical Education (AIM). Published quarterly. Includes abstracts of materials designed for teacher use or student use in the classroom and annotations of bibliographies or lists of instructional materials. Columbus, Ohio: The Center for Vocational and Technical Education, The Ohio State University.

_____. Blind Man on a Freeway: The Community College Administrator, San Francisco: Jossey-Bass, 1971.

_____. The Vertical Ghetto: Everyday Life in a Housing Project, New York: Random House, 1969.

_____. What Teacher-Coordinators Should Know About Cooperative Vocational Education. Information Series No. 36. Columbus, Ohio: The Center for Vocational and technical Education, The Ohio State University. August, 1971. (VT 012 905, see May 1972 RIE).

_____. "The Role of the Junior College in Providing Post-Secondary Education for All," in Trends, Washington, D. C.: U. S. Government Printing Office, 1970.

_____. The Systems Approach: An Emerging Behavioral Model for Vocational Guidance. Research and Development 45. Columbus, Ohio: The Center for Vocational and Technical Education, The Ohio State University, 1971. 33 pp. (ED 047 127 MF $0.65 HC $3.29)

_____. Less Time, More Options: Education Beyond the High School, New Jersey: McGraw-Hill, 1970.

_____. The Open Door Colleges: Policies for Community Colleges, New Jersey: McGraw-Hill, 1970.

_____. Quality and Equality: Revised Recommendations for a New Level of Federal Responsibility for Higher Education, New Jersey: McGraw-Hill, 1969, A supplement to the 1968 Special Report by the Commission.

_____. A Chance to Learn: An Action Agenda for Equal Opportunity in Higher Education, New Jersey: McGraw-Hill, 1970.

_____. Cohen, Arthur M., Objectives for College Courses, Beverely Hills, Cal.: Glencoe Press, 1970.

_____. "Teacher Preparation: Rationale and Practice," Junior College Journal, Vol. 37, No. 8, May, 1967. pp 21-25.

_____. Dateline '79: Heretical Concepts for the Community College, Beverely Hills, Cal.: Glencoe Press, 1969.

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A LOOK AT VOCATIONAL EDUCATION IN NEW MEXICO--1971.

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ABSTRACT - THIS DOCUMENT DESCRIBES THE 1971 PLANS AND PROGRAMS FOR VOCATIONAL EDUCATION IN NEW MEXICO. CHAPTERS INCLUDE THE FOLLOWING TITLES: (1) CAREER EDUCATION, (2) VOCATIONAL SECONDARY-PLANS AND PROGRAMS; (3) POST SECONDARY AND PRIVATE SCHOOLS, (4) VOCATIONAL YOUTH ORGANIZATIONS, (5) RESEARCH COORDINATING UNIT, AND (6) STATISTICAL DATA - FISCAL YEAR 1971. (DL)

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LETTERS OF COMMENDATION

SECTION I

BRUCE KING
GOVERNOR

STATE OF NEW MEXICO
OFFICE OF THE GOVERNOR
SANTA FE
87501

Vocational education remains an area of vital importance to New Mexico. As a key to the economic development and well being of our state, it will continue to receive heavy emphasis during my administration.

While giving increased support to vocational education, we need also to review existing programs to make certain they are producing practical results. It is essential that vocational education meet the need of producing young men and women trained in skills readily and immediately marketable to New Mexico employers.

Training programs geared to specific industries and companies such as those at Albuquerque Technical-Vocational Institute are working extremely well. We need to expand these to other areas of the state.

It is essential for the future of our state that young people who do not choose higher academic education be afforded a complete opportunity to receive vocational training which will lead them directly to jobs.

It is my aim to work closely along these lines during the next three years.

Most sincerely,

Bruce King

BRUCE KING
Governor

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United States Senate

COMMITTEE ON
AERONAUTICAL AND SPACE SCIENCES
WASHINGTON, D.C. 20510

August 12, 1971

Mrs. Hilda Majors, Director
Research Coordinating Unit
Vocational-Technical Education Division
State Department of Education
Santa Fe, New Mexico 87501

Dear Mrs. Majors:

During our nation's history, an admirable theory developed which held that every young person should be afforded the opportunity to obtain as much formal education as he wished. This emphasis on prolonged and intensive academic preparation received an impetus from the launching of Sputnik in 1957, which sparked the drive toward development of a national corps of highly educated, sophisticated technicians and scientists. The trend accelerated in the 1960s, when new and massive infusions of Federal financial aid helped place higher education within the reach of the majority of young people.

During this rush toward academic sophistication and excellence, vocational and technical education too often languished from inattention and neglect. This was unfortunate for several reasons. For one, young people leaving high school were faced with the narrow options of either continuing an academic career in college or of proceeding immediately into the work force. Second, those adults in the rapidly changing and complex technological society had few opportunities to learn new and vital skills as the demand for their own capabilities slackened.

Fortunately, technical and vocational education programs have come of age. The list of unfilled needs is still long, but it is encouraging to see that our concept of "education" has broadened.

Sincerely,

Clinton P. Anderson

Clinton P. Anderson

CPA/cc

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United States Senate

COMMITTEE ON APPROPRIATIONS

WASHINGTON, D.C. 20510

Sept. 1, 1971

Mrs. Hilda Majors, Director
Research Coordinating Unit
Vocational Education
Education Building
Santa Fe, New Mexico 87501

Dear Mrs. Majors:

For many years people have paid lip service to the desirability of technical and vocational education. All the while, however, this very same kind of education was consistently shortchanged in terms of financial support and institutional commitment. These days are fortunately coming rapidly to an end. As one who has for many years advocated a far-reaching, all-encompassing system of vocational education, I greet this new movement with unconcealed joy.

It does no good to try to stuff an education down the throat of a young man or woman when we know perfectly well that they will probably not get a chance to advance materially because it does not provide them with skills.

The secret is to place workable, valuable skills in their hands through a network of institutions across our State.

Over the years the farm to city exodus has robbed New Mexico of many priceless young people. Providing them with vocational skills would allow them to find employment here within the boundaries of our own State. In turn, this would create the pool of skilled labor we know is so vital to New Mexico's ability to attract the kind of industry we have sought for so long.

Finally, if a young person still insists on leaving, they will at least be able to take a skill with them, rather than become a public charge when they eventually migrate to a new place.

Government programs are available to dovetail with those provided by the State. In Washington, an unceasing effort continues to either increase the national commitment to all States in this area, or to increase the share New Mexico can apply for and receive.

New facilities can and must be constructed with Federal aid. I have worked on several in the past, particularly those new ones which have appeared across the northern portion of New Mexico. I am prepared today as in the past to work with any community in order to facilitate the application for Federal aid in order to bring another one of these technical vocation schools into being.

Our commitment to vocational education must be a permanent one that does not allow backsliding. If we do not fill the vacuum, we shall be betraying the uncounted thousands of young people who are relying on taking advantage of such an opportunity. Without a skill, there will be no job. Our path is clear before us. Our responsibility is defined.

On behalf of the future of our young people, let us all continue to work for vocational education programs making the accomplishments of school years useful tools, as well as basic foundations for productive meaningful lives.

Sincerely,

Joseph M. Montoya

Joseph M. Montoya
United States Senator

JMM/bam

Congress of the United States
House of Representatives
Washington, D.C. 20515

November 12, 1971

Mrs. Hilda Majors, Director
Research Coordinating Unit
Division of Vocational Education
State Department of Education
Santa Fe, New Mexico 87501

Dear Mrs. Majors:

The Vocational-Technical Division of our New Mexico State Department of Education has made significant strides towards meeting the needs of our people in this field.

We must adopt a long view of Vocational Education so that by expanding and increasing its areas of influence the program will continue to produce the trained and skilled craftsmen so necessary to a balanced economy in our state.

I have supported this program, and will continue to do so in order that we may elevate its prestige to that of the premiere educational program for young people that it truly is.

Sincerely yours,

Manuel Lujan, Jr.

MLJ/mm

Congress of the United States
House of Representatives
Washington, D.C. 20515

October 13, 1971

Miss Hilda Majors
Director
Research Coordinating Unit
Vocational Education Division
Department of Education
Santa Fe, New Mexico 87501

Dear Miss Majors:

At no time in our history has the need for vocational and technical skills been greater than it is today. It is imperative that future education programs put more emphasis on training people to fill the jobs that our expanding industry is creating.

Much progress has been made through vocational education programs in New Mexico in the past, but one thing all of us must recognize is that we have only scratched the surface when it comes to actual need. It is an acknowledged fact that in the next decade 80 percent of the newly-created jobs will be of a vocational nature and will not require a college degree.

It is my sincere hope that state and federal governments, working together, can provide the programs necessary to meet the challenge. We must create in our young people the desire to learn a vocational trade and then provide the means through which they can develop their technical skills.

An expanded vocational program is the most pressing need we have in New Mexico today. It is the one thing that will solve our unemployment problem and help attract the industry that New Mexico so desperately needs.

Sincerely,

Harold Runnels

HAROLD RUNNELS, M.C.

dch

NEW MEXICO STATE ADVISORY COUNCIL FOR VOCATIONAL-TECHNICAL EDUCATION

SECTION II

NEW MEXICO ADVISORY COUNCIL ON VOCATIONAL TECHNICAL EDUCATION

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Mr. Peter A. Eissele
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The New Mexico Advisory Council on Vocational Technical Education, as a result of its study and evaluation during the past year, viewed a significant growth of vocational technical education throughout the State. Priorities were directed at serving persons of economically depressed areas; programs were concerned with preparing people with skills exhibiting manpower shortages; and innovative projects were introduced to expand educational opportunities to serve more people of all ages. Despite this continual progress, the State must realize its greatest task lies ahead. A system of education must be sought that will develop a strong work ethic in a highly industrialized mobile society in which occupational choice may be eminent many times during a lifetime.

> Occupational-related experiences, representing a total scope of career possibilities, should be intrinsic to the nature of all subject matter beginning at the elementary school level.
>
> Every youth should be allowed the opportunity of obtaining a saleable skill or gaining the knowledge and skills to enter advanced training of any type before leaving high school.
>
> Provisions should be made to allow any adult the opportunity to prepare for a new or expanding occupational role.

Redirecting our priorities toward career preparation for all persons, regardless of age, and away from the current dichotomy of objectives, seems to present an overwhelming goal. However, if public education is to be relevant to society, then a Look at Vocational Education today must only be a glimpse of Career Education tomorrow.

Advisory Council Evaluates Voc Ed Programs

The State Advisory Council for Vocational Education, in its annual evaluation report released last month, lauded the Division of Vocational Education for its increase and upgrading of vocational activities in New Mexico the past year, but also pointed out several shortcomings in the form of comments and recommendations.

The council's report offered comments and recommendations in the following areas: Guidance and Counseling Services, Data Collection and Reporting, Agency Coordination, Exemplary Programs, Industrial Development, Health Service Occupations Programs, Financial Support–Secondary Level, Financial Support-Post Secondary Level. The council's comments and recommendations in each of these areas are cited below.

AGENCY COORDINATION:

Comment: The lack of coordination and articulation among secondary, post-secondary, and adult education agencies has reduced the capabilities of the total education function to provide adequate preparation for certain job needs.

Recommendation: The State Board should explore the possibility of establishing cooperative arrangements with post-secondary area vocational schools to assist secondary school districts in the development of multi-level career development programs.

GUIDANCE AND COUNSELING SERVICES:

Comment: There exists a critical need for expanded vocational guidance and counseling services at all levels (K-12) in New Mexico's public schools.

Recommendations: (1) Career awareness group guidance programs should enroll a minimum of 8,500 students, and a means of support for these programs should be developed. (2) The State Board should strengthen the total guidance and counseling system by entering into cooperative agreements with educational institutions involved with training counselors, in order to provide course offerings relevant to career orientation. (3) The State Board should encourage the use of Federal funds earmarked for exemplary purposes for initiating additional experimental programs in career development. (4) The State Board should cooperate with the State Manpower Planning Council to develop a system of cross-utilizing manpower resources to enhance the occupational guidance system. (5) The person chosen for the position of State Vocational Guidance Counselor should be able to take a leadership exposition in providing career orientation services for all public school counselors. (6) A teacher-training institution should be established for the area of vocational guidance and counseling.

INDUSTRIAL DEVELOPMENT:

Comment: New Mexico lacks a reliable industrial development tool that can assure industrial prospects of trained manpower.

Recommendation: The State Board should continue its efforts to expand the industrial development training activities within the Division of Vocational-Technical-Adult Education, and should support legislative action necessary to secure additional state funds to conduct such program.

EXEMPLARY PROGRAMS:

Comment: Several exemplary programs completed during FY 1971 have focused on criticial educational problems in New Mexico, but additional refinement is needed if these programs are to realize their fullest potential.

Recommendations: (1) The Division of Vocational-Technical-Adult Education should make provisions in future program planning and budgeting to accommodate those local school districts that endeavor to adapt model programs to their respective curricula. (2) The Research Coordinating Unit, in selecting new programs of this nature, should give special consideration to the continued refinement of existing programs in order to develop more inclusive models, any of which could be incorporated in the curriculum of any school district.

DATA COLLECTION AND REPORTING:

Comment: The information system currently providing occupational and manpower data cannot adequately serve the program planning needs of vocational education.

Recommendation: The State Board should encourage the division of vocational-technical education to undetake a cooperative effort with state agencies requiring similar occupational and manpower data to assist the Employment Security Commission in developing the capabilities necessary to serve the information needs of these agencies.

Advisory Council Evaluates Voc Ed Programs

HEALTH SERVICE OCCUPATIONS PROGRAMS:

Comment: New Mexico's efforts to expand and update the health service occupations programs have not adequately responded to either the acual or anticipated manpower needs for this field.

Recommendations: (1) The Division of VTAE should continue to expand existing programs to meet both the actual and anticipated manpower needs in the health service occupations field. (2) Introductory and core programs, which would acquaint students with this area and which would prepare them for specific paramedical courses, should be encouraged at both the elementary and secondary levels. Priority for the establishment of these programs should be given to rural communities in the target areas. (3) The Division of VTAE should establish training programs for one or more of the following occupations in an effort to meet the rapidly increasing demand for skilled personnel: dental hygienists, physical therapists, medical lab technicians and librarians, radiologic technicians, orthopedic assistants, prosthetists, and health aides. These additional health oriented programs could be initiated in two ways. First, as exemplary programs to be developed with the assistance of appropriate medical institutions; or second, as cooperative programs inaugurated in conjunction with related private, state, and federal agencies such as the Southwest Regional Medical Program. (4) An extensive effort should be made to establish a teacher-training facility for all areas of health service occupations.

FINANCIAL SUPPORT–SECONDARY LEVEL:

Comment: The processes for distributing State funds and monies allocated under the Vocational Education Amendments Act of 1968 for secondary vocational education programs are not conducive to optimum program effort.

Recommendations: (1) The State Board and the State Office of Public School Finance should mutually develop a method for disbursing all State and Federal funds for vocational education programs in elementary and secondary schools in New Mexico, pursuant to the following guidelines: (a) Funds provided through this system should be a result of an annual comprehensive vocational education plan submitted by each district to the State Board for approval on the basis of criteria cited in the State Plan. Such a proposal should have the concurrence of the local advisory committee(s) for each area of training being requested. (b) The distribution system should recognize efforts of the school district to implement a total vocational education program, grades 1 through 12, by providing supplemental incentive grants incentive to the district. The said agencies should create and support legislation necessary to the implement action of this method. (2) The long range planning function should be formalized at the state level to assure a statewide systematic approach to program planning. Provisions should be subsequently made to create regional vocational education supervisor positions for the purpose of providing assistance to the local school districts in the task, and to serve as a liaison to the Division of VTAE.

FINANCIAL SUPPORT–POST SECONDARY LEVEL:

Comment: The lack of a statewide systemized approach to securing and expanding capital outlay funds for expanding facilities at post-secondary area vocational schools and the relatively arbitrary manner of disbursing PL 90-576 funds to these schools, discourages cooperative program planning necessary to meet the educational needs of the people of New Mexico.

Recommendations: (1) The State Board should recognize the need for a long term plan to be developed in light of projected needs to secure and allocate state funds for constructing facilities at post-secondary area vocational schools. (2) The weighting scale for distributing PL 90-576 funds to area vocational schools should be refined to comply with a total statewide program planning and budgeting effort.

CAREER EDUCATION

SECTION III

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STATE OF NEW MEXICO

DEPARTMENT OF EDUCATION

EDUCATION BUILDING

SANTA FE

87501

LEONARD J. DE LAYO
SUPERINTENDENT OF PUBLIC INSTRUCTION

Very recently, I had occasion to reflect on vocational education and the world of work in some rather amusing, although not actually funny, circumstances.

I stepped out of the building here in Santa Fe on my way to a meeting with Governor Bruce King. There were some workers here digging up a faulty pipe, which by the way had caused flooding in the basement of the State Education Building and put all the plumbing facilities out of commission for almost two days. I paused for a moment to watch -- I guess everyone likes to watch work -- and I certainly got an education. I discovered some of our young people don't know how to work.

Here were two young men, both intelligent, tangled up in their shovels, going about the digging in the most straining way possible, digging for all they were worth for three minutes and then resting for five. The gyrations and contortions going on around the shovel handles were fodder for a very laugh-filled fifteen minutes on "Laugh-In." I didn't wait to catch the sequence with the pipe wrenches, but the first few minutes caused some reflection on my part.

So, to the cries for more and more vocational education, I will add a cry for practical education -- the kind of education that will put competent men on the shovel and wrench and screwdriver handles, and even more, that will place these men in a position so they can work the right way and love that work because it is fulfilling and not just exhausting.

As we grow in vocational education, then, let us all keep our eyes on the practicalities so we can be as proud of the actual doing as we are of the teaching to do.

Sincerely,

Leonard J. De Layo

Leonard J. De Layo
State Superintendent of Public Instruction

VOCATIONAL–TECHNICAL EDUCATION AREA

ERNEST A. VIGIL, STATE DIRECTOR
VOCATIONAL-TECHNICAL & ADULT EDUCATION

STATE OF NEW MEXICO

DEPARTMENT OF EDUCATION — EDUCATION BUILDING

SANTA FE - 87501

It goes without saying that the last three years have been growth years for the Vocational Education movement in New Mexico.

Significant gains in funding have allowed us to implement a variety of needed programs state-wide, at the secondary and post-secondary levels.

The national trend to place more emphasis on "Career Education", K-14, is presently under way in New Mexico. Basically, the program model is as follows:

Grades K-6	Career Awareness
7-8	Career Orientation
7-10	Career Exploration
11-12	Entry Level Job Skill Training
13-14	Vocational-Technical Adult Training

The programs for the 11th and 12th grades are designed to develop specialized job-level skills as their overall objective.

Programs beyond the 12th grade are designed for sequential training for high school drop-outs or high school graduates as well as allowing adults the opportunity to receive supplemental or preparatory training for employment.

One can readily see that, while progress is being made, much remains to be accomplished in this vital area of Vocational-Technical Education.

E. A. Vigil, State Director
Vocational-Technical & Adult Education

Career Education

Highlights of Career Education are presented in this section to relay to Legislators, School Personnel and the Public the focus for Education in our schools.

Marland on Career Education is a reprint from American Education, November 1971. The United States Commissioner of Education, Dr. Sidney P. Marland, Junior, tells the story via question and answer interview.

A Model for Career Education, as presented by Federal Officials, is reproduced for review.

Some of New Mexico's programs involving Career Education are highlighted.

New Mexico will become more involved in Career Education for next fiscal year 1973.

Marland on Career Education

Since he became U.S. Commissioner of Education, Dr. Sidney P. Marland, Jr., has spoken out vigorously for a new emphasis in education—an emphasis on what he calls "career education." Along with the wide interest aroused by the term—and more particularly the whole concept it labels—came a broadside of questions seeking a clearer definition of career education and a more elaborate discussion of its implications. In the following paragraphs Commissioner Marland responds to some of the questions most frequently asked, as selected and posed to him by the editors of American Education.

Q Commissioner Marland, on several occasions recently you have talked of "career education." What is the difference between career education and vocational education?

A Speaking just in terms of the schools, career education—as I see it—would embrace vocational education but would go a good deal further. I suppose all of us are familiar with the situation of a young person finishing high school or even college with no idea of what kind of work he would like to follow. This is a depressing proposition for the student and in my view a failure on the part of the schools. So what I would hope for is a new orientation of education—starting with the earliest grades and continuing through high school—that would expose the student to the range of career opportunities, help him narrow down the choices in terms of his own aptitudes and interests, and provide him with education and training appropriate to his ambition. In many cases his training would certainly involve the "manipulative" skills commonly associated with vocational education. It would be strongly and relevantly undergirded by education in the traditional academic subjects.

In any event, what the term "career education" means to me is basically a point of view, a concept—a concept that says three things: First, that career education will be part of the curriculum for all students, not just some. Second, that it will continue throughout a youngster's stay in school, from the first grade through senior high and beyond, if he so elects. And third, that every student leaving school will possess the skills necessary to give him a start in making a livelihood for himself and his family, even if he leaves before completing high school.

Q In the beginning of your response to the previous question why did you say you were speaking "just in terms of the schools"?

A We often think of "education" and "schools" as being almost synonymous, but of course much of education takes place elsewhere. I suppose that is particularly true of career education, in the form of on-the-job training. But I made the distinction primarily because we are exploring the possibilities not only of a "school-based" model of career education but of three other models as well. One will be based in the home and will involve extensive use of TV instruction and possibly tutoring. A second model will be employer-based, with a consortium of public and private employers taking responsibility for a good portion of the student's training. And a third will be based in special residential facilities where students—presumably in their teens and older—will live while engaged in intensive career development, with corresponding academic learning.

Our principal efforts so far have been with the school-based model, since this is the one most people will encounter. As of the beginning of the current school year we are funding school-based models on an experimental basis in six districts—Mesa, Arizona; Los Angeles, California; Jefferson County, Colorado; Atlanta, Georgia; Pontiac, Michigan; and Hackensack, New Jersey.

Q Does career education mean learning specific job skills?

A To one degree or another, yes. Yes particularly for students who plan to take a job immediately upon graduating from high school. Students who plan to continue their training at an area technical school, a community college, or at a university would also be given work experiences of probably a more general nature. You cannot really learn about a job by reading a book, of course. I believe we should provide realistic work experience for all young peo-

ple. However, by career education I would have considerably more in mind than the teaching of specific skills. I think the student should learn about the wide range of job possibilities, he should learn what is involved in getting and holding a job, he should have guidance and counseling toward matching his interests and abilities with a potential career, and he should be guaranteed help in finding a job whenever he decides he is ready to enter the working world.

Q How will career education be structured or organized?

A That, it seems to me, must be left to the decision of local school boards, teachers, students, the business community, labor, and others directly involved. Much will depend upon State and local administrative leadership. We have some ideas, of course, but this is a basic, far-reaching concept that demands the best thinking of everyone. The Office of Education is funding the experimental models I previously mentioned, and members of the staff will continue to participate in the search for effective approaches. But we will certainly not attempt to dictate what the overall approach should be. Our reason for establishing the demonstration models is to test this substantial concept and to see whether it captures the enthusiasm of other communities. It will not work unless local educators believe in it.

Q Accepting that reservation, how might career education work out in a given school system?

A Responding just for the purposes of illustration, I would say that there would probably be two basic aspects to the approach in a given school district. The first would have to do with the curriculum, and it would begin with the proposition that experts have identified some 20,000 different kinds of jobs. Obviously, that is far too great a number for any individual to comprehend. However, those jobs can be grouped within general clusters. Some examples from one suggested arrangement are Business and Office Occupations, Marketing and Distribution Occupations, Communication and Media Occupations, Manufacturing Occupations, and Fine Arts and Humanities Occupations.

During the first six years of his schooling the youngster would be made familiar with these various clusters of occupations and what is involved in entering them. In grades seven and eight he would concentrate on learning more about those particular job clusters that interest him most. In grades nine and ten he would select a job cluster to explore in some depth, an experience that would include visiting places where this kind of work is going on, trying his own hand at certain basic skills, and in general getting practical experience in what that line of work involves. In grades 11 and 12 he would pursue his selected job area even more intensely, in terms of one of three options: acquiring skills that would enable him to take a job immediately upon leaving high school; taking a combination of academic and on-the-job courses in preparation for entering a post-secondary institution that would train him as a technician, for instance; or electing a somewhat similar combination of courses in preparation for a professional degree from a four year college and beyond.

That is the curriculum aspect of the career education concept. Hand in glove with it would go a refocusing of classes in the basic subject areas—math, science, language arts, and social studies—in such a way that these classes were presented in terms of the student's career interests. One of the major benefits of this kind of refocusing would be that school would immediately become more relevant. The student would not be learning just for learning's sake or because someone ordered him to, but because the subjects he was studying would bear directly and specifically on his planned career. We feel this has particular usefulness in motivating the student who is now less than successful in school.

Let me add a third basic component of the career strategy: teacher education. Perhaps we will come to this later, but we see a need for a very large effort in helping teachers at all levels increase their capacities to relate their teaching to the career theme.

Q Wouldn't so much emphasis on jobs and work tend to lower the intellectual quality of education?

A On the contrary, I would expect it to *heighten* the intellectual quality of education, because school work would become more meaningful and stimulating resulting in higher motivation. As every teacher is painfully aware, getting students motivated is a very perplexing proposition. If you had to pick out the single most difficult aspect of teaching, inspiring students to want to learn is probably the hardest. The traditional content of a course in history or mathematics simply has no clearly recognizable bearing on the life of at least half the students and probably more than that. Under the career education concept, such courses would be couched in terms and objectives that the child could clearly see and feel as being of personal importance to him. The gifted youngster can equally benefit from courses with that kind of built-in motivation. None of us really learns in a vacuum. We learn for a purpose. The more effective the schools are in capturing a youngster's curiosity and capitalizing on his interest, the more he will want to learn. Research has increasingly suggested this proposition, giving heavy emphasis to the need for the learner to *believe* that he has some control over his own destiny.

Q You seem to be talking about some really far-reaching changes in the curriculum, requiring new kinds of materials and approaches. Where will these new approaches and materials come from?

A I do not know, in the sense that I would certainly set no restriction. Many would come from the schools themselves, I would suppose, and from industry, from labor, universities, State departments of education, professional education associations, and so on. Not excluding the U.S. Office of Education. As for the necessary materials, many of these are already available. Examples are course materials in "The World of Construction" and "The World of Manufacturing" developed under a USOE grant to Ohio State University. Others have been developed for use at the elementary school level in Georgia, Texas, and New Jersey. In addition, many effective materials have long been available for such occupational areas as electronics and stenography. Other departments of government, particularly the Department of Defense, have some request materials on skill training.

As for approaches, I can see the possibility of organizing task forces composed of experienced people to study the

various job clusters and develop a core curriculum for each, applicable at various grade levels and including appropriate materials and media. Other task forces would be needed for the language arts, mathematics, the sciences, and social studies—their job being to adjust these subject areas to the cluster curriculums.

Putting all these efforts together will be a very large task, but I have no doubt that it can be accomplished within a matter of three or four years if those concerned with the task believe deeply in the worth of the concept.

Q All that you have said suggests, as you implied earlier, that the schools are going to wind up with teachers who are just not trained to deal with the new curriculum.

A Without question, inservice training will be needed, not just for teachers but for supervisors and counselors and others as well. Indeed this winter we will be conducting 16 seminars for State and local administrators throughout the country, as a first step in inservice education for the leadership. Moreover, during the first year after a system has switched to the career education concept, teachers will have a real job on their hands in reworking lesson plans and adjusting their teaching procedures. However, no one would expect teachers to become instant experts in say police work or computer technology or nursing or architecture. They will need to become familiar with the job cluster idea and the skills that are called for, but their basic jobs as teachers will remain in the subject areas for which they were trained. I would foresee that they would be supported in their work by many more counselors and paraprofessionals than has been customary. And on a less formal basis, they would turn to "outside" persons qualified in particular jobs. A teacher dealing with the Health Occupations cluster, for example, might very well be backed by a team that included physicians, nurses, and medical technicians, all systematically engaged in the new design for learning.

Q One gets the impression that career education will cost much more than the schools are currently spending—perhaps so much more that most of them could not afford to switch.

A My own impression is that given the failures and disenchantment attributable to the general curriculum to which so many youngsters are subjected today, few of them could afford *not* to make the switch. But as for specifics, the fact is that we do not know how much it would cost to convert to the career education concept—nationally or in a particular district, though the initial costs might be fairly substantial. That is one of the pieces of information we are seeking from the six school-based experimental models we are now funding. Some "extra" costs would come chiefly in the development stage—the costs of developing new curriculums and new materials and new approaches. These are one-time expenditures and of course would not be borne by a particular school district. These costs would be paid with special funds that in a couple of cases are now being provided by State legislatures and in six cases by USOE.

Very likely, basic operating costs will prove to be somewhat larger than those for the standard school today, but though I seriously doubt that any such difference would be prohibitive, we do not really know yet. In any case, we should not forget that as far as costs are concerned, the essential point is not whether particular sums of public money are being spent by the schools or by the State welfare department or by some other agency—the point is what the total comes to. From that perspective I would have every expectation that career education would result in substantial savings, by providing a sound alternative to welfare and unemployment roles and by giving people the capacity to make a larger contribution to our economy. In other words, simply more or less education money is not the real question. The real question is one of total national resources and how they are deployed to meet national needs.

One further thing: As I indicated earlier, the primary reason for the failure of the schools to serve many young people adequately (as represented by dropouts and youngsters graduated from high school prepared neither for a job nor for further education and the extra social costs that go with that failure) can be traced to what we call general education. If we could replace that curriculum with the kind of creative and productive schooling that enables youngsters to carve out careers for themselves we would save a good deal of money that to all intents and purposes is now simply going down the drain.

Q Do you believe it is realistic to expect the large degree of cooperation from business and industry and labor unions that the career education concept seems to call for?

A Reactions I have received from a great many business executives and labor leaders make it clear that they are keenly interested in the career education idea. For one thing, they are deeply concerned about the whole subject of where our schools and the Nation at large are going. For another, they look to the schools for well trained employees. The interest is there—no doubt about it.

It is quite proper, of course, to question how far business and industry can afford to go in providing supervisory time and in making their equipment and facilities available to students. To some degree they are of course doing that already. This is not a new notion being thrust upon industry; we have had school-business partnerships for some time. The difference is that up until now relatively few students and relatively few industries have been involved, whereas with the career education concept we are talking about the universe of students and, really, the entire business community.

Obviously, if business is to be expected to take on this extra load we will have to find some kinds of compensation that may not result in a profit but will at least prevent out-of-pocket losses. Perhaps that compensation could come in the form of tax incentives. Perhaps it might mean a new authority permitting school systems to contract with industry to conduct cooperative programs. My hope is that several options can be developed, so that a particular business might choose among a number of alternatives to find the arrangement that best fits its capacities—or for that matter have the freedom to suggest a format of its own.

In any case, I see considerable national interest in the career education approach. For very practical reasons as well as out of a general concern for our Nation's progress, business and industry and labor seem ready to lend a hand.

Q Is there any one particu-

lar group that you see as a target for career education, or is the proposition more in the order of "something for everybody"?

A When I talk about career education I am not thinking of rich or poor, or blacks or whites or browns or the smart or the dull or those of differing national origins or regions. I am thinking about human beings who find that the current offerings of our schools are not meeting their needs. Now, this deficiency does not affect certain groups in our population as harshly as it affects others—ghetto youngsters, for example, or migrant children. Obviously such youngsters stand to benefit especially. But this hardly excludes the banker's son who has an above-average I.Q. and comes from a home that takes academic and social success for granted. That background does not automatically provide him with the ability to choose a satisfying career for himself, rather than being pushed into a job he really finds distasteful. Or attending a college because he is expected to, regardless of his own goals. For that matter, suppose that deep in his heart he would really prefer to work with his hands and his mind rather than in his father's bank—if only some sort of stigma were not attached to that decision. I maintain that career education is for him, too

Q How would you reconcile this point of view with the Office of Education's stress on the desirability of a higher education with its concomitant expectancy for higher earnings?

A I was not talking about earning goals necessarily, although they are obviously a factor. I want career education to lead to fulfillment for young people. Money can without question fulfill a lot of desires, but it never can be a substitute for the deep-down satisfaction one gets from accomplishment in work enjoyed. The data that suggest people earn more money in their lifetime if they have a college degree is quite unimpeachable, but do the figures also testify that these people are happier in their jobs than those who did not go to college? And if money is still the overriding concern, I would point out the distinct possibility that the man who went to college and became a journalist might have earned more money as a house painter or as a manager of house painters. I would also add that many young people today are not particularly motivated by economic "success." They are at least momentarily concerned with serving humanity. Career education equips them to do this realistically.

Q There would seem to be a likely possibility that a system focused on career education would funnel a good number of students away from the colleges and universities. Would that really be desirable?

A Conceivably there could be some reduction in college and university enrollments, but I suspect not nearly as much as the question implies. Indeed, I think the number of people attending college at a slightly deferred age will increase. The important thing, I would hope, would not be in numbers but the quality—and by quality I am thinking of the attitudes of students and the reasons that bring them to the campus. There seems little doubt that a good many students in college today have no *bona fide* purpose for being there. They are not really intent on jobs that require higher learning. They are there because they see nothing more promising off the campus and because a college degree has unfortunately become a status symbol.

Through career education such students would receive guidance and direction toward fields that truly interest them, and through such devices as work-study and apprenticeships they would gain the skills needed to enter satisfying lines of work.

Meanwhile the places of those thus drawn away from college campuses would be taken by talented children who because of nothing more than the accident of being born to poor parents have traditionally been counted out as college material.

But let us suppose that I am wrong in this prediction and that career education actually does have the effect of substantially decreasing college enrollments. Is this so very bad? The Department of Labor has calculated that right now, in 1971, and for the forseeable future, 80 percent of the tasks required by our society can be performed by people with a high school diploma.

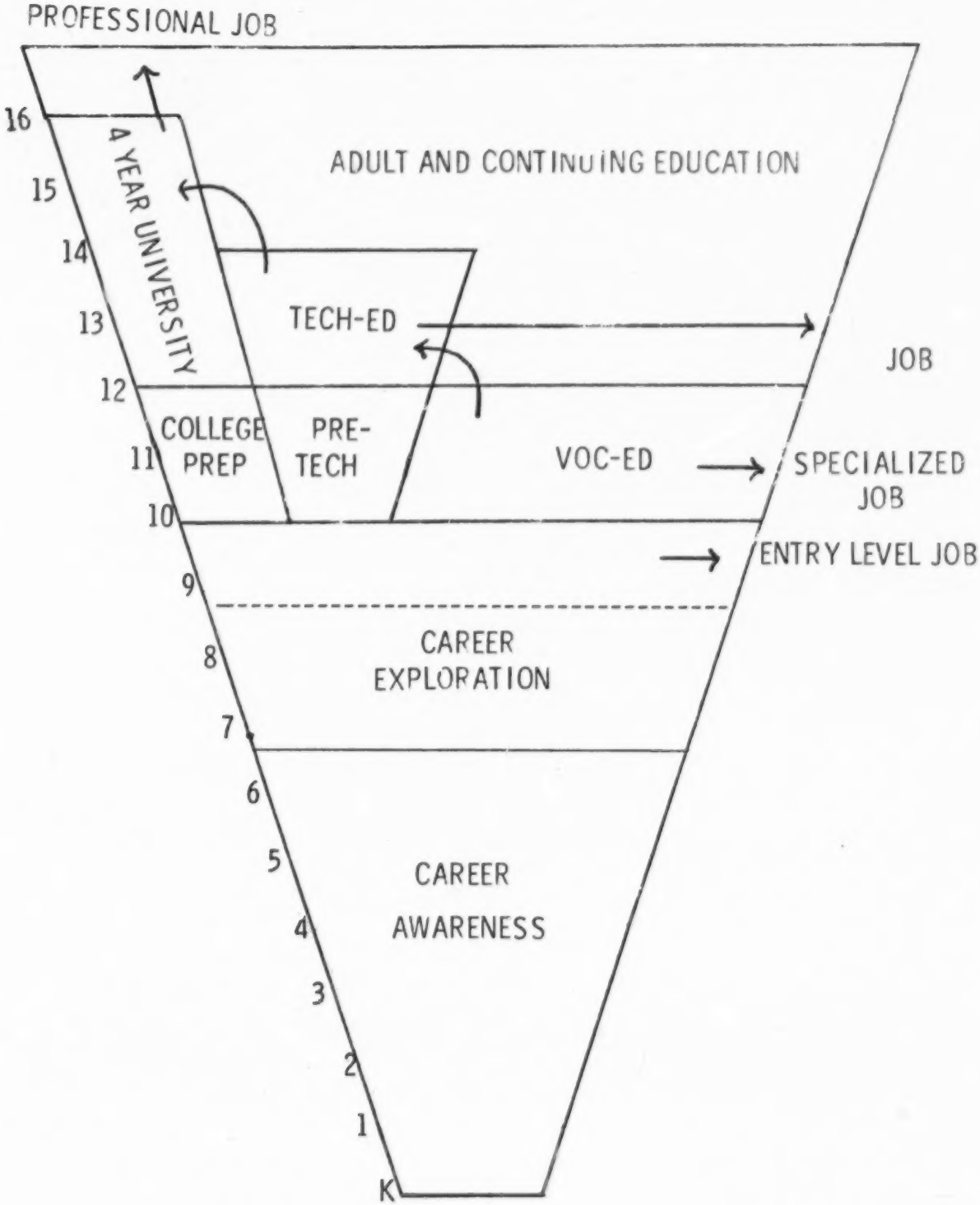
Now, I don't want to be misunderstood. I do not oppose college attendance. On the contrary, I have spent most of my life helping people get ready for college and serving on college faculties and as a member of university boards of trustees. So I am hardly one to disparage the high importance of higher education. But I do oppose a policy that says excellence resides *only* in a college degree. This sort of thing has led to a false value system among young people and too often it has pushed them into college when neither they nor the college had any need for each other.

Q It is almost a natural law that anything new encounters suspicion and hostility. What reaction do you expect the career education idea to get from the general public?

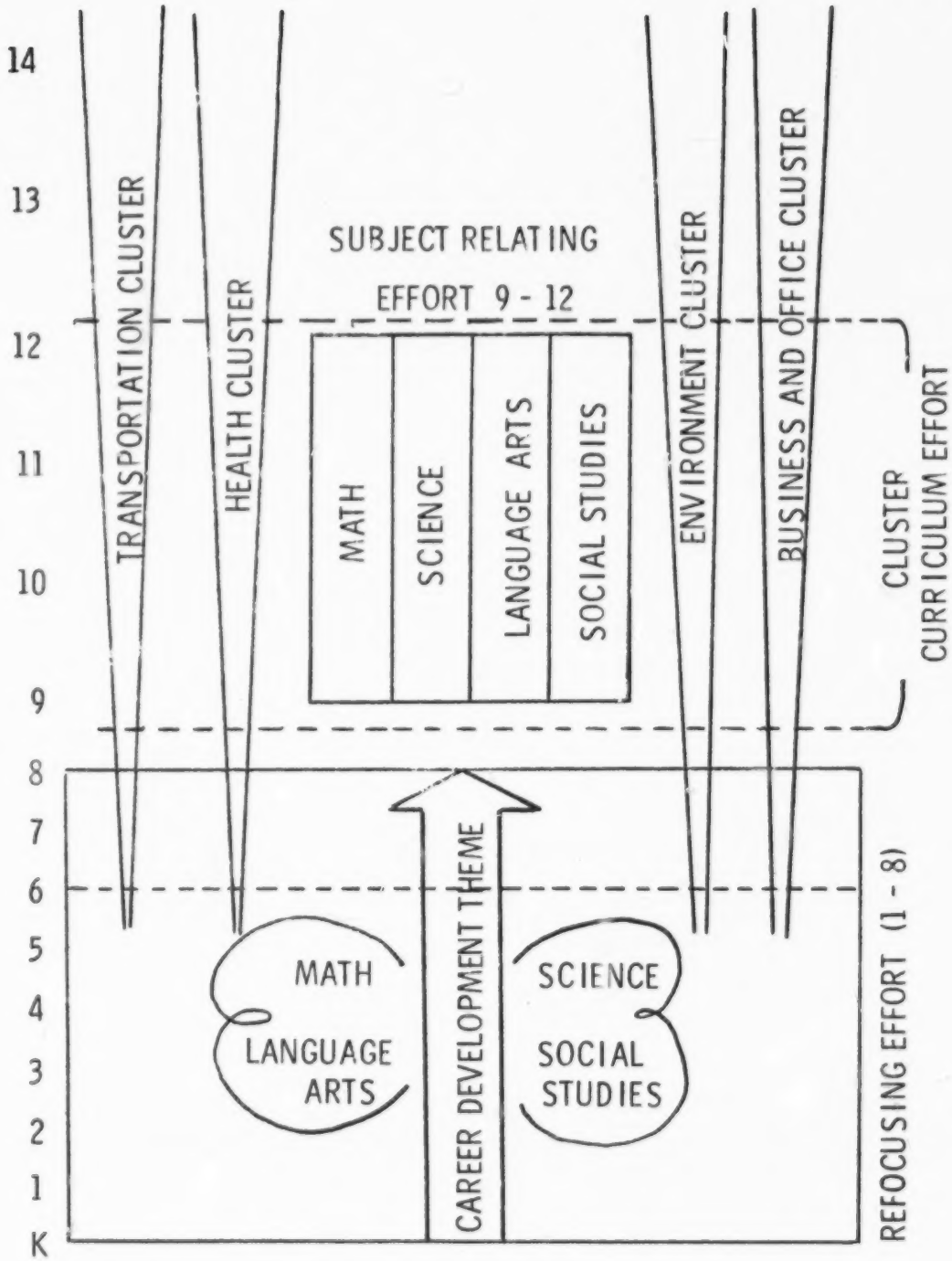
A It might very well have tough sledding, especially at first. We will need delicate sensors to pick up at an early stage any misapprehensions or feelings of distrust. And then we will have to respond to such reactions by presenting the facts about the intent and potential of the career education idea. I would welcome this kind of give and take, for in the long run it is our citizens who must judge the merits of one approach to education as contrasted with another.

Changes in many conventional public attitudes will have to occur, and that's no easy matter. Too many mothers and fathers think vocational education is fine—but only for the neighbor's child. *Their* children are going to MIT and Vassar. What we have to do is set up alternative arrangements that provide every youngster with equally valued options. He could go on to higher education or he could train for a technical job at a community junior college or he could spin off from the system whenever he was ready and equipped to hold a job. That kind of arrangement would of course have to be so flexible that youngsters could always change their minds and re-enter the system, not only as young people, but as mature adults.

The letters and comments I have received so far from educators and laymen have been so warmly favorable as to indicate that the career education idea may catch on. The educational leaders at State level have already expressed active support. Spokesmen for higher education have encouraged us. But the real test remains. I think most people feel it is high time to make the schools truly relevant and meaningful for every youngster, and that's what career education is all about. ■



CAREER EDUCATION
MODEL



THE TRIPLE-PRONGED EFFORT
TO RESTRUCTURE THE EDUCATIONAL PROGRAM
AROUND CAREER EDUCATION

TABLE I

SUGGESTED CAREER EDUCATION EXPERIENCES BY GRADE LEVEL

GRADES: 1-6	GRADES 7-8	GRADES 9-10	GRADES 11-12		
STUDENT DEVELOPS SELF-AWARENESS AND UNDERSTANDING OF HIS INTERESTS AND ABILITIES				100% PLACEMENT	JOB
STUDENT DEVELOPS ATTITUDES ABOUT THE PERSONAL, SOCIAL, AND ECONOMIC SIGNIFICANCE OF WORK					NON-BACCALAUREATE PROGRAM
OCCUPATIONAL AWARENESS: Student is informed about occupations through a series of clusters representing the entire world of work.	OCCUPATIONAL ORIENTATION AND EXPLORATION: Student explores several clusters of his choice.	OCCUPATIONAL EXPLORATION IN DEPTH, BEGINNING SPECIALIZATION: Student selects one cluster to explore in greater depth. Develops entry-level skill. May change cluster if desired.	SPECIALIZATION: Student specializes in one cluster. Takes prerequisites for further education and/or intensive skill training for job entry.		BACCALAUREATE PROGRAMS

MINI-GRANT PROJECT

11/23/71

The Mini-Grant Project in the Albuquerque Public Schools was implemented with three objectives in mind.

1. To provide creative elementary teachers the opportunity to pursue a vocationally oriented research project of their own choosing.

2. To develop a career education curriculum in the area of the teacher's choice.

3. To provide students with information about jobs, to develop wholesome attitudes toward the world of work, to establish pertinence to the student's world, and to expose students to activities in various occupations.

The projects originated by the teacher making written application for a Mini-Grant to the State Advisory Committee, Research Coordinating Unit of the State Department of Vocational Education. Thirty-six teachers, representing twenty-six schools, working with 1,000 students, received Mini-Grants varying from $398 to $500 to research and develop curriculum materials in twenty-three different media directed toward the world of work which could be used in other schools throughout the state.

ALBUQUERQUE PUBLIC SCHOOLS
VOCATIONAL EDUCATION DEPARTMENT
PRE-VOCATIONAL EDUCATION PROGRAMS

By: Orin L. Buchleiter
Industrial Education Coordinator

In our modern world of tremendous opportunities, many career areas go begging for young people to develop and join the working forces while other fields of endeavor are saturated far beyond the absorption point with young people; there is a tremendous imbalance in modern working America today.

The Mobile Career Orientation Laboratory through its Orientation to the World of Work Program and the Industrial Arts Curriculum Projects through their World of Construction and World of Manufacturing Programs in the Albuquerque Public Schools are taking strides towards helping young people find their place in our modern technological world.

The Mobile Career Orientation Laboratory (Pictures #1 & #2) Program offers a "hands-on" approach to many trade and professional careers for young men and women, a career library, as well as a very special teacher, Mr. John Williamson, and other community resource people who are interested in helping youth find their rightful and successful place in our society.

The program reaches an estimated 720 sixth grade students a year in six different elementary schools. The cost of the lab is about $20,000 plus the teacher's salary which is being financed by the three area officed of the school system. Students meet for twenty-five to forty-five minutes each day, depending on the number of students in the school, for six weeks. The lab will be located at Roosevelt, La Mesa, Kirtland, Adobe Acres, Cochiti, and Montgomery Elementary Schools this year. This program is not intended to force students to make early career decisions, but rather to give them the knowledge to make intelligent career decisions when the time to make choices does arrive.

The Industrial Arts Curriculum Project (I.A.C.P.) is currently being offered in two schools, Adams and Harrison Junior Highs, with plans of initiating the program in at least four more schools in the 1972-73 school year.

The first year of the program finds about 360 students in the World of Construction (Picture #3) where they are provided an opportunity to learn and apply fundamental knowledges and skills of the construction industry. The second year has another 360 young people in the World of Manufacturing (Picture #4) where they develop an understanding of the basic concepts of manufacturing technology. Students work together in using tools, materials, and techniques to produce products that represent many products produced in a factory or plant.

These four I.A.C.P. programs average about $3,500 apiece per year and are being presented in the existing Industrial Arts Laboratories. Bill Worthen and David Bradley are teaching the World of Construction at Harrison and Adams respectively; John Criswell and Mike McAfee are presenting the World of Manufacturing at the same schools.

The most important function of these five new programs in the Albuquerque Public Schools is to show young people what they can do with themselves, how they can best take advantage of their education, and how they can find their future through Vocational Training.

- 1 -

- 2 -

- 3 -

- 4 -

CAREER AWARENESS PROGRAM

11/23/71

A Career Awareness Program was implemented into the sixth grade of the Albuquerque Public Schools in September of 1970, on a volunteer basis. Elementary School Principals were contacted in April and May of 1970, to see if they would be receptive to the program. All those contacted thought the program would be beneficial. The Principals were then asked to seek volunteers from their sixth grade teachers who would be willing to integrate the Career Awareness Program into their sixth grade curriculum.

The responses from the school principals were gratifying as 57 elementary schools (Grades 1-6) volunteered two sixth grade teachers each. Three mid-schools (Grades 6-7-8) volunteered two sixth grade teachers each and two junior high schools (Grades 7-8-9) volunteered their counseling staff to conduct group Career Awareness Programs.

There were 60 schools involving at least two sixth grade teachers each, or 120 teachers presenting the Career Awareness Program to 3,600 sixth grade students during the school year 1969-70. Also, two junior high schools had four counselors present the program to 400 junior high students.

We had a total of 62 schools participating, involving 124 teachers and 4,000 students.

The course objectives are:

1. To provide students with information about jobs in the world of work.

2. To establish wholesome attitudes about work.

3. To impress on youth the relevance of "education" toward preparing one's self for a career.

4. To acquaint youth with the job requirements established in Business and Industry.

5. To expose youth to some applications of the activities in various occupations, through numerous curriculum programs.

6. To increase knowledge of occupational opportunities as an aid in making wiser career decisions.

7. To develop an appreciation of one's personal responsibility to become a productive member of society.

The success of the Career Awareness Program of 1970-71 was infectious to the point that this school year (1971-72) all 78 elementary schools in the Albuquerque Public Schools will present the program to 7,500 sixth grade students involving 250 teachers. Three mid-schools (Grades 6-7-8) will have the program at the sixth grade level and nineteen junior high schools (Grades 7-8-9) will provide groups with instruction on Career Awareness.

During the present school year, 100 schools involving 278 teachers will provide a Career Awareness Program to 10,500 students in the APS. The material used in the program was the Widening Occupational Roles Kit, Grades 6-9, published by Science Research Associates, Incorporation, as well as teacher prepared materials.

Submitted by: Leroy Brannon
Staff Coordinator
Vocational Education

TAOS CAREER EDUCATION PROGRAM

A $96,852 Career Education Project, designed to be the most comprehensive in all of New Mexico, will get underway in January of 1972, and will run through June 30 of 1973.

The project encompasses kindergarten through 12th grades. It involves all schools in the Taos School District: all elementary schools, the junior high school, and the senior high school.

The project consists of four components: Career Awareness for Grades K-6; Guidance and Counseling for the middle grades; On-the-Job Cooperative Program for Grades 10-12; and Placement Program at the Secondary Level.

Within the above grade levels, objectives of the project have been set forth as follows:

1. To develop and implement a program at the elementary school level designed to increase career awareness.

2. To improve the guidance and counseling services at all grade levels with special emphasis on career orientation and meaningful exploratory experiences for students at the junior high level.

3. To provide job preparation in occupational areas for grades 10 through 12, with special emphasis on the utilization of work experience and cooperative educational opportunities.

4. To establish a placement service to insure the placement of all existing students in either a job, a post-secondary occupational program, or a baccalaureate program.

The Taos project is one of the Federally sponsored projects that are being conducted in each state. From these projects will emerge a career education model that will be used in expanded career education programs nationwide.

CAREER EDUCATION
FOR
PRE-VOCATIONAL INDUSTRIAL EDUCATION

This program should be a study of industry and its technology for the purpose of pre-vocational and general education. Through instructional and laboratory experiences students should learn about the industrial and technical aspects of our society.

A variety of industrial areas must be covered so as to allow the students a basis for logically selecting an industrial or technical vocation if they are so inclined. Four or more areas such as: power mechanics, electricity, metals, graphic arts, plastics, drafting or construction-production oriented woods must be offered.

Equal time must be allotted on a six week, nine week, semester or full year basis. This can be accomplished in a general shop or a unit shop according to the school enrollment or size. The program should be coordinated throughout the school or district and follow a sequence from junior high school through senior high school.

This program allows for flexibility in scheduling. A sample schedule plan is attached.

A pre-vocational industrial education program should include the following features:

1. Student personnel and cleanup system.
2. Adequate safety program.
3. An adequate facility which is well lighted and ventilated.
4. Course of study and lesson plans.
5. An adequate operational budget for supplies and equipment.
6. Adequate equipment in all areas to be taught.
7. A well qualified instructor.
8. Provide for care and maintenance of equipment.
9. Orientation to the world of work, consisting of job opportunities, qualifications, wages and working conditions in the industrial areas being taught.
10. Supply information in regard to high school and post high school trade and technical programs.
11. Support in-service teacher training programs.

SUGGESTED SCHEDULE

PRE-VOCATIONAL INDUSTRIAL EDUCATION

7th
6-9 weeks
4 or more areas

- Power Mechanics
- Basic Electricity
- General Metals
- Drafting
- Graphic Arts
- Plastics
- Woods

8th
18 weeks in
2 areas offered
in 7th grade

- Power Mechanics
- Basic Electricity
- General Metals
- Drafting
- Graphic Arts
- Plastics
- Woods

9th
18 weeks in
2 areas offered
in 7th grade*

- Power Mechanics
- Basic Electricity
- General Metals
- Drafting
- Graphic Arts
- Plastics
- Woods

10th
36 weeks in
4 or more areas**

- Power Mechanics
- Basic Electricity
- General Metals
- Drafting
- Graphic Arts
- Plastics
- Woods

11th and/or 12th
36 weeks in 4 or more
areas 1 or 2 hr. block**

- Power Mechanics
- Basic Electricity
- General Metals
- Drafting
- Graphic Arts
- Plastics
- Woods

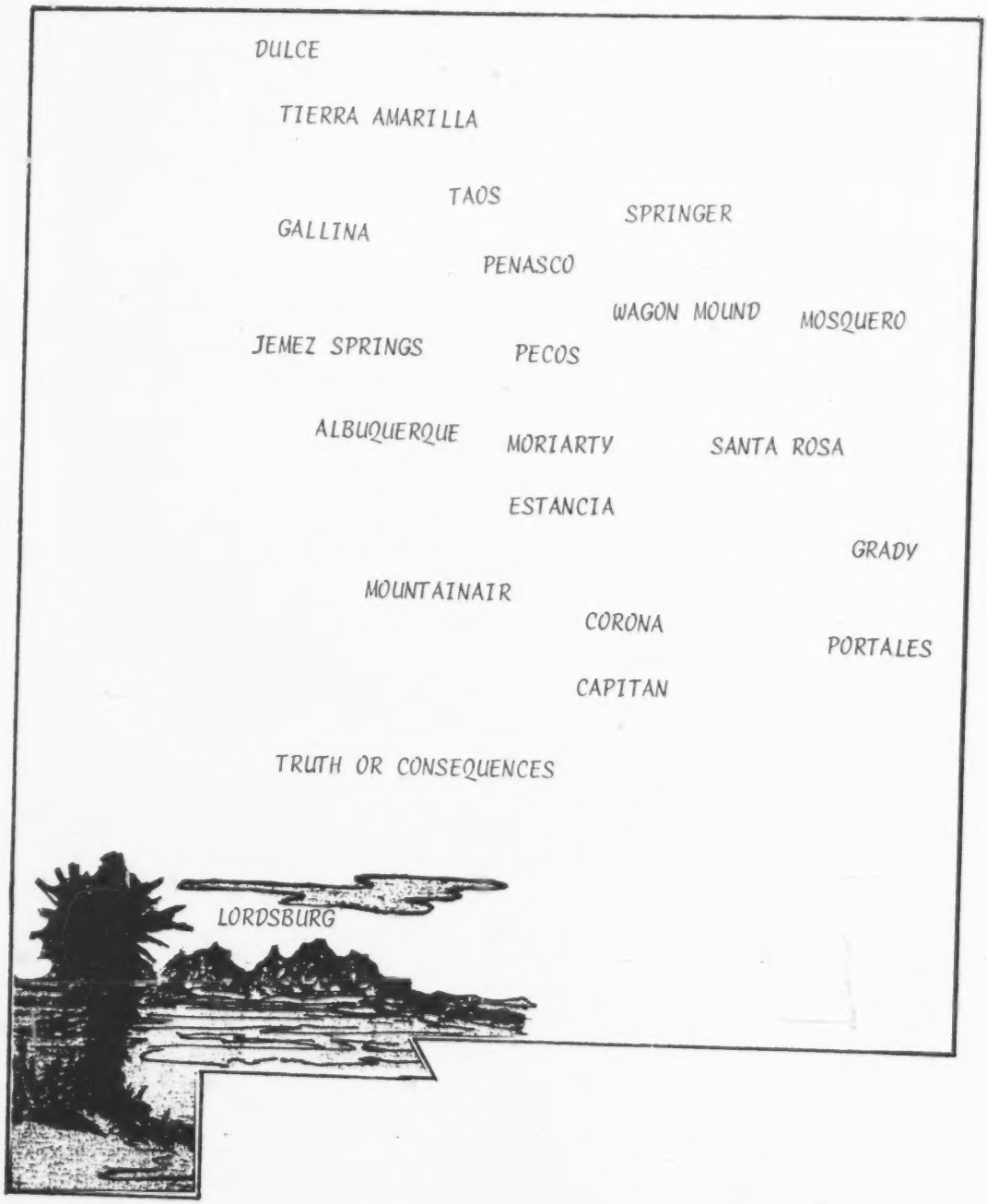
11th and/or 12th

Approved
T & I Program
1. High School
2. Area Voc. School

*Two different areas from 8th grade.

**In small schools these may be scheduled on alternate years or by running two areas simultaneously.

PRE-VOCATIONAL INDUSTRIAL EDUCATION



VOCATIONAL SECONDARY – PLANS & PROGRAMS

SECTION IV

STATE OF NEW MEXICO

DEPARTMENT OF EDUCATION — EDUCATION BUILDING

SANTA FE – 87501

LEONARD J. DE LAYO
SUPERINTENDENT OF PUBLIC INSTRUCTION

Vocational Education, throughout the nation, and certainly here in New Mexico, is receiving a thrust at the elementary level. It is felt that the majority of young people today really do not have the proper background to make an occupational choice at an early age.

The schools of today must embark on a program to impress upon our young people, the importance of working men and women and to give them a clear understanding as to what will be expected of them when they complete their formal schooling and enter into the "World of Work." It has been said that the young people of today cannot make a valid career choice before leaving high school and certainly this is true in most instances. But, I say to you, that with our young people presently accepting adult responsibilities at the age of 18, we, in education, must prepare these young people to meet this challenge in our society. Career orientation must be a part of this training.

Wade Fredrickson

Wade Fredrickson
Assistant State Director
Program Development

ADULT BASIC EDUCATION

A growing demand has been evident in the past few years to meet the many specific needs of the citizens of New Mexico in Adult Basic Education. Although the program statistics show a steady annual increase in enrollment, high school equivalency diplomas and personal accomplishments, it still reflects the fact that we are only reaching a small percentage of the potential student body. With only token state funding support available and limited federal funds, it is apparent to the division that a new direction of energy must be undertaken to supplement the adult classroom situation.

With this in mind the Division of Adult Basic Education is developing the concept of the adult learning center. It is hoped that this conceptual thrust would provide new opportunities for individualized instruction and increased enrollment, and thus provide the direction for individual achievement.

Implementation of this program has begun at the State Penitentiary, Springer, and the Girls' Welfare Home in Albuquerque. A proposal will be submitted to the legislature whereby 15 areas in the state would encompass an adult learning center along with the on-going ABE program.

Following is a list of locations and sponsoring agencies of programs currently in existence in New Mexico:

LOCATION	SPONSORING AGENCY
Acoma	North Central New Mexico Concentrated Employment Program
Alamogordo	Alamogordo Public Schools
Albuquerque	Albuquerque T-VI
*Albuquerque	University of New Mexico
Artesia	Artesia Public Schools
Bernailillo	North Central New Mexico Concentrated Employment Program
Clovis	Clovis Public Schools
Cobre	Cobre Public Schools
Costilla	North Central New Mexico Concentrated Employment Program
Cuba	Cuba Independent Schools
Deming	Deming Public Schools
Espanola	Area Vocational School
Espanola	North Central New Mexico Concentrated Employment Program
Estancia	Estancia Public Schools
Hobbs	Hobbs Municipal Schools
Jemez Pueblo	North Central New Mexico Concentrated Employment Program
Laguna	North Central New Mexico Concentrated Employment Program
Las Cruces	Las Cruces Public Schools
*Las Cruces	New Mexico State University
Las Vegas	North Central New Mexico Concentrated Employment Program
Las Vegas	Las Vegas City Schools

(Continued on page 2)

LOCATION	SPONSORING AGENCY
Los Lunas Honor Farm	State Penitentiary
Mora	North Central New Mexico Concentrated Employment Program
Pecos	Pecos Independent Schools
Penasco	North Central New Mexico Concentrated Employment Program
Questa	North Central New Mexico Concentrated Employment Program
Raton	Raton Public Schools
Roswell	Roswell Independent Schools
Santo Domingo	North Central New Mexico Concentrated Employment Program
Santa Fe	Santa Fe Public Schools
Santa Fe	North Central New Mexico Concentrated Employment Program
Springer	New Mexico Boys' School
State Penitentiary	State Penitentiary
Silver City	Silver City Consolidated Schools
Taos	North Central New Mexico Concentrated Employment Program
Tucumcari	C.A.A.
Zuni	North Central New Mexico Concentrated Employment Program

*University of New Mexico and New Mexico State University are programs for the employees of the institutions.

Approximately 85 New Mexico ABE personnel attended institutes this past summer. New Mexico hosted a TV Video-Tape production seminar at the Law Enforcement Academy in Santa Fe and a National Institute for Teacher of Spanish Speaking Adults at the University of New Mexico in Albuquerque.

State ABE personnel also attended institutes in Kentucky, Oregon, Missouri, Arizona and Oklahoma.

LAS CRUCES A.B.E. PROGRAM

Under the direction of Mr. Ralph Dominguez of the Las Cruces Public Schools, the primary purpose of the A.B.E. program is to eliminate illiteracy and/or functional illiteracy among all adults 16 years of age or over.

The A.B.E. classes are designed to:

1. Assist adults to overcome English Language limitations through an intensive English as a Second Language program.
2. To improve their basic education in preparation for occupational training and more profitable employment.
3. To become more productive and responsible citizens.
4. To pass the high school equivalency examination which in turn may open new doors to employment opportunities.

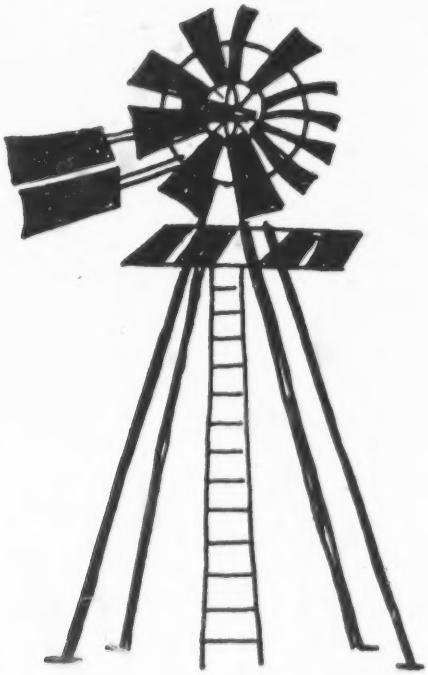
The Las Cruces A.B.E. program began this year with a series of in-service workshops conducted by the Las Cruces Public Schools, the State Department of Education, Division of A.B.E. and New Mexico State University. The workshops were held in order to provide coordination and expertise in all areas of adult education with specific emphasis on programmed instructional materials and individualized learning.

At the present time the Las Cruces A.B.E. program is providing educational opportunities for more than 265 adults of the area. Emphasis is given to English-as-a-second-language classes, G.E.D. classes, and the citizenship program.

The above figures also reflect a new program just implemented at New Mexico State University for employees with less than a 12th grade education. Through a fine cooperative and innovative effort by the Las Cruces Public Schools, the State Department of Education, Division of Adult Basic Education and New Mexico State University, employees of the institution will be provided with the necessary educational tools for job upgrading and mobility.

Las Cruces ABE – English-as-a-second-language class in action.

Las Cruces ABE – Graduation Ceremony to conclude program and issue awards.



AGRICULTURE
9-12

agricultural production

agri-business

agri-business production

horticulture

agricultural production
agricultural supplies & serv.
agricultural mechanics
agricultural processing
inspection & marketing

ornamental horticulture
agricultural conservation, vitalization, environment & services
forestry

AGRICULTURE EDUCATION

I. PURPOSE

The Vocational Agriculture Program provides training and education to develop those competencies for persons engaged in agricultural occupations or for those persons preparing for entry into agricultural occupations.

II. OBJECTIVES

A. The objectives of the Agricultural Education Program are:

1. To develop agricultural competencies in animal science, plant science, soil science, agricultural economics and business management, and agricultural mechanics needed for individuals engaged in or preparing to engage in production agriculture or in agricultural business or in other careers in agriculutre.

2. To develop an understanding and appreciation of career opportunities in agriculture and of the preparation needed to progress in production agriculture or in agricultural business occupations or in other careers in agriculture.

3. To develop the ability to secure satisfactory placement and to advance in an agricultural occupation through a program of continuing education.

4. To develop those abilities in human relations which are essential in agricultural occupations.

5. To develop agricultural leadership, character thrift, scholarship, cooperation, citizenship and patriotism, by participating in experiences and activities of the FFA, which in an integral part of the Agricultural Education Program.

III. INSTRUCTIONAL PROGRAMS

A. Secondary Programs in Vocational Agriculture

1. Production Agricultural Programs and Agricultural Business Programs:

AGRI-BUSINESS instruction is being given at West Mesa High in Albuquerque. Pictured above are Linda Leonard and Dr. Howard Sherrod.

a. The instructional programs will consist of the following major areas:

(1) The instructional program in production of livestock, crops, soils and the management and accounting necessary for efficient operation of these areas.

(2) Agricultural mechanics to develop skills necessary to operate, maintain and repair equipment, machinery, and facilities on a farm or ranch or in agricultural business.

(3) Supervised agricultural experience on a farm or ranch or in agricultural business to develop responsibility, thrift and economic development.

(4) Leadership training through the activities and experience of the Future Farmers of America, which is an integral part of the curriculum of Vocational Agriculture.

(5) Instruction for agricultural business occupations will include planning for occupational experience, agriculture salesmanship, agriculture business procedures and programmed instruction by areas for product information.

b. Secondary Schools will provide at least three years of Vocational Agriculture in which:

(1) The first two years consist of study of basic agriculture in animal science, plant science, soil science, agriculture mechanics and leadership training through the FFA.

(2) In production agriculture, the third year class, and in those schools that have four years, will be spent on agriculture economics, the management of a farm business and the accounting necessary to operate an efficient farm business. The students in Vocational Agriculture will be given an opportunity to supplement classroom instruction by participation in laboratory exercise, field trips, use of resource people, and other means to develop competencies necessary to enter the occupation of agriculture.

(3) In the third year of agricultural business occupations, time will be spent on career information, selection of occupations, planning for occupational experience, agriculture salesmanship, business procedures and programmed instruction in the occupational area selected.

2. Vocational Horticulture

a. Instructional program will consist of the following major areas:

(1) Career information, personal traits and relations, selection of area leadership training, planning for occupational experience, horticulture salesmanship and business procedures, horticulture accounts and records and programmed instruction for occupational areas.

b. Secondary schools will provide at least three years of Vocational Horticulture in which:

(1) The first two years will consist of study of basic horticulture soils,

landscaping and decisions with horticulture mechanics and leadership training.

(2) The third year will consist of study of planning for occupational experience, salesmanship, business procedure accounts, records programming instruction and occupational experience.

3. Minimum time requirements – Local boards may meet minimum time requirements for:

a. Production Agriculture

(1) Local schools may meet the minimum time requirement of 684 hours of classroom instruction divided in any manner the school wishes during the three years.

b. Agriculture Business Occupations

(1) The minimum time requirement in this area is 900 hours with one hour for first and second years and a three-hour block for the third year.

c. Vocational Horticulture

(1) The minimum time requirement is 900 hours for the three years with one hour period for the first and second year and a three-hour block for the third year.

PRODUCTION AGRICULTURE receives strong emphasis in secondary instructional programs. Feeding his hogs, as a part of his project, is John Duffy of Lovington.

NEW HORTICULTURE PROJECTS

Five new horticulture programs were initiated last year in New Mexico High Schools.

In all five cases, the overall objective was to train students for employment in the various areas of Ornamental Horticulture. Specific objectives were set down as follows:

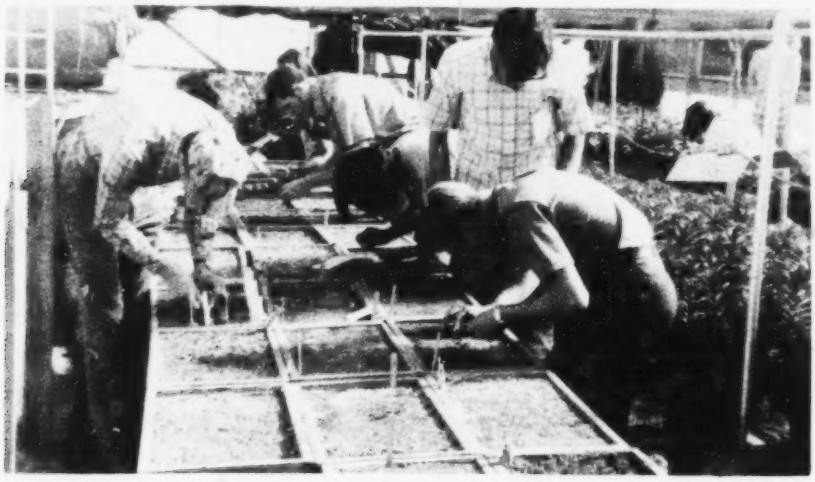
1. To teach the student plant processes, plant propagation, the growing of plants and identification of ornamental plants.
2. To teach the student about soils, soil fertility and plant-growing media.
3. To teach leadership activities.
4. To teach business procedures and relations.
5. To have student gain experiences by working in a horticulture business.

Each of the five programs was initiated in the fall semester of 1970 and continued through the spring semester of 1971. A total of 273 students participated in the five programs. Of these, 93 were enrolled at Valley High, 71 at Espanola, 39 at Las Cruces, 31 at Los Lunas and 39 at Belen. Due to the popularity of the programs, a substantial increase in enrollments is expected in the fall of 1972.

Instructors for each of the five programs were as follows:

1. Valley High, Albuquerque: Mr. George Head
2. Espanola High, Espanola: Mr. Gene Thornton
3. Las Cruces High, Las Cruces: Mr. Jon L. Nunn
4. Los Lunas High, Los Lunas: Mr. D. Gonzales
5. Belen High, Belen: Mr. Gilbert Mireles

Consultative and technical service was furnished by the State Department of Vocational Agriculture, Vocational Education Division, under the direction of Mr. Charles Morrison, State Supervisor.



HORTICULTURE project was started last year in Las Cruces, one of five new horticulture projects initiated throughout the state.

Although objectives were identical for each of the five programs, curricula and methods differed somewhat. Each program was identical, however, in one respect. Greenhouses were designed and built at each high school by the teachers and students. This construction was done during class hours and instruction was slow during this period. At Las Cruces and Belen, the primary idea was to give as broad an understanding of the field of horticulture as possible.

About 65-80 percent of the instruction was lab work. Their curricula emphasized the problem-solving approach; wherein, certain hypothetical problems were drawn up and the students were the experts who would solve the problems. At Las Cruces, one project was to have each student grow a lily and sell it. At Valley High in Albuquerque, for the first semester, the students were introduced to the field of horticulture with a multi-media approach of slides, filmstrips and textbooks. The students were taught plant identification, basic soils, fertilizers and irrigation. Instruction was given on greenhouse drawings, on surveying, bills of materials and rafter framing. The second semester of instruction covered construction of coldframes, construction of greenhouses and research reports on some area of horticulture were required. Espanola followed the same general procedure with a mixture of classroom instruction, lab work, and home projects. At Los Lunas, students were required to identify and verbalize five or more ornamental horticulture career areas; home garden projects were required, with emphasis on the students learning to plant, grow, care and identify greenhouse and outdoor plants.

Exemplary program funds of $5,000 were allotted for each of the five programs. This amount, in most cases, covered the construction of the greenhouses. An additional $10,008 State funds were allotted for salaries and supplies to each program.

CONCERTED SERVICES

The staff of Concerted Services in Training and Education (Rural Development) in Sandoval County will:

1. Maintain information center for purposes of disseminating current data on state/federal programs,
2. Carry out field work on programs when agency personnel are not available,
3. Function in public relations capacity with representatives of industries seeking plant sites,
4. Increase employment and education by directing attention to school districts and existing agencies to develop training programs,
5. Assist town councils and local housing authorities to develop proposals and applications for public housing,
6. Assist Navajo families in filing applications with governmental agencies for financial help to build water wells and get electrical services,
7. Water and sewer associations in various communities will be assisted with form filling and processing applications to appropriate agencies,
8. Planning and coordinating meetings with federal/state agencies and local communities to establish industrial parks, recreational parks and swimming pools,
9. Through existing health agencies and councils, expand health facilities to rural communities by establishing clinics and providing ambulance services,
10. Cooperate with Soil and Water Conservation Districts in conservation and environmental projects.

Henry A. Gonzales is Coordinator for Sandoval County;
Inez M. Gabaldon, Secretary;
Patricia DeHerrera, Typist.

A LITTLE TALE OF WATER WELLS ON THE NAVAJO RESERVATION

This little tale is what we hope will be the continued development of water wells on the Navajo reservation of southwestern Sandoval County, New Mexico. This shows the impact of full utilization of federal funds through two agencies of the Department of Agriculture – Farmers Home Administration and Agricultural Stabilization and Conservation Service.

1. On August 25, 1969, Teddy and Lucita W. Toledo of Ojo Encino came to Concerted Services office in Bernalillo asking for help to build a water well which would provide a service for five families. These families were traveling four to five miles through rugged dirt roads to haul their water supply. Farmers Home Administration was reached by telephone in Albuquerque and procedures for filing an application obtained.

   It was necessary to clear land ownership by searching for government patents, which subsequently had to be recorded at the County Clerk's office, the land had to be assessed and taxes paid. Legal Aid Services was consulted to have them research and clear the land insofar as liens, encumbrances, etc. A contractor was sought to give cost estimates of drilling a well, draw up plans and specifications. A group known as the Toledo Water Users Association was organized at a meeting whereby they all agreed to repay the loan, if approved, by contributing a small sum each month until the total loan was paid in full.

   The Toledo Association received their loan April, 1971 in the amount of $3,000 from Farmers Home Administration; and currently, the group is enjoying a fresh water supply within the proximity of their hogans.

2. As a result of this "first", Felix Herrera of the same general location, visited in the CSTE office indicating his age and health were slowing him down – the trek to haul water miles away was proving to be a hardship. The same procedure was followed as in the Toledo case; however, this time the Agricultural Stabilization and Conservation Service had funds under the 1971 REAP (Rural Environmental Assistance Program) to participate in a cost-sharing pooling agreement. Herrera Group delegated Concerted Services to coordinate the project in obtaining the funds to get a water well constructed.

   A 50% cost-sharing agreement application was completed for the Herrera Group with several meetings at Ojo Encino required to obtain signatures and pertinent information. A snapshot picture was taken of the area where the well would be located, displaying the dam that had gone dry.

   This snapshot was introduced at the ACP County Committee meeting on September 10 as evidence of the need for a cost-sharing agreement in excess of 50%. Consequently, the Herrera Group received approval for 80%. The other portion, 20%, was approved by Farmers Home Administration. As a result of this, by the end of September, 1971, there will be four water wells completed in this area.

DISTRIBUTIVE EDUCATION 9-12

marketing | merchandising | management

advertising & display
apparel & accessories
automotive services
finance & credit
floristry
food distribution
food services
home furnishings
hotel & lodging
industrial marketing
personal services
petroleum
recreation
transportation

DISTRIBUTIVE EDUCATION

I. PHILOSOPHY OF DISTRIBUTIVE EDUCATION

From acceptance of business education at the turn of the century as a phase of public education, its reason for being has extended to include Distributive Education, as a phase of curriculum in most comprehensive schools. Distibutive Education may be identified as an area of study that teaches free enterprise and prepares individuals for the business aspects of family living, as well as for earning a living in business.

The curriculum of Distributive Education prepares individuals for all levels of employment and responsibility in distributive occupations or functions by providing instruction in marketing, merchandising, and management for those preparing for or engaged in retailing, wholesaling, and service businesses, or activities.

For many students who seek early employment, education for Distributive Education is an exploration to assess personal attributes with the demands of distributive pursuits. For those students who have chosen an appropriate occupational goal in Distributive Education work, it is a skilled and technical preparation required to enter upon and advance in a career via business or higher education.

II. STATEMENT OF OBJECTIVES

A. Distributive Education in New Mexico can be either a program of Vocational or Technical education in the field of marketing, merchandising, or management. It is composed of high school preparatory and cooperative programs, post-secondary programs, and adult education programs. It prepares people for distributive occupations or those occupations followed by proprietors, managers, or employees engaged primarily in the marketing or merchandising of goods and services. Such occupations are found in various business establishments including retailing, wholesaling, manufacturing, storing, transporting, financing, and risk bearing.

POINTS IN SALESMANSHIP typifies curriculum instruction given in Secondary School Distributive Education courses in New Mexico

ANALYZING WINDOW DISPLAYS also is a part of most Distributive Education Curriculums in New Mexico Secondary Schools.

B. New Mexico Distributive Education teachers and coordinators must work with objectives which will explicitly formulate the ways in which the students will be expected to change using the educational processes; that is, the ways in which they will change in their thinking, their feelings, and their actions. It is important that the major objectives of the Distributive Education Program be clearly identified, if time and effort are to be used effectively.

C. To strengthen the general objectives of Distributive Education and to provide and upgrade programs of instruction designed to prepare individuals to enter, progress, or improve competencies in distributive occupations more emphasis is being placed on each individual student and his/her career objective. Teacher-coordinators of Distributive Education in New Mexico have pledged stronger effort toward total development of the individual student by designing and providing individual career learning units, career group projects, and to provide additional opportunities for the student to attain achievement and progress through a program of DECA activities designed as an integral part of a Distributive Education program.

D. The following are those objectives suggested for statewide use in developing and continuing a Distributive Education Program at the high school, post-high school, or adult education level:

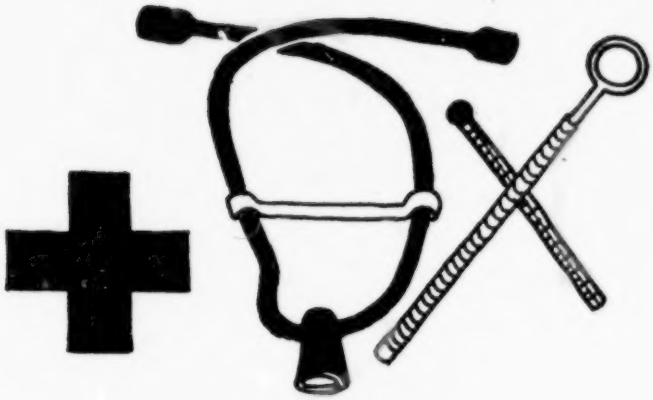
1. Increase the educational level and occupational deficiency of distributive courses through planned training.

2. To familiarize the distributive workers with needs and wants of customers.

3. Through a knowledge of merchandise, be able to satisfy the needs of customers.

4. To offer training and provide background for modern business methods and skills in the distributive field.

5. To satisfy the local labor market in the distributive field with as highly skilled workers as possible.



HEALTH OCCUPATIONS 7-12

health information systems

health services delivery

mental health, mental illness & retardation

accidents, injuries & emergency serv.

health assistant
dental assistant
medical assistant
nursing assistant

HEALTH OCCUPATIONS

The Health Occupations Programs in the secondary level offer training opportunities to students of ethnic background, to students with special needs, as well as to the disadvantaged. The Health Occupations Programs have a dual purpose, one of which is skill development for entry level job opportunity in delivery of health care, and secondly, it gives the student a broad orientation into the health career area.

In 1970-71 the enrollment for Health Occupations Programs in the secondary level was two hundred fourteen in the twelve high schools that have health career orientation programs.

The Health Assistant Curriculum Guidelines for secondary level has been revised and will be available by November 1971. A Spanish-English Glossary of Medical Terminology has also been developed to aid bilingual students in communicating with patients.

The Health Occupations includes training for Dental Assistants, Associate Degree in Nursing, Practical Nursing and Nursing Assistants. The post-secondary programs are established in area vocational schools, junior colleges or community college campus, with an enrollment of over five hundred students. New Mexico now has three Associate Degree in Nursing Programs with an enrollment of two hundred. Three new Practical Nursing Programs were located, respectively, in Carlsbad, Farmington, and Las Vegas with an enrollment of three hundred.

During the summer of 1971, two Teacher Education Workshops were held at Eastern New Mexico University, twenty-two H.O.E. instructors attended. The H.O.E. area currently has sixty-eight instructors in both secondary and post-secondary programs.

The Health Occupations for the adult has been primarily to (1) upgrade skills in reactivating professional personnel and (2) entry level skill development for many adults who otherwise would not have the opportunity for training. These programs are relatively short in duration and intensive in content. Approximately four hundred adults were trained through daytime and nighttime classes.

A workshop was held for Hospital Food Service Supervisor, with a "continuing education" phase to be held in 1972.

Exemplary Project for the Physically Handicapped

The Perceptual Motor Dysfunction Program was turned over to the North Area of the Albuquerque Public Schools, where the occupational therapists are assigned to work with classroom teachers and students with perceptual motor dysfunction.

H.O.E. Enrollment 1971-72

Post-Secondary

Three Associate Degree in Nursing		277
Three Dental Assistant		52
*Three Nursing Assistant (1st Trimester)		43
**Six Practical Nursing		293
	TOTAL	665

Adult – Supplement

Medical Office		25
Hospital Ward		25
	GRAND TOTAL	715

Secondary

Fifteen high schools have a total enrollment of 306 – Artesia, Belen, Bernalillo, Carlsbad, Cobre, Farmington, Gallup, Las Cruces, Clovis, Las Vegas, Portales, Ruidoso, New Mexico Girls' Welfare Home (Hobbs and Roswell will start second semester)		306	
Santa Fe Skill Center:			
Dental Assistant		66	
Nursing Assistant		60	
	GRAND TOTAL	432	1,147

**Nursing Assistant Classes Enrollment on Trimester
**Practical Nursing includes Enrollment July 1970-June 1972

(Reprinted by courtesy of Farmington Daily Times)

FIRST COLLEGE LPN COURSE – SAN JUAN

A new training program, instituted last January by the vocational-technical division of San Juan College, is taking an important step toward helping to relieve the increasing shortage of health occupation personnel.

The college previously sponsored training for nurses aides and when this proved so successful and it was determined that many local women wished to move ahead in the field of nursing, the Licensed Practical Nurse course was launched.

Recruited as co-directors for the year-long program, which began last January, were Mrs. Joan McCollister and Mrs. Betty Schafer, both registered nurses who have had training experience.

This initial LPN class is now moving into its final quarter of training where most of the course time is devoted to actual application of skills at San Juan Hospital and such other facilities as the training school of the San Juan Association for Retarded Children, public health offices and local schools.

Following their graduation in January, the students will take their state board examinations in the spring and then be eligible for placement.

Of the 15 women in the class, two have had some college work, three previously served as nurses aides and all but three are married women with children. Age span of the students is 19 to 48 years old.

For the first 14 weeks of the course, the students spend about five hours a day in the classroom at the Jack Cline Memorial Building and one hour observing hospital procedures.

After this period, the clinical period at the hospital spans five hours a day and the classroom time, one hour. The students are introduced to such areas in the hospital as surgery, operating room, intensive care, pediatrics, obstetrics, the diet kitchen and medical floor.

Each student observes and is also given assignments. As their knowledge and skills progress, they are allowed to assume more patient care.

Mrs. McCollister stressed that the students are never allowed to do anything that they have not been previously taught.

Upon graduation and after they have passed the state board examinations, the new LPN's will be able to assume most floor duties at a hospital or other medical facility under supervision of the registered nurses.

"One of the best advantages in nursing programs today is the so-called ladder concept," Mrs. McCollister stated, "in which a student taking, say a one-year LPN course, may now be credited for this time toward a three-year RN degree if she wishes to continue her education."

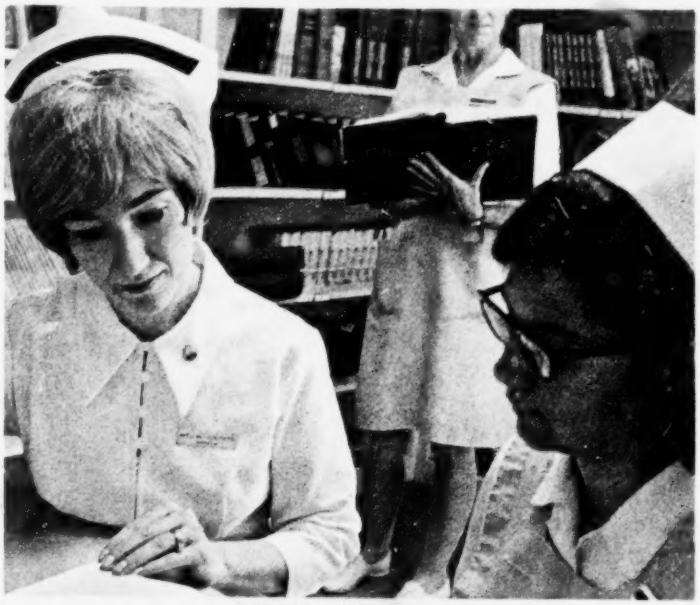
The co-director added that they had been much encouraged by both the professionalism and enthusiasm of their students as well as the complete cooperation of the hospital and other facilities. Many local physicians have served graciously as guest lecturers on their particular specialities for the class, she said.

"This is a two-fold project," Mrs. McCollister added. "We are not only creating productive people but also helping to provide needed services for the profession. It takes a lot of discipline and feeling for nursing on the part of the students but I believe it is a rewarding experience – for us as well."

The next LPN class offered by San Juan College will begin Feb. 7, 1972. However, deadline for applications, according to Glen Gabehart, dean of the college's vocational-technical division, is Dec. 15.

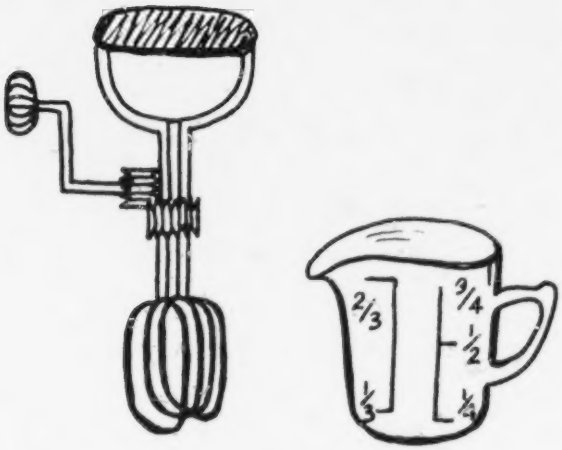
Applicants must be at least 18 years old, be in good health and have a high school diploma or its equivalent. Tuition is $225 with books, supplies, uniforms, etc., running about $100 more.

Anyone interested in the LPN program is urged to contact Gabehart at San Juan College. He stressed that interested persons are encouraged to apply as soon as possible in order that applications may be processed, necessary tests administered and interviews scheduled.



Checking References

LPN students are able to fulfill assignments with the use of the growing medical library adjacent to their classrooms in the Jack Cline Memorial Building. Mrs. Joan McCollister, program co-director, left, helps student Joann Chacon. Background, Margie Stoker.



HOME ECONOMICS 7-12

home ec. related occupations

child care services
housekeeping services
enviromental planning serv.
clothing services
human relations
food services

home ec. for homemakers

child care
clothing
creative arts
enviromental planning
family economics
foods
health
housekeeping
human relations

HOME ECONOMICS

Career preparation in homemaking and in home economics related occupations is the direction Home Economics will continue to pursue during 1971-72. Our objectives are:

I. Career orientation

a) at the seventh grade levels through the areas of foods, health, personal development, interior decoration

b) at the eighth grade level through the areas of child care, clothing, finance, and family relationships.

II. Career exploration at the ninth-tenth grade levels in

a) foods and nutrition

b) child development

c) clothing and textiles

d) housing and interior design

e) family life education

III. Training at the eleventh-twelfth grade levels in a cluster or variety of occupations related to one subject area as listed above through:

a) planned school-industrial cooperative training program

b) a simulated in-school program

IV. Specialized job training at the post-secondary level based on a spin-off or ladder concept where a student trains from the lowest to the highest level of a job area. The student is prepared at all times with the skills necessary for a level of employment in the job area.

Teachers will be provided curriculum guides developed around behavioral objectives.

Future Homemakers of America, the youth organization that is an integral part of all home economics programs, has as its major emphasis:

1) strengthening the district structure through increased local autonomy

2) individual development through Encounter growth experiences

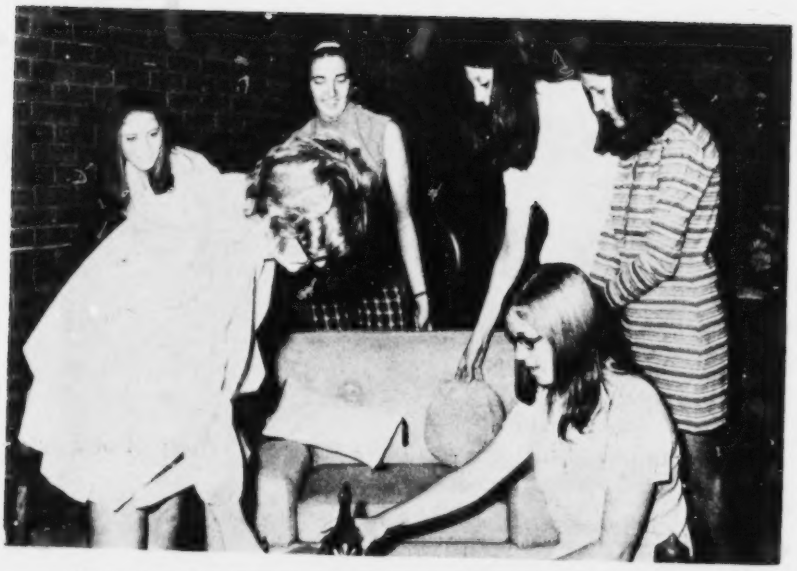
3) career development through H.E.R.O. (Home Economics Related Occupations) chapters.

The insurance of program improvement to a quality level will be continued through close state and local coordination.

INTERIOR DESIGN COURSE AT CLOVIS

'Happiness is' to both teacher and fifty-eight Clovis High School students a newly initiated Home Economics course in Interior Design.

The preparation of books for kindergarten children, mobiles, collage, and torn paper projects have taught students the principles and elements of design. Rooms were analyzed to apply in a practical way these design principles. Students have taken field trips and listened to speakers on such subjects as lighting, floor and wall coverings, furniture construction.



NEW INTERIOR DESIGN COURSE AT CLOVIS. Several of the 58 Clovis High School students now studying interior design are pictured above arranging furniture, one of the activities they engage in during the instruction.

Teams of students are planning the decor for several teacher's and counselor's offices in the High School. Simple upholstery is a part of this project.

A local realtor has provided a new home for which the students will present their plans for landscaping, outer covering, interior color scheme, and furnishings. These recommendations will be taken into consideration in the completion of the home.

The final project will be to hold open house in the model home, informing the public of the student's activities and answering questions regarding any aspect of the selected design.

Because of the high student interest in advancing to a more sophisticated level as well as in pursuing careers in interior design, an advanced course is planned second semester.

MANPOWER

DEVELOPMENT and TRAINING

MANPOWER DEVELOPMENT AND TRAINING

Project Development

During fiscal year 1971, the state MDT office and the local educational community had knowledge of project proposals being generated in the local CAMPS areas. Each project was evaluated by the local manpower advisory committee and the local CAMPS committee; each proposal received endorsement and was given a priority. The State MDTA Operations Committee also endorsed and gave each project a priority in accordance with state and local needs as established by the state and local CAMPS committees. The state MDT plan was prepared in accordance with Interagency Cooperative Issuances and approved by the State CAMPS Committee. Upon receipt of MT–1's for each project, the state MDT office in cooperation with other divisions of the department of vocational education selected training agencies in accordance with Section 160.4 of the federal regulations. Training agencies and the state MDT office cooperatively prepared the training plan guides based on information provided in the DOL form MT–1. Tables 1 through 5 relate information concerning project activity during the fiscal year.

Regular Program

The single-project concept will continue in the MDTA program in New Mexico during FY–72. The MDTA staff feels that a continued effort should be made to maintain slots filled. In order to do this, continued utilization of clustering of occupations will be made. The state's MDTA apportioned funds will only permit four class-size projects, about 100 training opportunities, outside the metropolitan area of Albuquerque. The Albuquerque Skills Center and individual referrals will tie up the bulk of state apportioned funds.

Redevelopment Area Program

Besides 20 individual referral slots identified later in this report, two RAR class-size projects have been submitted for funding prior to the end of FY–71 and two projects are being planned for FY–72.

Correctional Program

Two class-size projects are planned for funding under Section 251 of the Act. One of these, Electrical Appliance Repairman, has been submitted for funding. Due to the success achieved with the two projects last fiscal year, it is anticipated that at least two projects will be submitted for funding during FY–72.

Individual Referral Program

The individual referred program will continue to operate in the same manner as it did in the previous fiscal year. As part of the overall MDTA objective, the individual referral projects continue to fulfill a real need to the unemployed, underemployed, and the disadvantaged trainees by providing skill training in the occupations requested.

The individual referral projects funded for FY–72 will provide a total of 71 training slots. A statewide individual referral project, will serve approximately 51 individuals. A Rural Area Redevelopment individual referral project will provide training to approximately 20 trainees. The individuals to be served consist of a large number of Spanish-Americans and Indians. Both of these individual referral projects have been endorsed by the State MDTA Operations Committee and have been included in the FY–72 CAMPS plan.

Pending approval is a special pilot project known as "Project Hitchhike." This project was submitted for funding during FY–71. Project Hitchhike is to provide training to residents from Sierra and Socorro Counties and is to serve eleven individuals.

Environmental Program

At the end of FY–71, notification was received of the funding of the Auto Emission Control project. This project is to serve 400 individuals throughout New Mexico.

Project Transition Program

Two project transition proposals were submitted for funding during FY–71. These are Television Service and Repairman to serve approximately 72 individuals, and Air Conditioning and Refrigeration Mechanic to serve approximately 65 individuals. If funded, these projects will provide training for entry level employment to military personnel who are to be discharged shortly.

Skill Center Program

During FY–72, two additional components of the Albuquerque Skills Center will begin operation, the Cook (Hotel and Restaurant) and Stenographer (Part-time). The Cook will serve 15 trainees and the Steno will provide upgrading opportunities for 20 people. Additionally, MDTA state apportioned funds have been earmarked for the ASC to provide 159 annualized slots during FY–72.

The ASC has the capability of 20 to 30% expansion with supplemental funding or buy-in contracts. It is anticipated that present ASC operation will continue well into the middle of FY–72. The three Albuquerque CEP clusters in the skills center, Electronics Related, Clerical, and Basic Mechanics will also carry on for the same length of time.

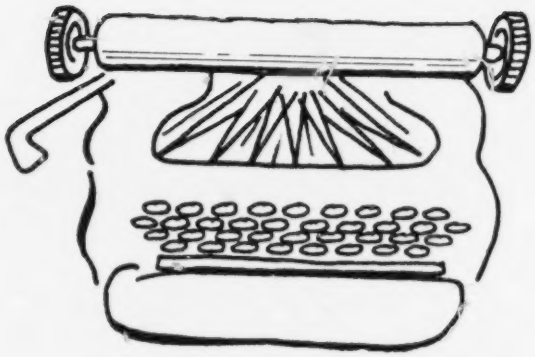
Specific Objectives for Fiscal Year 1972

1. To analyze the employment statistics of those completing training at the Albuquerque Skills Center immediately after training and six months after training.

2. To conduct an analysis of dropouts during FY–72 by screening the forms MA–102.

3. To continue present efforts to provide training opportunities by (a) clustering, modulizing, or building career ladders and utilizing the open-entry-exit concept, (b) coordinating efforts with ESC to maintain trainee slots filled, and (c) continue seeking funds for innovative training projects in rural areas.

4. To encourage more participation by instructional personnel in AMIDS workshops.



OFFICE EDUCATION 8-12

clerical occupations

- jr. accountant
- bookkeeper
- cashier
- payroll clerk
- gen. office clerk

secretarial occupations

- messenger
- receptionist
- typist
- stenographer
- secretary

accounting occupations

VOCATIONAL OFFICE EDUCATION

I. PHILOSOPHY OF VOCATIONAL OFFICE EDUCATION

Office Education is a vocational program which prepares the student for a career in an office occupation anywhere from entry level on through management or supervision. In the Office Education Program, skills, knowledges and procedures learned in class are fused with learning from an actual job or a simulated situation. Office Education may be terminal in nature or lead to further education and training.

Programs are operated in Office Education at the high school, post high school and college levels. In addition, special programs are offered for youth and adults. Office Education is for the student who wants it, needs it, and is able to profit by it.

The basic philosophy governing the criteria for approved programs in Vocational Office Education is that of vocational competence of the student. Concomitant outcomes of Vocational Office Education are development of office skills, communication skills, job skills and students' attitudes and personality.

Preparation for work has always been an important part of education. Success at work is essential for survival and for the development of a good life. To provide one's share of the goods and services as needed by mankind is a recognized attribute of citizenship. As public schools have been established, Vocational Education increasingly has been included as a part of a total educational program.

Vocational Office Education, organized and taught in the classroom and on the job in a systematic, business-like manner, contributes imeasurably to the development of a vocationally-competent student.

II. OBJECTIVES OF VOCATIONAL OFFICE EDUCATION

A. General Objectives:

1. To provide youth with a gainful vocational competency in office occupations.
2. To develop an understanding of business organization, office procedures, customs and techniques.
3. To bridge the gap from school to entry level office occupations.
4. To provide an effective program integrating the school, students and the business community.
5. To provide students with an opportunity for practical application of theory and principles in cooperative training and simulated activities.

B. Specific Objectives

1. Related Knowledge Development:

   a. Acquires the proper background

      1) Information basic to performance of skills

2) Information basic to performance of office routines and procedures

3) Continue development of knowledge of business in general and our economic system

2. Skill Development in Communication:

a. Acquire marketable skills

1) Build speed and accuracy in such skills as typing, shorthand, and transcription

2) Build speed and accuracy in working with business forms

3) Practice common business procedures such as filing, telephoning and operation of business machines

4) Improve spelling

5) Improve penmanship

6) Improve computational skills

3. Attitude and Personality Development:

a. Acquire an employable personality

1) Dress appropriately for the office

2) Be dependable, punctual and exercise tact and courtesy

3) Learn to cooperate and work harmoniously with fellow workers

b. Practice critical self evaluation

1) Strive to continuously improve yourself

4. Integration of Knowledge Ability:

a. Problem Solving

1) Situations in class

2) Situations that arise on the job

3) Combined use of learnings applied to the job

5. Vocational Competency Development:

a. Develop an appreciation for various types of employment

b. Discover the merits of various office jobs

c. Select an occupation and prepare to enter it

1) Consider information available on the particular job

2) Consider the value of your work experience

3) Consider present employment needs

4) Apply for an actual job before graduation

d. Evaluate the value of the coordinated activities of work experience

1) Immediate and present merits

2) Later effects

(a) Successful performance of duties

(b) Promotion and related job values

OFFICE SIMULATION VIA MOBILE UNIT

Simulation will undoubtedly become the new byword for the intensive, in-school laboratory office occupations program in New Mexico. Two significant projects were piloted in New Mexico during the 1970-71 school year and both proved to be quite successful.

The latest technique in office education, office simulation, is being brought to rural area schools via the New Mexico Office Education (New MOE) mobile unit, a 72 x 12 foot trailer equipped with the latest in office furniture and equipment. The unit, designed after its forerunner, MOE, Inc., (Mobile Office Education), of Utah, features three offices of five positions each. The positions, which simulate those of a mortgage loan company office, are cashier, executive secretary, insurance clerk, posting and tax clerk, and vice president. A receptionist and an administrative assistant complete the unit of seventeen student positions.

Students assume positions on a rotation basis to complete the work of a mortgage loan company in New MOE. Materials for the simulation were developed under a federal grant by Utah State University at Logan, Utah. A year was spent studying the Utah Mortgage Loan Corporation, and the following year was spent writing up the simulation materials. In June, 1970, a workshop was held which introduced the materials to representatives of various states, New Mexico included.

The workshop was a culmination of planning for a mobile unit for New Mexico. The New Mexico Division of Office Education patterned its proposed unit after Utah's MOE; and in July, 1970, the Four Corners Regional Commission supplied the Division with a grant to provide a mobile unit to serve the rural areas of New Mexico. New MOE serves the schools of Pecos, Mora, Penasco and Santa Cruz.

OFFICE SIMULATION via a traveling mobile unit is now operating on a regularly scheduled basis at Pecos, Mora, Penasco, and Santa Cruz. Traveling with the unit is state instructor Mary Stowell, standing, as she views work of Pecos student.

Position Simulation: What does a school do when faced with the problem of preparing students for office jobs and there are not businesses available to place these students for training? The next best thing to actual experience, on the job, is position simulation. What is position simulation? It is the duplication in the classroom of actual work performed in businesses in the community and surrounding area. This is what they are doing at Moriarty High School and West Mesa High School in Albuquerque.

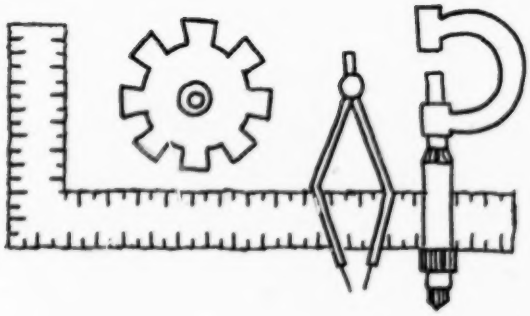
The two instructors, Mrs. Patricia G. Roth of Moriarty and Linda Frost of West Mesa, went into business offices, observed, took notes, interviewed supervisors and developed simulation materials for each position. They were both furnished with actual business forms, letterhead stationery and statement blanks which they photocopied for use in the classroom. In addition, actual letters from the materials were composed into student-job manuals with specific instructions for each student.

POSITION SIMULATION is a new technique in teaching office education skills.

The student works independently "in" a different business office on a rotation basis. He might be filling out forms, taking letters from the transcribing machine or setting up files. He will be performing those tasks which are really carried on in a specific business.

In Mrs. Roth's classroom, she added a piece of equipment other than calculators, transcribers, etc.,--the telephone. Presently, it is operating as an intercom system. One instrument sits on the desk in a partitioned office, in the corner of the classroom. The other instrument is connected at the teacher's desk. Mrs. Roth telephones the student worker and pretends that she is the outside caller and makes up a hypothetical situation. The student learns how to answer the telephone properly and takes messages.

The simulation method involves a great deal of work and extra hours on the teacher's part, but we believe it is far better than a typical classroom structure of learning, The students like it much better than the traditional classroom, and they feel that they learn more, have more responsibilities and do not have a monotonous routine.



PRE-VOCATIONAL INDUSTRIAL ARTS : 7-10

trade & industrial 11-12

unit industrial arts 11-12 general education

electricity
electronics
auto mechanics
drafting
refrigeration
auto body

carpentry
plastics
printing
machine tool
welding

and / or post secondary
(area vocational school or tech institute)

higher education

INDUSTRIAL ARTS PROGRAMS

I. INTRODUCTION

A. Industrial Arts is a phase of general education and has not usually been associated with vocational education. However, under the Vocational Amendments Act of 1968, Industrial Arts can qualify for Federal funds if it is structured to meet the intent of the law (P.L. 90-576). This would be to serve the purpose of pre-vocational education in the industrial areas.

B. The primary purposes of these programs are:

1. To meet the needs of small schools where justification of a trade and industrial education program in one specific area is unrealistic and cannot be justified, or

2. To act as a feeder into a trade and industrial education program on the secondary or post-secondary level, or

3. To offer occupational information and a variety of laboratory experiences regarding the world of work to elementary school students.

II. PHILOSOPHY OF INDUSTRIAL ARTS

A. Industrial Arts is a study of industry and its technology for the purpose of general and pre-vocational education. Through instructional and laboratory experiences, students learn about the industrial and technical aspects of life. The instructional content deals with the origins and development of industry, and the tools, materials, processes, products, energies, opportunities, organization, and problems involved in converting the earth's resources into material goods.

Industrial Arts is a part of the total educational program, and as such, is just as important to the growth of the student as the areas of English, mathematics, social studies, science, foreign language, and other subjects considered necessary to prepare our citizens for everyday life. In fact, Industrial Arts finds itself in the unique position of actually being able to apply much of the knowledge gained in these other courses to practical, everyday aspects of living. We must remember that man has always had to be able to use his mind to study, to think, and to plan, but he also has had to make a practical application of this knowledge for progress to take place.

As part of general education, Industrial Arts had an obligation to operate a program that is designed to offer something to all students. We must not draw a line on the sex, intelligence, and aptitudes of those students we are willing to accept. Actually, all education has this same obligation or else we must redefine our position.

Industrial Arts, being a laboratory type course, should always allow for individual differences. The instructor should be flexible enough in his presentation of material to provide for the gifted student and the slow learner, as well as the student of average intelligence.

One method used for the presentation of material is the "General Shop" or "General Industrial Arts." This is usually found in the junior high school. It is particularly adaptable to this level because it allows for exploration in many areas. However, some small senior high schools should also utilize this method of instruction rather than a unit shop or laboratory in one area such as woodworking.

The "Uni Shops" or laboratories are more for specialization and are usually found in the larger high schools where they have laboratories to teach each specific area such as electricity-electronics, power mechanics, drafting, metals, etc.

A combination of these two programs is ideal: the General Shop or General Industrial Arts on the junior high school level and a variety of unit Industrial Arts shops or laboratories on the senior high school level for further exploration.

III. OBJECTIVES

A. General

1. To develop an insight and understanding of industry and its place in our culture.
2. To discover and develop talents, aptitudes, interest and potential of students in technical fields and applied sciences.
3. To develop technical problem solving skills related to materials, processes, and products.
4. To develop a measure of skill in the use of the common tools, machines and processes.

B. Specific Levels

1. High School
   a. Provide adequately for basic instruction to meet the needs of at least three types of students:
      (1) Those desiring to explore more deeply the avocational, cultural understandings and consumer concepts of American industry,
      (2) Those planning to pursue advanced study and careers in such areas as applied and technical science, and
      (3) Those who will be entering the labor force before graduation or immediately thereafter.
   b. Provide practical situations dealing with the industrial world of work and understandings of the competitive nature of industry and business.
   c. Provide basic skills which are useful in a variety of occupations or for occupational adjustment.
2. Junior High School
   a. Provide all students with the opportunity to explore industry and the world of work.
   b. Provide opportunities for attaining knowledge of industrial vocations and related avocational pursuits and hobbies.
   c. Improve the competency level of the students in regard to choosing, buying and using the goods and services of industry.
3. Elementary School
   a. Support, enrich and vitalize the academic curriculum and make general education experiences more meaningful to students.
   b. Develop cooperative attitudes and self-reliance through problem solving situations.
   c. Develop an understanding and appreciation for the dignity of honest work.
   d. Learn how to modify materials to meet students' needs by using basic tools and materials.

WORLD OF MANUFACTURING

"The World of Manufacturing" is designed to help youth understand the basic concepts of manufacturing technology. Students work together in using tools, materials, and techniques to produce products that represent, in principle, many products produced in a factory or plant. Students learn how industry integrates men, machines and materials into efficient production systems. The study focuses on the management, the personnel and the production techniques of manufacturing.

"The World of Manufacturing", which is designed for 8th grade students, is divided into three major sections extending over the school year:

1. An introductory section
2. An analysis of the managed-personnel-production system of manufacturing practices applied to the corporation
3. A synthesis of manufacturing practices applied to the corporation.

The introductory section provides a brief history of manufacturing and of major concepts of manufacturing technology. The analysis section of the course provides a basic understanding of the common systems of manufacture of all materials, including textile, metal, plastic, wood, chemical, electrical, rubber, printed, petroleum and other products. The manufacturing corporation section is a synthesis of manufacturing practices applied to a specific product.

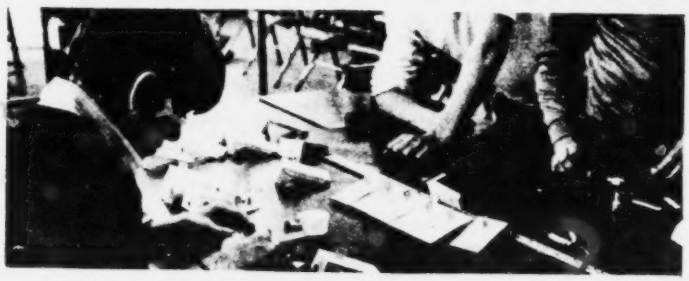
This section introduces the formation of a corporate structure, demonstrates effects of corporate decision-making and provides engineering and production experiences. Personnel practices are interspersed throughout the assignments wherever they are most relevant.

Two World of Manufacturing projects have been implemented for the school year 71–72 at Adams & Harrison Jr. High in Albuquerque. These are to complement the World of Construction which has been in existence a year at the two schools.

At this point, I.A.C.P. is the most exciting, innovative program available for Industrial Arts. It has much to offer for Career Education.

Engineering principles are reinforced by testing this model of a helicopter on a dynamic beam balance device.

Through the use of hard mock-ups, this group of students is role playing a consumer survey regarding the features of shower footwear that they have designed.



Principles of mass production in manufacturing are learned as groups of students assemble electrical components of a high-intensity lamp.

SOMETHING NEW IN INDUSTRIAL ARTS

David Bradley, John Adams Junior High School, Albuquerque NM
John Criswell, Harrison Junior High School, Albuquerque, NM
Orin Buchleiter, Industrial Education Consultant, Vocational Department
Albuquerque Public Schools, Albuquerque, NM

Mr. Criswell goes over the blueprint details of a new home.

Mr. Bradley explains various types of foundations using a sand box and model foundations.

Students learn to set up batter boards and to locate ground points for a new building.

The plot must be surveyed to locate a new structure.

For many years people have been complaining that our current Industrial Arts Programs are far behind modern industry and technology and yet very little has been done in the past to correct this situation. This past spring, the Vocational Education Department in Albuquerque decided to take some positive action. It studied many new programs in Industrial Arts and after very careful consideration and advice from many people, selected a very exciting program called the Industrial Arts Curriculum Project, or I.A.C.P.

What is I.A.C.P.? This is a two-year study of industrial technology, "The World of Construction" being the first of the two-phase program. It is designed to provide experiences and knowledge about the man-made world we live in, and it shows our young people how to work efficiently with the men, materials, tools, and techniques of modern industry.

The course was developed at Ohio State University and the University of Illinois in an Industrial Arts Curriculum Project begun in 1965. Since that time, a very excellent textbook, workbook, and teacher's guide on the "World of Construction" have been developed and published by the McKnight & McKnight Publishing Company.

We saw the value in the program and set the gears in motion to receive some pre-vocational funding for the program. Through the cooperation of the State Department of Vocational Education, especially Weldon Perrin and Dave Goin, funds were obtained to initiate two pilot programs at Harrison and Adams Junior High Schools in Albuquerque, New Mexico.

The two teachers involved in the new program, John Criswell of Harrison and Dave Bradley of Adams, started their orientation and planning of the program before school was out last spring. August 17-28, found John and Dave at a very comprehensive two-week "World of Construction" workshop at

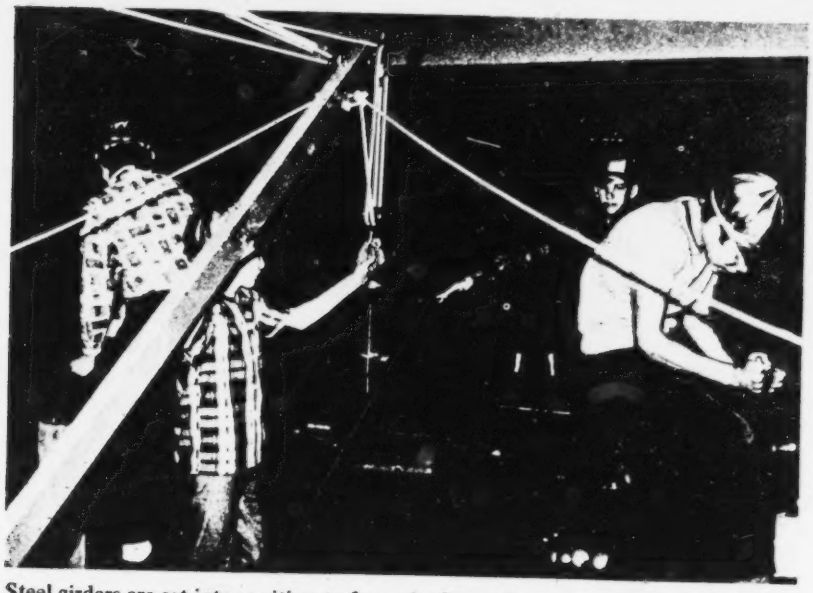
Electrical conduit must be formed to go into a building.

California State College in Long Beach. They had been sent there on two scholarships provided by the Associated General Contractors, New Mexico Building Branch. When they came back they were extremely enthusiastic and anxious to start the new program.

Although the traditional woods/metals shops are being utilized, the program is something completely new and exciting. Students are no longer limited to a few specific trades. They study topics such as surveying, design, blueprint reading, specifications, bids, construction of wood and metal framing, painting, plumbing and electrical installation, labor management, landscaping, community planning, contracting, hiring and firing, grievances, strikes and negotiations, careers and education, and a myriad of other aspects of "The World of Construction."

In order to help us with the program and involve our community in this new experience, an Advisory Committee was developed, made up of Neil W. Widner, AGC Training Director, William D. Ross of the Mechanical Contractors Association, Tom Yandoh of the National Electrical Contractors Assocation, and Tom Speer, Executive Director of the New Mexico Association of Commerce and Industry. Our first meeting with this Advisory Committee was most rewarding; the committee members eagerly pledged their support of our new programs and assured us they would provide all the building materials necessary for the programs.

Everyone who has become involved in the programs--students, teachers, consultants, parents, school administrators, and other visitors are very much encouraged by this new approach to learning. We are looking forward to a continuation of "The World of Construction" and an addition of "The World of Manufacturing" next year at our two pilot schools. We would like to invite you to visit these two programs this next semester; you too will soon be involved in something new in Industrial Arts.



Steel girders are set into position to form the frame for a new commercial building.

Plumbing is prepared for their building. Copper and galvanized pipe are used.

A negotiations meeting settles a labor dispute.

A wood frame structure with wiring, ducting, and plumbing systems develops knowledge of construction techniques.

Students design and build a model of their dream home and place them in a carefully planned community.

SPECIAL NEEDS

SPECIAL NEEDS

Objectives

1. To focus attention on the needs of the special student in curriculum development.

2. To provide special occupational instruction and services to the special population groups who can benefit from such programs and services.

3. To motivate these individuals in such a manner as to stimulate their achieving occupationally, educationally, and socially.

4. To assist the local schools to plan learning experiences for a wide and diverse range of student abilities, as well as social differences.

5. To encourage the development of marketable skills in a specific occupation or grouping of occupations.

6. To prepare disadvantaged and handicapped persons to function in regular class settings and encourage the smooth transition into their chosen occupation and the community in general.

7. To foster the vocational development of these individuals beyond the secondary school level enabling them to pursue post-secondary occupational training.

SCHOOL-BUSINESS INTEGRATION

WORLD OF WORK integration is now in progress at John F. Kennedy High School in Espanola. Shown above is student Robert Trujillo working at Tony Sanchez' Valley Cleaners in Espanola.

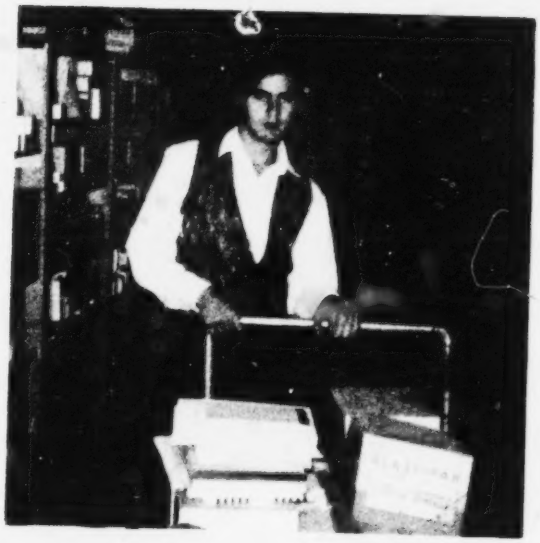
CURRENT PROGRAMS FOR THE DISADVANTAGED

Pre-Vocational Guidance Program

PURPOSE: The program is organized to expose youngsters to the world of work, on a theoretical and practical basis. A course, "Introduction to Careers" will describe various occupations and focus on human relations problems, attitude formation, role-playing, preparation of income tax applications, employment forms, etc. In addition, approximately 165 students are working in 63 work stations for training and experience, 2 hours, one day per week, for 1 credit, no salary reimbursements are given.

DIRECTOR: Mr. John Watts, Guidance Counselor
J. F. Kennedy Junior High School
Espanola, New Mexico

WORLD OF WORK EXPOSURE



TRADES

and

INDUSTRY

TRADE AND INDUSTRIAL EDUCATION PROGRAMS

I. PHILOSOPHY OF VOCATIONAL TRADE AND INDUSTRY

A. Vocational Trade and Industrial Education recognizes its responsibility toward providing occupational training for both persons in school and those out of school.

B. Vocational Trade and Industrial training should contribute to the total general education program by being designed to meet the needs of all individuals with an interest in development of desirable work habits, attitudes, skills and related knowledge to successfully enter the world of work.

C. Instruction should be current to the training needs for both persons in school and out of school, and should recognize economic and industrial needs in providing vocational education training.

II. OBJECTIVES

A. The objectives of Trade and Industrial Education at the State level is to provide service and support to schools planning, developing and operating approved Trade and Industrial Programs for in-school and out-of-school youths and adults requesting training, retraining or upgrading industrial occupational skills.

B. Major emphases of Trades and Industry programs this next year will be in two areas:

1. More cooperative training programs at the secondary level, and

2. More beginning and open ended training programs at the post-secondary level. In these programs, students may enter programs at any time and go through a sequence of training. They may go to work, then go back to school, and pick up at any point on the instructional continuum.

III. INSTRUCTIONAL PROGRAMS

A. Vocational Trade and Industrial Education – Day Trade

1. **Objectives of Programs** – Vocational Trade and Industrial Education for students includes any subject designed to develop manipulative skills, technical knowledge and related information necessary for employment in any crafts, skilled trade, or single-skill occupation which directly functions in designing, producing, processing, fabricating, assembling, testing, maintaining, servicing or repairing any product or commodity. Also included is training for service and certain semi-professional occupations considered to be trade and industrial in nature.

2. **Equipment, Tools and Supplies** – Items of equipment, tools and supplies must be comparable in type, size and quality to those used in commercial establishments. It is the school's obligation to keep equipment up to date and in a state of good repair. The teacher should maintain an inventory of all equipment and should submit a list of needed equipment and supplies to the administrator at the end of each term.

3. **Instruction** – Instruction is based upon an analysis of the trades or occupations

taught and is centered around the performance of useful or productive jobs or operations done by students in accordance with the accepted procedures and standards which prevail in the occupation taught. After the student has gained sufficient skill and knowledge of various operations through laboratory experiences, he should be assigned real or "live" jobs provided by patrons of the school. No charges other than for parts, supplies and materials should be made for such work.

4. **Instructional Materials** – The school will need to provide a technical library for the occupations taught. In addition, shop manuals, equipment catalogs, trade journals and a variety of visual aids are needed for effective instruction.

   State-adopted textbooks are available for most types of shop programs. The superintendent or local administrator should determine if the textbook has been adopted on the textbook lists.

5. **Youth Leadership Organization** – All students enrolled in Trade and Industrial courses have opportunities to develop leadership abilities through participation in the Vocational Industrial Clubs of America. Leadership activities include planning and carrying out approved social and civic projects, experience in group leadership, and statewide competition as individuals and teams in leadership skills and craftsmanship.

6. **High School Credits** – Preparatory shop programs are fully accredited high school subjects which carry two or three units of credit for each year of instruction. Not fewer than two credits may be earned.

7. **Selection of Students** – Regular high school students enrolled in grades ten, eleven and twelve are eligible for entrance into shop classes. The age of entrance upon a vocational training program should be regulated locally at such point as will insure that those completing training will be sufficiently mature to be accepted as workers, will complete the course at the same time they complete high school and be available for employment. Admission must be restricted to those who are physically and mentally competent to do the work required in the program and who possess qualifications necessary for employment in the occupation for which the training is offered. As a rule, mentally or physically handicapped persons do not profit from the instruction and are a serious source of danger to themselves and other students in working with machines and tools.

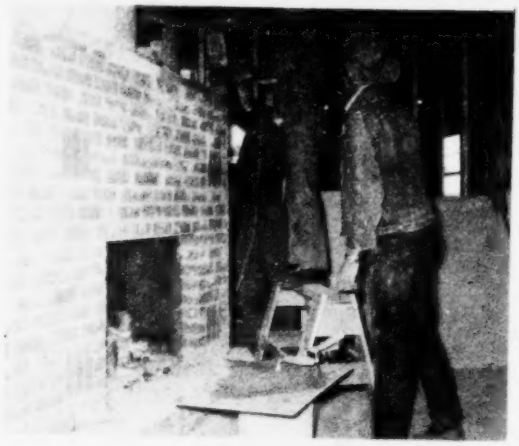
8. **Facilities** – The operating school has the responsibility of providing adequate shop space, auxiliary rooms, equipment and supplies for each instructional program. The shop area must be sufficiently large to permit a comfortable and safe work area around each item of machinery or equipment. For effective instruction and supervision, no more than 20 students should be enrolled in any one shop class. Technical information related to the occupation is taught with shop instruction and preferably in an adjoining classroom. However, an area within the shop where students may assemble for group instruction, demonstrations and other activities is acceptable. The shop building itself should be located on the school campus, although not necessarily attached to the main building. It should be comparable to other buildings in design and construction.

ALAMOGORDO BUILDING TRADE PROGRAM GETS NATIONAL AWARD

A building trades program at Alamogordo last year, which involved high school students and seven local business firms, won a national regional award.

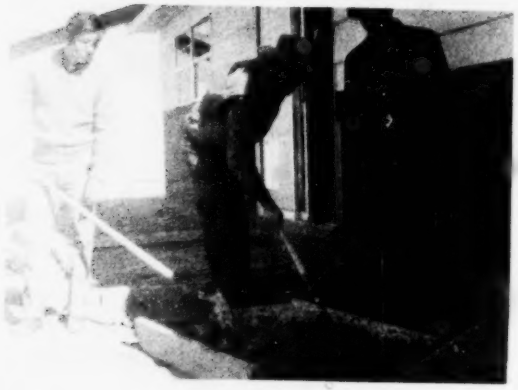
The project involved the construction of a house. Students were involved in computin the cost of materials, making materials lists, computing costs of concrete and lumber, and in making layouts of floor plans.

Then came the actual work--construction of the 1,400 square foot house. The specialists taught and supervised, and the boys did the work.

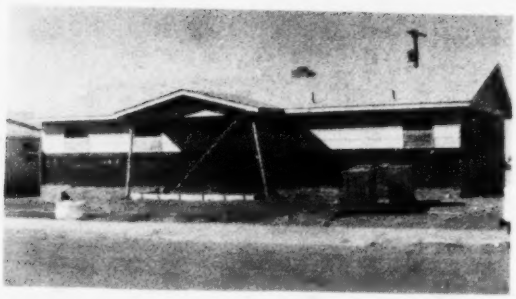


The project was launched by Jim Giggs, instructor at Alamogordo Pubnc Schools. He called upon the local businessmen to help. A Lay Committee from the business community was formed. This committee consisted of the following businessmen

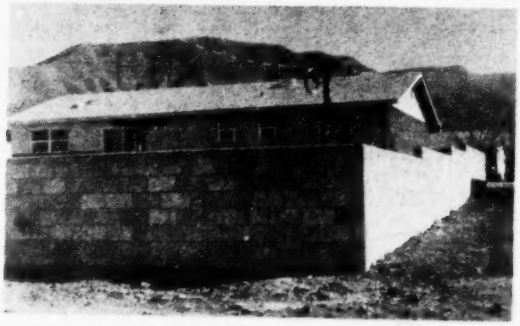
Jack Pancake, Owner of Fox-Galbraith Lumber Company
Norman Lane, Owner of Lane's Plumbing Company
S.D. Davis, Contractor
Ben Weeks, City Building Inspector
F.L. Johnson, Electrical Inspector
Charles Nolan, Architect
John Buckner, Licensed Electrician



The City Building Inspector, the FHA Inspector, and the Electrical Inspector all said they are well pleased with the workmanship and construction.



Front and rear view of exterior of house.



POST SECONDARY & PRIVATE SCHOOLS

SECTION V

STATE OF NEW MEXICO

DEPARTMENT OF EDUCATION — EDUCATION BUILDING

SANTA FE - 87501

DIVISION OF VOCATIONAL EDUCATION

LEONARD J. DE LAYO
SUPERINTENDENT OF PUBLIC INSTRUCTION

Dear Educator,

To say that the Vocational Education needs in New Mexico are nearly met, would be a gross exaggeration. We can say, however, that since the impetus given by the Vocational Education Act of 1963, a visible sign of progress can be seen in the endeavor of meeting employment and individual training needs in New Mexico.

In 1969, a master plan for the development of Area Vocational Schools in New Mexico was approved by the State Board of Education.

This Plan calls to have ten area vocational schools in operation by 1980, in key locations throughout the State. To-date, eight of these schools are in operation offering a wide selection of occupational programs.

One of our goals now is to begin implementing new and emerging occupational programs to better serve the needs of our people as well as to keep pace with changing technological occupations.

It is hoped, that this publication will give you an insight to the progress made, state-wide, at both the secondary as well as the Post-Secondary level.

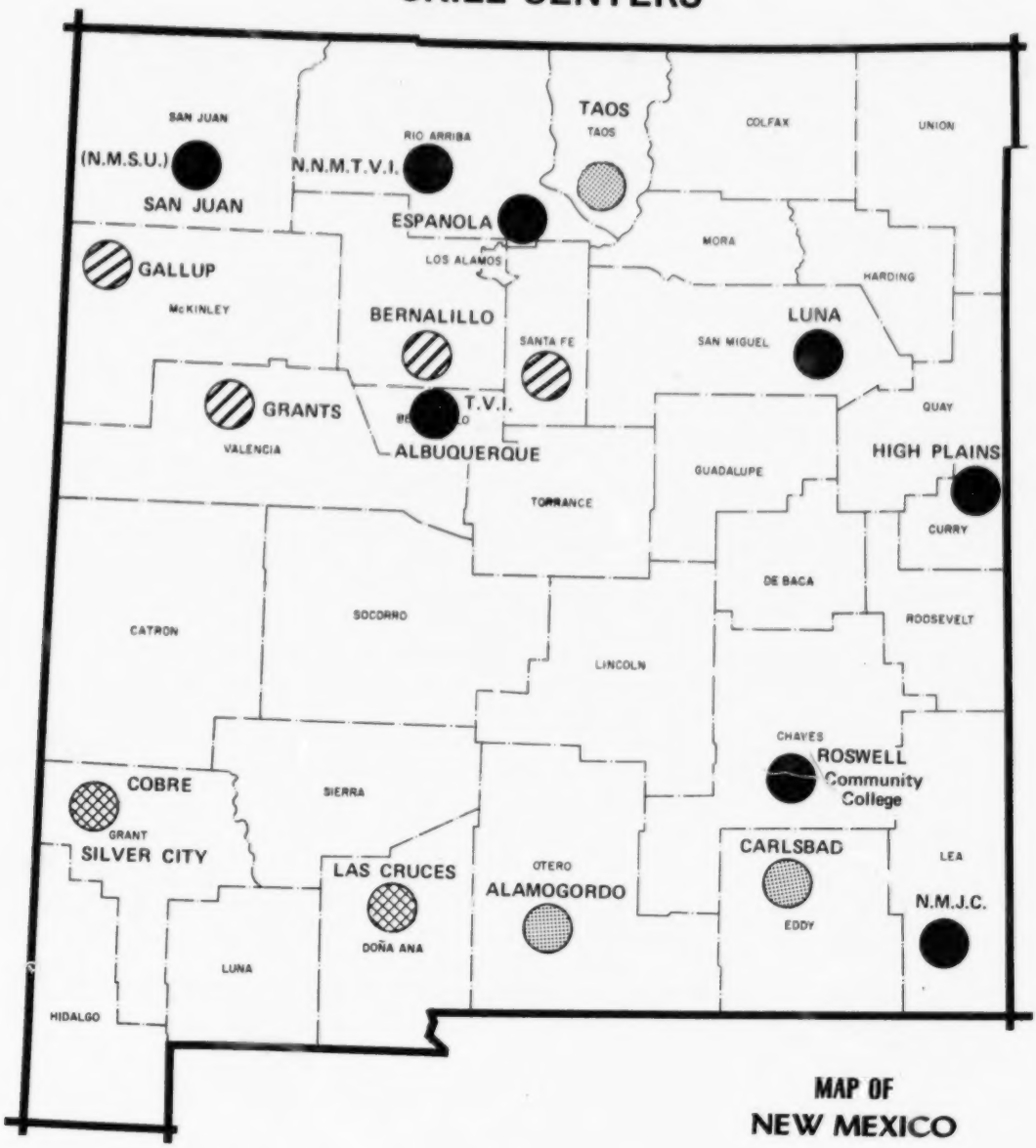
Sincerely,

Donald J. Rea

Donald J. Rea
Assistant State Director
Vocational-Technical & Adult Education

DJR/ba

AREA VOCATIONAL SCHOOLS
and
SKILL CENTERS



MAP OF NEW MEXICO

- PROPOSED AREA VOCATIONAL SCHOOL
- AREA VOCATIONAL SCHOOL IN OPERATION
- PROPOSED SKILL CENTER
- SKILL CENTER IN OPERATION

POST-SECONDARY SCHOOLS

The major objective of the post-secondary program is to give specific job training for employment.

During the past year, two additional vocational schools opened their doors. The Espanola Branch of New Mexico Technical Vocational School began programs in June. The Espanola Branch is designed to primarily serve out-of-school youth and adults for gainful employment. However, there are a number of secondary students from the area taking advantage of programs offered. The Santa Fe Skill Center opened in September. This school, at present, is primarily serving secondary students. It is expected to serve a number of adults on primetime and evening programs are designed to serve adults in skill improvement. The Espanola School brings the number of designated area vocational schools to eight.

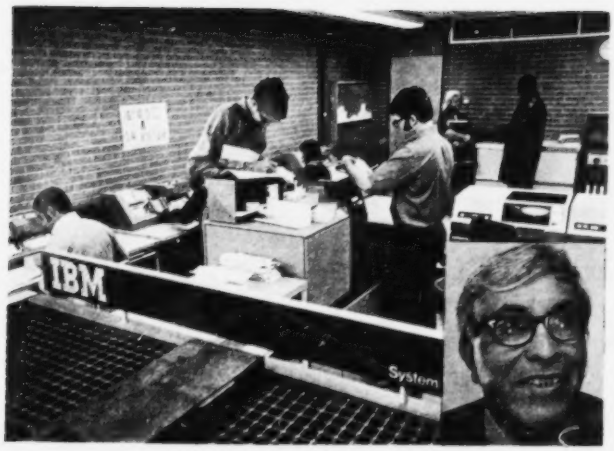
One of the prime objectives of the post-secondary division is to "extend the number of program offerings at area vocational schools to secondary school students in the district of the area school". To date, programs of this nature are active in Las Vegas area under the auspices of the Luna Area Vocational School; in the Hobbs area under the auspices of New Mexico Junior College; in the Espanola and El Rito areas under the auspices of the Northern New Mexico Technical-Vocational Institute.

The High Plains Area Vocational School in Clovis commenced programs this fall. The vocational programs planned for the school include the areas of Health Occupations, Trade and Industry, and Office Education.

Other objectives of the post-secondary division include the continued study of the feasibility of an area vocational school in the Las Cruces area and extending post-secondary offerings as funds will permit. For example, a Diesel Mechanics Program at ATVI is being planned.

Area Vocational Schools are depicted on the next two pages.

Eight Area Vocational-Technical Schools



John E. Baca (lower right above) Associate Director of Student Services at Albuquerque-TVI, says 20 tuition-free technical and vocational career programs are now being offered for 1971-2, such as the one in Data Processing pictured above. Mr. Baca says to call him anytime at 842-3766.

Nelson Gonzales (lower right above) Vocational Counselor at the Northern New Mexico Technical-Vocational School, referred to as El Rito, says to please call him or come in and see him about the many school programs the school offers, such as the one in barbering shown above. Mr. Gonzales says he is especially interested in students who want dormitory and cafeteria service.

. Gene Le Doux (lower right above) Assistant President of the Espanola Campus of the Northern New Mexico Technical Vocational School says that school has a wide variety of course offerings and they have plans for others. The Espanola School is a new one, built on 20 acres in Espanola Valley. Dr. Gene says to get in touch.

John Kitchens, (lower right above) registrar at the area technical-vocational school on the Roswell campus at Eastern New Mexico University, says their curriculum is a campus blend of Vocational-Technical Education certificates and college credit transcripts, with such courses as the one illustrated above in aircraft mechanics, qualifying students for Federal Aviation Administration for A & P licenses. Mr. Kitchens invites any and all to come and visit.

Now Operating Across State of New Mexico

Irvin E. Siegenthaler (lower right above) Dean of Vocational-Adult Education School at New Mexico Junior College, says the school offers college credit vocational-technical courses, such as the one in automotive training illustrated above. In addition, says Dean Siegenthaler, they offer 57 vocational single-unit short courses. He says a catalogue will be sent upon request.

Mr. J. M. Tejada (lower right above) Director of the Luna Area Vocational-Technical School, says a mill levy affords no-tuition courses in district and reasonable tuition out of district in the areas of welding, auto mechanics, drafting, electronics, practical nursing, and business education.

Mr. Glen Gabehart (lower center above) Dean of Vocational-Technical Education at the San Juan Campus in the Four Corners area, feels the school has much to offer, particularly in secretarial training and in training for licensed practical nursing, as pictured above. Dean Gabehart says he welcomes applications from throughout New Mexico.

Mr. O. B. Coffey (lower right above) Vocational Director of the High Plains Area Vocational-Technical School, a part of Clovis Community College, which is a branch of Eastern New Mexico University, says his program will offer carpentry, electromechanical installation and repair, a course in office education, and a part time course in hotel-motel management. Mr. Coffey says he is looking forward to receiving inquiries from interested students.

BERNALILLO SKILL CENTER CONTINUES EXPANSION

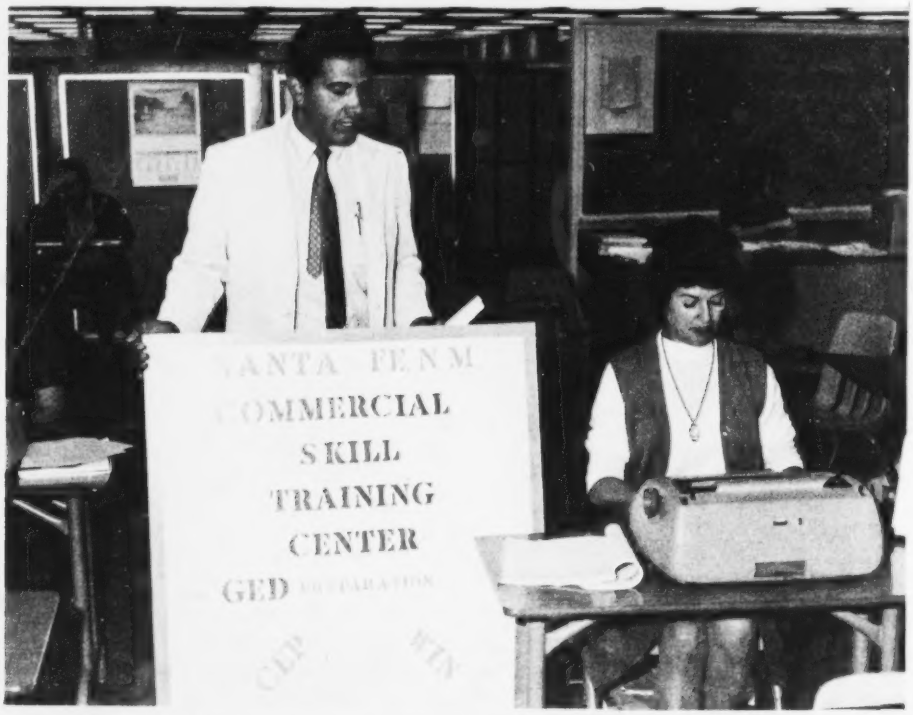
VOCATIONAL COMPLEX

HEALTH OCCUPATIONS

CARPENTRY

NEW SANTA FE SKILL CENTER OPENS DOORS

SANTA FE VOCATIONAL-TECHNICAL SCHOOL opened its doors this last October, offering some 19 day and night courses to high school graduates and to adult non-graduates. School principal is John Collie.



COMMERCIAL SKILLS is one area of courses being offered at the Santa Fe Vocational-Technical School. Mr. Fernando Ramirez, above, director of Adult Vocational-Technical Education, said course offerings are gradually being expanded, and that he has hopes of the school being named an Area Vocational School.

PRIVATE SCHOOLS

The Legislature passed two bills during the recent session, both designed to improve the quality of post-secondary education offered in the private sector.

The proprietary vocational school movement is one of the fastest growing movements in the entire educational arena. At the time of this writing, over 33 private vocational schools are permitted or approved to operate in the State of New Mexico. An additional 15 private vocational schools have made applications for operation.

New Mexico is one of the few states that exempts nationally or regionally accredited schools from State regulations. The national or regional accrediting commission is recognized as the regulating body.

Albuquerque Business College
221 San Pedro N.E.
Albuquerque, New Mexico 87108

Southwestern Business College
100 North Pennsylvania
Roswell, New Mexico 88201

Broadcast Academy
323 South Nevada Avenue
Colorado Springs, Colorado 80902

Granite Computer Institute
3620 North Central Avenue
Phoenix, Arizona 85012

Alamogordo Secretarial School
Security Center Mall
Alamogordo, N.M. 88310

Coronado Technical Institute, Inc.
225 San Pedro Drive N.E.
Albuquerque, N.M. 87108

Educational Concepts, Inc.
6340 Linn Avenue N.E.
Albuquerque, N.M. 87108

Hooten/Stahl Inc., Realtors
2051 Wyoming N.E.
Albuquerque, N.M. 87112

Universal Training School of
Motel & Resort Management
P. O. Box 14453
Albuquerque, N.M. 87111

North American Technical Institute
1606 Central Avenue S.E.
Albuquerque, New Mexico 87106

Arizona Automotive Institute, Inc.
6829 North 46th Avenue
Glendale, Arizona 85301

Computer Training Schools, Inc.
1718 Peachtree Road, N.W.
Atlanta, Georgia 30309

AAA Business College
1115-1/2 Central Avenue
Albuquerque, New Mexico 87106

Career Training Institute
National Building, Suite 1401
505 Marquette N.E.
Albuquerque, New Mexico 87100

Ed Norris & Associates, Inc.
1504 San Pedro N.E.
Albuquerque, N.M. 87110

Flair Studio Modeling Service
9301 Candelaria N.E.
Albuquerque, N.M. 87112

Las Cruces Business Institute
430 S. Main Street - Suite G
Las Cruces, N.M. 88001

New Mexico Data Training Center
1300 Osage
Santa Fe, New Mexico 87501

School of Broadcast Training
317 West Quay
Artesia, New Mexico 88210

Automation Academy
2010 East Charleston Blvd.
Las Vegas, Nevada 89104

Automation & Universal Training, Inc.
444 Sherman Street
Denver, Colorado 80203

Punch Card Machine Training, Inc.
316 V.F.W. Building
Broadway at Thirty-Fourth St.
Kansas City, Missouri 64111

American Automation Training
Centers, Inc.
3435 Broadway
Kansas City, Missouri 64111

Columbia School of Broadcasting
(California Branch)
4444 Geary Boulevard
San Francisco, California 94118

Career Academy
611 East Wells Street
Milwaukee, Wisconsin 53202

Columbia School of Broadcasting
Seven East Bijou, Suite 203
The Majestic Building
Colorado Springs, Colorado 80902

Dominican College
5915 Erie Street
Racine, Wisconsin 53402

ELBA Systems Corporation
5929 East 38th Avenue
Denver, Colorado 80207

National Institute of Meat Packing
3435 Broadway
Kansas City, Missouri 64111

North American Correspondence School
4361 Brich Street
Newport Beach, California 92660

Ambassador Motels, Inc.
Executive Training Division
7855 - 61 W. Colfax Avenue
Denver, Colorado 80215

Southwest Data Institute, Inc.
P. O. Box 1714
Durango, Colorado 81301

United Systems, Inc.
(Truck Driver Training)
c/o M. F. Corp. Terminal Bldg.
1905 South Belmont Avenue
Indianapolis, Indiana 46221

Rickay Careers, Inc.
2433 North Mayfair Road
Milwaukee, Wisconsin

Atlantic Schools
2020 Grande Avenue
Kansas City, Missouri 64108

Bell & Howell Schools
4141 Belmont Avenue
Chicago, Illinois 60641

Central Business College
1177 Grant Street
Denver, Colorado 80203

Denver Automotive and Diesel
College, Inc.
460 South Lipan
Denver, Colorado 80223

Draughon's Business College
103 Sixth Street S.W.
Albuquerque, New Mexico 87101

Jetma Technical Institute
103 South Airport Boulevard
S. San Francisco, California 94080

Parks School of Business
1370 Pennsylvania
Denver, Colorado 80203

Santa Fe Business College
121 North Federal
Santa Fe, New Mexico 87501

Southwest Colleges, Inc.
Business Division
210 Yale Boulevard S.E.
Albuquerque, New Mexico 87106

Spartan School of Aeronautics
International Airport
Tulsa, Oklahoma 74151

United Electronics Institute
3947 Park Drive
Louisville, Kentucky 40216

Southwest Colleges, Inc.
Computer Division
136 Louisiana Boulevard N.E.
Albuquerque, New Mexico 87108

Technical Education Corporation
5701 Waterman Avenue
St. Louis, Missouri 63112

Universal Technical Institute
3121 West Weldon Avenue
Phoenix, Arizona 85017

VOCATIONAL YOUTH ORGANIZATIONS

SECTION VI

VOCATIONAL YOUTH ORGANIZATIONS
in
NEW MEXICO

Youth organizations are a vital part of Vocational Education. In New Mexico, there are five vocational youth organizations: Office Education Association (OEA), Vocational Industrial Clubs of America (VICA), Future Farmers of America (FFA), Distributive Education Clubs of America (DECA), and Future Homemakers of America (FHA).

The oldest youth organization is the Future Farmers of America, operating in New Mexico for 41 years. The youngest is the Office Education Association, in existence four years. Running a close second to being the youngest is the Vocational Industrial Clubs of America, in existence six years. The Future Homemakers of America has been organized 26 years, and the Distributive Education Clubs of America 17 years.

FFA is associated with the Vocational Agriculture Department; FHA with Home Economics; DECA with Distributive Education; VICA with Trades and Industrial; and OEA with Office Education. This year there has been one slight change in the supervision of two of the organizations. DECA and OEA have been combined under one head. The State Advisor to both organizations is Joe Solano, former Assistant Supervisor of Office Education.

The five organizations have a total enrollment of 9,970. This enrollment is projected to increase to 10,700 next year. The Division of Vocational Education views the members of these organizations as leading citizens of the future due to their early participation in organizational and leadership activities.

DISTRIBUTIVE EDUCATION CLUBS OF AMERICA

(DECA)

1,500 Members

32 State Chapters

32 Programs Operating

350 At State Meet

25 At National Meet

STATE DECA OFFICERS are, left to right, President, Mary Ann Ballard, Carlsbad; Excutive Vice President, Joshan Bibb, Albuquerque; and Secretary-Treasurer, Etta Shier, Roswell.

State Conference – March 16, 17

Chapter Increase 50%

National Recognition

FUTURE FARMERS OF AMERICA

(FFA)

3,073 Members

66 State Chapters

4,045 Eligible As Members

550 At State Meet

125 At National Meet

STATE FFA OFFICERS AND FRIEND, are, left to right, Noel Ray Gallehen, First Vice President, Portales; Steve Balak, Acting State Treasurer, Los Lunas; Jim Gilmore, State President, Elida; Mr. Ronald Cross, Agriculture Agent Santa Fe Railway Co. Amarillo, Tex.; Lyman Graham, State Secretary, Tatum; Randy Menell, State Reporter, Animas; Forrest Bray, State Sentinel, Des Moines. Mr. Cross represents an organization that donates $1,500 to the association annually for scholarship awards. Absent from the picture is John Riviera, State Treasurer, Belen.

State Conference — June 4–6

1,100 In Contests

$2,200 In Awards

FUTURE HOMEMAKERS OF AMERICA

(FHA)

3,174 Members

97 State Chapters

105 Eligible Programs

1,300 At State Meet

24 At National Meet

FHA Executive Council Members are, left to right, Louetta Irwin, Clayton, Treasurer; Debbie Snider, Clovis, Secretary; Vickie McLain, Clovis, Vice President of State & National Projects; Susan Currier, Kirtland, Historian; Vickie Bilberry, Floyd, President; Edna Cain, Logan, Vice President; Mauria Tanner, Kirtland, Vice President of Recreation; Mabel Angel, Santa Rosa, Parlimentarian; and Bertha Torres, Gadsden, Vice President of Devotions. The office of secretary is now held by Ozena Crosswhite, Clovis.

State Conference — March 10, 11

28 Superior Chapters

140 At Leadership Camp

OFFICE EDUCATION ASSOCIATION

(OEA)

1,426 Members

58 Chapters

88 Eligible Programs

400 At State Meet

60 At National Meet

OEA STATE OFFICERS are, left to right, front row, Sharla Sparks, Reporter, Belen; Becky Lockmiller, Historian, Texico; William Wilson, Parliamentarian, Texico; Elizabeth Sanchez, Treasurer, Albuquerque. Back Row: Peggy Gallegos, Vice President, Santa Fe; Romaine Alarid, President, Santa Fe; and Jan Schooley, Secretary, Jal.

State Conference – April 6 – 7

12 National Honors

Won National Miss OEA

VOCATIONAL INDUSTRIAL CLUBS OF AMERICA
(VICA)

844 Members

30 State Chapters

16 At National Meet

SECONDARY VICA OFFICERS are, left to right, Andy Johnson, Carlsbad, Parliamentarian; Pat Cervantes, Clovis, Reporter; Cherrie Crowley, Clovis, Treasurer; Richard Romero, Los Lunas, President; Barbara Jones, Carlsbad, Secretary; and Dale Seago, Grants, Vice President.

384 At 2 State Meets

POST–SECONDARY VICA OFFICERS are, left to right, top row, Ignacio Medina, N. M. Technical-Vocational School at Espanola, Parliamentarian; Mike Vaughn, New Mexico Junior College, Treasurer; Thomas Bill Edwards, N. M. Technical-Vocational School at Espanola, Vice President; and Reece A. Hill, N. M. Technical-Vocational School at El Rito, President. Bottom row, left to right, are Rebecca Naranjo, N. M. Technical-Vocational School at Espanola, Reporter; Martha Romo, Post-Secondary Sweetheart, N. M. Technical-Vocational School at El Rito; and Bonnee Apache, N. M. Technical-Vocational School at El Rito, Secretary.

50 Eligible Programs

RESEARCH COORDINATING UNIT

SECTION VII

RESEARCH COORDINATING UNIT

Statement of Purpose:

The purpose of the Research Coordinating Unit of the Division of Vocational Education is three-fold:

1. To systematically research, collect and disseminate information, primarily in the form of reports, about vocational activities and projects in New Mexico that will assist decision-makers at all levels.

2. To administer Federal research grants, evaluate programs, and disseminate reports on same.

3. To produce informational and promotional activities and programs whose purpose are to inform vocational teachers, administrators, students, and often the general public about vocational education in New Mexico.

Legal Basis:

Vocational Education Act of 1963
Vocational Education Amendments of 1968
Public Law 90-576
Part C Research and Training in Vocational Education
Part D Exemplary Programs and Projects
Part F Training and Development Programs for Vocational Education Personnel:

Section 551: To provide full-time advanced study for experienced vocational educators.

Section 552: Leadership Development Awards.

Section 553: Exchange programs, institutes and in-service education for vocational education teachers, supervisors, coordinators and administrators.

Section 554: Familiarizing teachers with curricular materials.

DATA INFORMATION SYSTEM

One of the major activities of the Research Coordinating Unit involves the Data Informational System.

A research grant was awarded to the University of New Mexico to computerize all vocational students in New Mexico. This grant is being coordinated by the Research Coordinating Unit. The forms being used are as follows:

DF1 - Vocational Program Status - To be completed by School Administrator.

DF2 - General School Information Inventory - To be completed by School Principal.

DF3 - Specific Program Information Data for Secondary and Post-Secondary Instructional Programs - To be completed by teacher.

DF4 - Specific Program Information Data for Adult Instructional Programs - To be completed by adult instructor.

DF5A - Student Information Card - To be completed by student.

DF5B - Vocational Student Status Report - To be completed by State Department.

DF6 - A Follow-Up Survey of Former Vocational Students - To be mailed by Research Coordinating Unit to former vocational students.

Each school will receive a printout of data compiled from information received. The compiled information will provide a basis for better planning and for program evaluation.

DF-1

VOCATIONAL PROGRAM STATUS REPORT

Name of School _____

Type of School: Public ☐ Private ☐

Name of Person Completing This Form _____

School District _____

Position _____

Enrollment:

20 1. ☐☐☐☐ Total School Enrollment.

2. ☐☐☐☐ Total Male E...

Dropouts:

5. Dropout Rate

Unemployment:

Budget Inf

DF-2

GENERAL SCHOOL INFORMATION INVENTORY

STATE DEPARTMENT OF EDUCATION
VOCATIONAL DIVISION
SANTA FE, NEW MEXICO

4 ☐☐☐ ☐☐ ☐☐ ☐☐☐
school code

DF-3

_____

Person Completing This Form _____

Position _____

Date ☐☐ ☐☐ ☐☐
mo. day year

7 Does the school have a specialized vocational guid- ...rogram for noncollege-bound students?

Are there age requireme... structional program?

☐ Yes

(specify)

☐☐ Years Old

SPECIFIC PROGRAM INFORMATION DATA FOR SECONDARY AND POST-SECONDARY INSTRUCTIONAL PROGRAMS

STATE DEPARTMENT OF EDUCATION
VOCATIONAL DIVISION
SANTA FE NEW MEXICO

☐☐ ☐☐ ☐☐☐
school code

Date ☐☐ ☐☐ ☐☐
month day year

DF-4

SPECIFIC PROGRAM INFORMATION DATA FOR ADULT INSTRUCTIONAL PROGRAMS

m _____

space above to list th... ...tion.

DF-5A

STUDENT INFORMATION CARD

STATE DEPARTMENT OF EDUCATION
VOCATIONAL DIVISION
SANTA FE, NEW MEXICO

Please Print

1.

name of school

school code

month

2.

Instr

Instr

Voc

3. Your social security number: ☐☐☐-☐☐-☐☐☐☐

4. ☐☐☐☐☐☐☐

DF-5B

VOCATIONAL STUDENT STATUS REPORT

STATE DEPARTMENT OF EDUCATION
VOCATIONAL DIVISION
SANTA FE, NEW MEXICO

READ INSTRUCTIONS ON THE REVERSE SIDE BEFORE COMPLETING ANY ITEMS BELOW

Check one or more items below	2. DATE OF COMPLETION OR TERMINATION:	ITEMS 5 AND 6 APPLY ONLY TO STUDENTS NOT COMPLETI... PROGRAM

DF-6

STATE DEPARTMENT OF EDUCATION
VOCATIONAL DIVISION
SANTA FE, NEW MEXICO

A FOLLOW-UP SURVEY OF FORMER VOCATIONAL STUDENTS

1970-1971 MINI-GRANTS

ADULT BASIC EDUCATION:

1. DEVELOPMENT OF AN INFORMAL READING INVENTORY (IRI) FOR ADULTS OF SPANISH-AMERICAN DESCENT
   Dr. Robert White, Assoc. Prof., U of NM
   Amount funded: $500.

AGRICULTURE EDUCATION:

1. CONSERVATION FIELD PLANTING
   Mr. Pete Santistevan, Supt., Bernalillo Pub. Sch.
   Amount funded: $470.

2. BEAUTIFICATION OF CORONADO HIGH SCHOOL
   Mr. Jack Parker, Voc. Agri. Inst.,Coronado H.S.
   Amount funded: $465.

3. SOIL & WATER CONSERVATION WITH EMPHASIS ON EROSION CONTROL AND CAMPUS BEAUTIFICATION
   Mr. Donald R. Wood, Supt., Jemez Valley Schools
   Amount funded: $500

HEALTH OCCUPATIONS:

1. A SLIDE SERIES WITH RECORDED INSTRUCTIONS FOR TEACHING HEALTH PERSONNEL HOW TO TRANSFER PATIENTS WITH ACUTE AND CHRONIC CONDITIONS
   Ms. Martha Cress, R.N., Dir., Health Occupations
   ENMU - Roswell Campus
   Amount funded: $190.

2. BRAILLE TRANSCRIPTION OF AMERICAN RED CROSS FIRST AID MANUAL & AMERICAN RED CROSS HOME NURSING MANUAL
   Mrs. Marilyn Redman, Teacher, New Mexico School for the Visually Handicapped
   Amount funded: $165.

3. FELT BOARD TO TEACH DISCRIMINATION OF NURSE'S VOCATIONS
   Mrs. Marilyn Redman, Teacher, New Mexico School for the Visually Handicapped
   Amount funded: $75

HOME ECONOMICS:

1. YOUNG CONSUMERS
   Ms. Bettie Lou Snapp, Home Economics Consultant
   Albuquerque Public Schools
   Amount funded: $250.

2. AN EARLY LOOK AT DOLLAR DECISIONS
   Ms. Sylvia Moore, Home Economics Teacher
   C. C. Snell Junior High School - Cobre
   Amount funded: $370.

3. FLORAL DESIGN
   Mrs. Janie B. Gregg, Act. Prin., Girls' Welfare Home
   Amount funded: $500.

4. MINI OPPORTUNITY TOUR
Mrs. Martha J. Thoelcke, Homemaking Inst.
Lake Arthur High School
Amount funded: $286.

5. PREPARATION FOR PARENTHOOD
Ms. Rose Marie Romero, Home Economics Teacher
Albuquerque Public Schools - Rio Grande H.S.
Amount funded: $300.

6. DEVELOPMENT AND DISSEMINATION OF MATERIALS ON AN INTERDISCIPLINARY APPROACH TO HOSPITALITY EDUCATION
Genevieve Raestle, Albuquerque Public Schools
Amount funded: $250.

INDUSTRIAL ARTS:

1. AN INVESTIGATION OF GRAPHIC ACTS TO DETERMINE COURSE CONTENT FOR AN ADVANCED PROGRAM IN HIGH SCHOOL.
Mr. John Fox, Graphic Arts Inst.,Los Alamos H.S.
Amount funded: $434.

MISCELLANEOUS:

1. STUDENT'S INDOCTRINATION INTO SANDOVAL COUNTY'S BUSINESS OPPORTUNITIES
Mr. Phillip M. Ludi, Prin., Cochiti Elementary Sch.
Amount funded: $500.

2. DISSEMINATION OF RESEARCH IN VOCATIONAL EDUCATION TO RURAL SCHOOL ADMINISTRATORS IN SOUTHERN N.M.
Dr. Everett D. Edington, Dept. Head, Education Admin.
New Mexico State University
Amount funded: $500.

3. A PILOT STUDY TO DETERMINE THE VALUE OF AN APPRENTICE PROGRAM TO THE SMALL HIGH SCHOOL VOCATIONAL CURRICULUM
Mr. Harold Longan, Prin., Ruidoso High School
Amount funded: $283.

4. MOTIVATING POTENTIAL DROPOUTS THROUGH THE USE OF SHAPING AND POSITIVE REINFORCERS
Mr. Daniel Flores, Social Studies Teacher
Santa Rosa Junior High School
Amount funded: $387.

OFFICE EDUCATION:

1. INITIATING AN OFFICE SIMULATION PROGRAM AT HAGERMAN AND DEXTER HIGH SCHOOLS IN THE INTENSIVE SECRETARIAL AND CLERICAL TRAINING PROGRAMS
Ms. Gloria E. Sims, Off. Educ. Coord., Dexter H.S.
Amount funded: $500.

2. INITIATING AN OFFICE SIMULATION PROGRAM AT HAGERMAN & DEXTER HIGH SCHOOLS IN THE INTENSIVE SECRETARIAL AND CLERICAL TRAINING PROGRAMS
Ms. Robbie Knoy, Off. Educ. Coord., Hagerman H.S.
Amount funded: $500.

3. MINI GRANT FOR MINI SIM
Mrs. Patsy Buzbee, Off. Educ. Coord., Goddard H.S.
Amount funded: $475.

4. EVALUATION OF CURRICULAR REQUIREMENTS FOR THE TWO-YEAR SECRETARIAL PROGRAM AT N.M. STATE UNIVERSITY BY 1967,1968,1969 GRADUATES OF THE PROGRAM
Miss Eleanor Ann Heins, Asst. Prof., Bus. Admin.
New Mexico State University
Amount funded: $500.

SPECIAL NEEDS:

1. INTRODUCTION TO AVIATION TECHNOLOGY AND AVIATION-RELATED OCCUPATIONS
Mr. Mark H. Dorfman, Dir. of Guid., Ft. Sumner H.S.
Amount funded: $475.

2. MOTIVATION FOR VOCATIONAL-TECHNICAL SCHOOL ENROLLMENT IN POST-HIGH SCHOOL ADULT LEVEL PROGRAMS
Ms. Nellie C. Schurkens, Vocational Counselor
San Juan Campus - New Mexico State University
Amount funded: $330.

3. SUPERVISED CORRESPONDENCE IN-SCHOOL STUDY
Mrs. Opal Snipes, Counselor, House Municipal Schools
Amount funded: $500.

4. THE UTILIZATION OF COMMUNITY MEMBERS, BOTH AS RESOURCE PEOPLE AND EVALUATORS OF A VOCATIONAL EDUCATION PROGRAM AND ITS NEEDS
Mr. John W. Watts, Guidance Counselor
John F. Kennedy Junior High School
Amount funded: $300.

5. THE EFFECT ON EDUCATION & VOCATIONAL PLANS OF AN INTENSIVE HIGH SCHOOL VOCATIONAL COUNSELING PROGRAM FOR JUNIORS
Ms. Christine A. Logan, Sch. Coun., Logan H.S.
Amount funded: $250.

6. THE EFFECT ON EDUCATION & VOCATIONAL PLANS OF AN INTENSIVE HIGH SCHOOL VOCATIONAL COUNSELING PROGRAM FOR JUNIORS
Ms. Christine A. Logan, Sch. Coun., San Jon H.S.
Amount funded: $250.

TRADES & INDUSTRY:

1. VIDEO TAPES OF INSTRUCTOR'S SHOP DEMONSTRATIONS
   Mr. Irving J. Stolet, Welding Instructor
   Albuquerque Technical-Vocational Institute
   Amount funded: $500.

2. WELD SAMPLE TESTING APPARATUS
   Mr. Robert Gallegos, Welding Instructor
   Luna Area Vocational-Technical School
   Amount funded: $250.

3. TEACHING ABOUT AUTOMOTIVE ELECTRICAL SYSTEMS WITH THE ELECTRICAL DEMONSTRATING BOARD
   Mr. Frank E. Cruz, Auto Mechanics Instructor
   Taos High School
   Amount funded: $215.

GRAND TOTAL AMOUNT FUNDED: $11,470.

MINI SIM:
A PROJECT IN
OFFICE SIMULATION

STUDENT INDOCTRINATION

into SANDOVAL COUNTY BUSINESS OPPORTUNITY

A MINI-GRANT REPORT

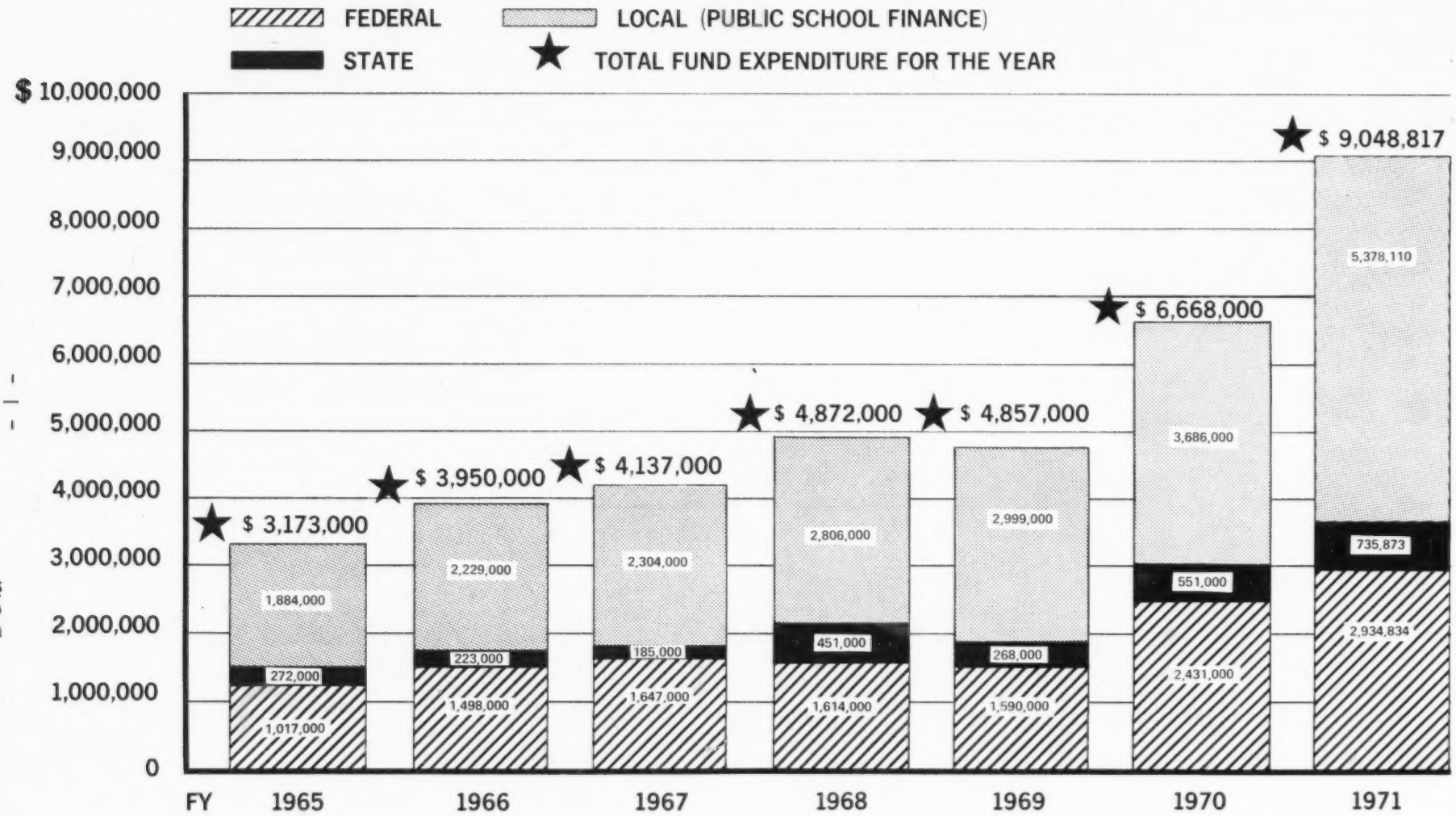
MOTIVATION THROUGH SHAPING
AND
POSITIVE REINFORCERS

INTRODUCTION TO AVIATION TECHNOLOGY
AND
AVIATION–RELATED OCCUPATIONS

STATISTICAL DATA – FISCAL YEAR 1971

SECTION VIII

VOCATIONAL ED. EXPENDITURES BY SOURCE



VOCATIONAL ENROLLMENTS BY UNITS – FISCAL YEAR 1971

UNIT	TOTAL	FEMALE	MALE	DISADV.	HANDI.	SEC.	P.S.	ADULT
Agriculture	4,226	236	3,990	1,889	46	4,073	53	100
Distribution	1,765	835	930	453	94	1,451	146	168
Health	1,075	980	95	287	41	214	662	199
Consumer and Homemaking	18,118	15,639	2,479	12,890	528	18,002	---	116
Occupational Preparation Home Economics	802	755	47	515	19	130	12	660
Office	18,518	13,065	5,453	4,212	310	10,532	4,059	3,927
Technical	605	25	580	107	6	----	585	20
Trades and Industry	7,400	251	7,149	2,415	123	4,234	561	2,605
Group Guidance	96	51	45	49	--	96	---	---
TOTALS	**52,605**	**31,837**	**20,768**	**22,817**	**1,167**	**38,732**	**6,078**	**7,795**

VOCATIONAL ENROLLMENTS BY RACIAL/ETHNIC GROUPS
FISCAL YEAR 1971

	TOTAL	SECONDARY	POST-SECONDARY	ADULT
AMERICAN INDIAN				
Regular Programs	1,665	1,434	146	85
Disadvantaged	2,963	2,784	129	50
Handicapped	149	121	2	26
Grand Total	4,777 (9.08%)	4,339 (8.25%)	277 (.53%)	161 (.30%)
NEGRO				
Regular Programs	329	188	102	39
Disadvantaged	278	196	59	23
Handicapped	10	8	0	2
Grand Total	617 (1.17%)	392 (.74%)	161 (.31%)	64 (.12%)
ORIENTAL				
Regular Programs	108	85	17	6
Disadvantaged	34	32	0	2
Handicapped	3	3	0	0
Grand Total	145 (.28%)	120 (.23%)	17 (.03%)	8 (.02%)
SPANISH SURNAMED				
Regular Programs	11,432	6,798	2,047	2,587
Disadvantaged	14,134	12,450	423	1,261
Handicapped	731	602	44	85
Grand Total	26,297 (49.99%)	19,850 (37.73%)	2,514 (4.78%)	3,933 (7.48%)
OTHER				
Regular Programs	15,087	9,063	2,820	3,204
Disadvantaged	5,408	4,790	255	363
Handicapped	274	178	34	62
Grand Total	20,769 (39.48%)	14,031 (26.67%)	3,109 (59.1%)	3,629 (6.90%)
TOTAL ENROLLMENT	52,605	38,732	6,078	7,795

ENROLLMENTS BY GEOGRAPHIC LOCATION
FISCAL YEAR 1971

	TOTAL	SECONDARY	POST-SECONDARY	ADULT
REGULAR	28,621	17,568	5,132	5,921
SMSA–				
Albuquerque	12,742	4,834	2,542	5,366
Non-SMSA	15,879	12,734	2,590	555
DISADVANTAGED	22,817	20,252	866	1,699
SMSA				
Albuquerque	5,609	4,452	663	494
Non-SMSA	17,208	15,800	203	1,205
HANDICAPPED	1,167	912	80	175
SMSA				
Albuquerque	298	217	31	50
Non-SMSA	869	695	49	125

SMSA – Standard Metropolitan Statistical Area.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION
WASHINGTON, D.C. 20202

NUMBER OF TEACHERS, STATUS OF TEACHER TRAINING, AND LOCAL ADMINISTRATIVE STAFF IN VOCATIONAL EDUCATION

(Vocational Education Amendments of 1968, P.L. 90-576)

READ INSTRUCTIONS ON REVERSE BEFORE COMPLETING THIS FORM

O.M.B. NO. 51-R0841
APPROVAL EXPIRES: 3/31/73

STATE/OUTLYING AREA: New Mexico
DATE PREPARED: 9/1/71
FISCAL YEAR ENDING: June 30, 1971
REPORT DUE: October 1, 1971

SECTION I - NUMBER OF TEACHERS AND STATUS OF TEACHING TRAINING

VOCATIONAL PROGRAMS (a)	TOTAL UNDUPLICATED (b)	NUMBER OF TEACHERS: SECONDARY FULL-TIME (c)	SECONDARY PART-TIME (d)	SECONDARY TEACHER AIDES (e)	POSTSECONDARY FULL-TIME (f)	POSTSECONDARY PART-TIME (g)	POSTSECONDARY TEACHER AIDES (h)	ADULT FULL-TIME (i)	ADULT PART-TIME (j)	ADULT TEACHER AIDES (k)	NUMBER OF ENROLLEES IN TEACHER TRAINING: PRE-SERVICE (l)	IN-SERVICE (m)	NUMBER COMPLETING STATE PLAN REQUIREMENT: PRE-SERVICE (n)	IN-SERVICE (o)
1. TOTAL UNDUPLICATED	932	352	182	-0-	148	57	7	31	155	-0-	325	468	177	74
2. EXEMPLARY, PART D	90	8	82	-0-	-0-	-0-	-0-	-0-	-0-	-0-		-0-		-0-
3. GROUP GUIDANCE (Prevocational)	2	-0-	2	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	2
4. PRE-POSTSECONDARY	-0-	-0-	-0-	-0-			-0-			-0-	-0-	-0-	-0-	-0-
5. REMEDIAL	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
6. COOPERATIVE, PART G	28	18	9	-0-	1	-0-	-0-	-0-	-0-	-0-	-0-	20	-0-	-0-
7. DISADVANTAGED	191	136	41	-0-	5	2	-0-	-0-	7	-0-	-0-	90	-0-	-0-
8. HANDICAPPED	26	24	-0-	-0-	-0-	-0-	-0-	2	-0-	-0-	-0-	20	-0-	-0-
9. AGRICULTURE	45	23	17	-0-	2	2	-0-	1	-0-	-0-	29	76	-0-	-0-
10. DISTRIBUTION	23	12	7	-0-	1	-0-	-0-	-0-	3	-0-	5	33	3	-0-
11. HEALTH	44	-0-	-0-	-0-	31	2	-0-	3	8		8	30	-0-	9
12. CONSUMER AND HOMEMAKING	69	48	14	-0-	-0-	-0-	-0-	-0-	7	-0-	219	60	90	6
13. OCCUPATIONAL PREPARATION HOME ECONOMICS	29	1	-0-	-0-	1	-0-	-0-	25	2	-0-	-0-	-0-	-0-	-0-
14. OFFICE	136	40	-0-	-0-	26	45	-0-	-0-	25	-0-	34	80	14	38
15. TECHNICAL	55	-0-	-0-	-0-	36	6	-0-	-0-	13	-0-	-0-	-0-	-0-	-0-
16. TRADES & INDUSTRY	190	38	10	-0-	45	-0-	7	-0-	90	-0-	-0-	44	18	19
17. OTHER (Specify) PV T&I	4	4	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	30	15	52	-0-

SECTION II - LOCAL ADMINISTRATIVE PERSONNEL

1. TOTAL, UNDUPLICATED	17	7	-0-		10	-0-		-0-	-0-
2. DIRECTOR	13	4	-0-		9	-0-		-0-	-0-
3. SUPERVISOR	4	3	-0-		1	-0-		-0-	-0-
4. GUIDANCE	-0-	-0-	-0-		-0-	-0-		-0-	-0-
5. OTHER	-0-	-0-	-0-		-0-	-0-		-0-	-0-

OE FORM 3136, 5/71

REPLACES OE FORM 3136 5/70 WHICH IS OBSOLETE

*OE Form 3136 shows spread of teachers by Programs.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION
WASHINGTON, D.C. 20202

NUMBER OF TEACHERS, STATUS OF TEACHER TRAINING, AND LOCAL ADMINISTRATIVE STAFF IN VOCATIONAL EDUCATION

(Vocational Education Amendments of 1968, P.L. 90-576)

READ INSTRUCTIONS ON REVERSE BEFORE COMPLETING THIS FORM

O.M.B. NO. 51-R0841
APPROVAL EXPIRES: 3'31 73

STATE/OUTLYING AREA: New Mexico
DATE PREPARED: 9/1/71
FISCAL YEAR ENDING: June 30, 19
REPORT DUE: October 1, 1971

SECTION I - NUMBER OF TEACHERS AND STATUS OF TEACHING TRAINING

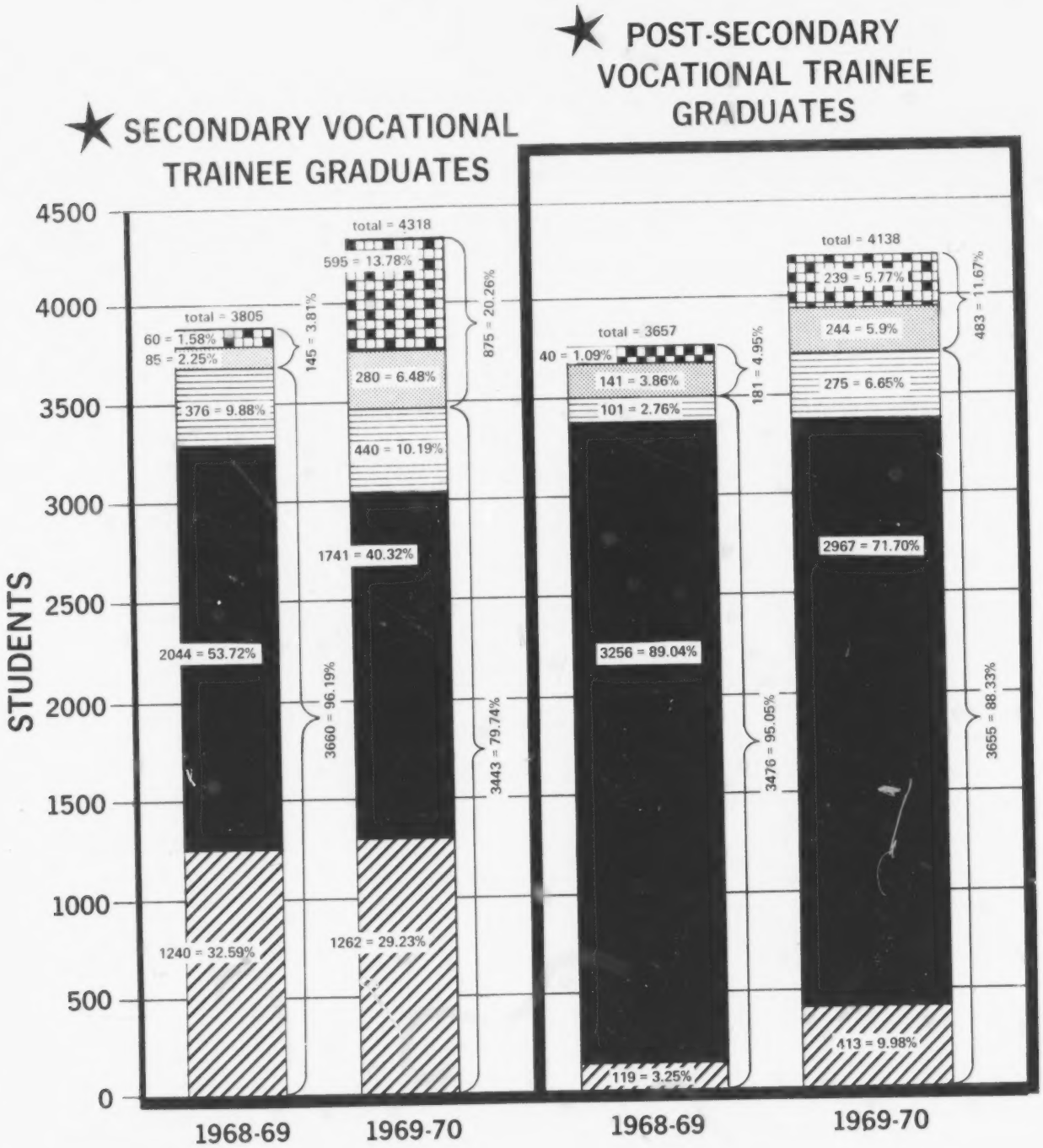
VOCATIONAL PROGRAMS UNITS (a)	TOTAL UNDUPLICATED (b)	NUMBER OF TEACHERS: SECONDARY FULL-TIME (c)	SECONDARY PART-TIME (d)	SECONDARY TEACHER AIDES (e)	POSTSECONDARY FULL-TIME (f)	POSTSECONDARY PART-TIME (g)	POSTSECONDARY TEACHER AIDES (h)	ADULT FULL-TIME (i)	ADULT PART-TIME (j)	ADULT TEACHER AIDES (k)	NUMBER OF ENROLLEES IN TEACHER TRAINING: PRE-SERVICE (l)	IN-SERVICE (m)	NUMBER COMPLETING STATE PLAN REQUIREMENT: PRE-SERVICE (n)	IN-SERVICE (o)
1. TOTAL UNDUPLICATED	932	352	182	-0-	148	57	7	31	155	-0-				
2. EXEMPLARY, PART D	82	-0-	82	-0-	-0-	-0-	-0-	-0-	-0-	-0-				
3. GROUP GUIDANCE (Prevocational)	2	-0-	2	-0-	-0-	-0-	-0-	-0-	-0-	-0-				
4. PRE-POSTSECONDARY														
5. REMEDIAL														
6. COOPERATIVE, PART G														
7. DISADVANTAGED														
8. HANDICAPPED														
9. AGRICULTURE	80	47	28	-0-	2	2	-0-	1	-0-	-0-				
10. DISTRIBUTION	43	18	20	-0-	2	-0-	-0-	-0-	3	-0-				
11. HEALTH	65	10	2	-0-	36	4	-0-	5	8	-0-				
12. CONSUMER AND HOMEMAKING	160	109	37	-0-	-0-	-0-	-0-	-0-	14	-0-				
13. OCCUPATIONAL PREPARATION HOME ECONOMICS	29	1	-0-	-0-	1	-0-	-0-	25	2	-0-				
14. OFFICE	177	81	-0-	-0-	26	45	-0-	-0-	25	-0-				
15. TECHNICAL	55	-0-	-0-	-0-	36	6	-0-	-0-	13	-0-				
16. TRADES & INDUSTRY	226	73	11	-0-	45	-0-	7	-0-	90	-0-				
17. OTHER (Specify) Pre-Voca. T & I	13	13	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-				

SECTION II - LOCAL ADMINISTRATIVE PERSONNEL

1. TOTAL, UNDUPLICATED									
2. DIRECTOR									
3. SUPERVISOR									
4. GUIDANCE									
5. OTHER									

OE FORM 3136A 5/71
*OE Form 3136A shows teachers by Units

REPLACES OE FORM 3136, 6'70, WHICH IS OBSOLETE



UNEMPLOYMENT RATE
OCTOBER 1970
NEW MEXICO: 7%
NATIONAL: 5.6%

1970-71 – FIGURES WILL NOT BE AVAILABLE UNTIL DECEMBER 30, 1971

CONTINUED SCHOOL

EMPLOYED IN AREA TRAINED OR RELATED AREA

ENTERED ARMED FORCES OR NOT AVAILABLE DUE TO ILLNESS, DEATH OR BY CHOICE.

NO RESPONSE

UNEMPLOYED

TELLING TOTALS -- NATIONAL TOTALS

TELLING TOTALS

Sidney P. Marland, Commissioner of Education for the United States, has repeatedly stated that career education could affect 80% of the nation's secondary youth. At present, however, only 25% of the secondary students in the country are enrolled in vocational skills programs. The total breakdown of enrollment in vocational education looked something like this in Fiscal Year 1970:

Instructional Program	Total	Ele. & Sec.	Post-Sec.	Adult	Teachers
Agriculture	852,983	550,823	23,381	278,779	12,420
Distribution	529,365	230,007	82,160	217,198	10,458
Health	198,044	31,915	102,515	63,614	10,483
Home Ec (gnfl)	151,194	66,237	19,557	65,400	3,571
Homkng & Consumer	2,419,216	1,867,822	24,702	526,692	30,654
Office	2,111,160	1,331,257	331,001	448,902	45,081
Technical	271,730	34,386	151,621	85,723	14,241
Trade & Indus.	1,906,133	692,396	261,182	952,555	56,720
Other	354,135	309,608	17,307	27,220	4,789
Total	8,793,960	5,114,451	1,013,426	2,666,083	188,417

- The number of disadvantaged and handicapped students served by vocational education increased by 777,183 between FY 1969 and FY 1970.
- In FY 1970, the amount of Federal funding for vocational programs was multiplied five times at the state and local levels.

AVA Member-Gram - Fall 1971

Ten Highest States and Ten Lowest States in the amount of money that each State spends for Vocational-Technical Education for each dollar of Federal funds received.

Ten Highest States		Ten Lowest States	
New York	$12.75	South Dakota	$1.61
Connecticut	7.54	Louisiana	1.93
Wisconsin	7.09	Nebraska	1.94
Massachusetts	6.74	Arkansas	1.98
Pennsylvania	6.24	Hawaii	2.05
Utah	5.91	New Mexico	2.05
Washington	5.71	Mississippi	2.06
Delaware	5.49	Tennessee	2.10
Iowa	5.49	Idaho	2.43
New Hampshire	5.49	Rhode Island	2.50

Pennsylvania RCU Reporter Fall 1971

NEW MEXICO VOCATIONAL PROFILE

SECTION IX

NEW MEXICO VOCATIONAL PROFILE

New Mexico
DEPARTMENT OF Education

742/743

This section relates teachers, vocational enrollments, and total funds expendited for vocational education by school districts for secondary public schools. Special schools such as Girls' Welfare Home and New Mexico Boys' School statistics are not presented.

In some instances vocational enrollments exceed school enrollments because of duplicate counts. Office education enrollments reflect those students who have signed a tenative career objective which does not mean that the total enrollment has completed a sequential program. Therefore, teachers and enrollment are not always compatible.

The difficulty with enrollments is the duplication achieved with a hand count. The Research Coordinating Unit has awarded a research grant to the University of New Mexico to establish a computerized Data Informational System for Fiscal Year 1971-1972. Therefore, duplication of count will be eliminated.

The data as presented was provided by the State Supervisors of Vocational Education and Fiscal Office. The Research Coordinating Unit compiled the data.

Fiscal Year 1970-71

County Bernalillo

School District Albuquerque

School Enrollment 38,776
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	3	1	252	$ 44,231	$ 3,500	$ 28,022	$ 12,709
Distributive Education	5	1	254	74,570	8,155	30,024	36,391
Health Occupations	1	0	29	8,240	3,500	------	4,740
Home Economics	24	0	7,722	292,687	23,000	20,016	249,671
Office Education	10	0	875	145,558	21,000	40,032	84,526
Pre-Vocational Exploratory	3	0	335	33,681	9,195	------	24,486
Trades and Industry	2	0	36	30,401	------	20,016	10,385
GRAND TOTAL	48	2	9,503	$629,368	$68,350	$138,110	$422,908

Fiscal Year 1970-71

County Catron

School District Quemado

School Enrollment 67
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture		1	15	$ 8,023	$2,625		$ 5,398
Distributive Education							
Health Occupations		1	34	5,322	650		4,672
Home Economics							
Office Education							
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL		2	49	$13,345	$3,275	------	$10,070

Fiscal Year 1970-71

County Catron

School District Reserve

School Enrollment 155
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education							
Health Occupations							
Home Economics		1	37	$5,875	$700		$5,175
Office Education							
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL		1	37	$5,875	$700		$5,175

Fiscal Year 1970-71

County Chavez

School District Dexter

School Enrollment 312
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education		2	71	$37,185	$35,750		$ 1,435
Health Occupations							
Home Economics	1		85	8,165	1,200		6,965
Office Education	1		66	8,890	3,500		5,390
Pre-Vocational Exploratory							
Trades and Industry	1		53	9,328	3,500		5,828
GRAND TOTAL	3	2	275	$63,568	$43,950		$19,618

Fiscal Year 1970-71

County Chavez

School District Hagerman

School Enrollment 213
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture		1	56	$10,102	$2,975		$ 7,127
Distributive Education		1	17	4,459	1,750		2,709
Health Occupations							
Home Economics		1	26	9,053	1,020		8,033
Office Education	1		71	12,217	3,500		8,717
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	1	3	170	$35,831	$9,245		$26,586

Fiscal Year 1970-71

County Chavez

School District Lake Arthur

School Enrollment 91
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education		1	15	$3,300	$2,700		$ 600
Health Occupations							
Home Economics		1	28	5,442	500		4,942
Office Education							
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL		2	43	$8,742	$3,200		$5,542

Fiscal Year 1970-71

County Chaves

School District Roswell

School Enrollment 4,875
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	2		103	$ 26,626	$ 3,500	$10,008	$13,118
Distributive Education	2		110	18,781	7,000		11,781
Health Occupations							
Home Economics	2		239	21,647	2,000		19,647
Office Education	4		730	52,745	14,000		38,745
Pre-Vocational Exploratory							
Trades and Industry	2		102	8,722	3,500		5,222
GRAND TOTAL	12		1,284	$128,521	$30,000	$10,008	$88,513

Fiscal Year 1970-71

County Colfax

School District Cimarron

School Enrollment 201
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education							
Health Occupations							
Home Economics		1	84	$8,068	$1,020		$7,048
Office Education							
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL		1	84	$8,068	$1,020		$7,048

Fiscal Year 1970-71

County Colfax

School District Maxwell

School Enrollment 74
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education							
Health Occupations							
Home Economics		1	20	$ 5,951	$ 550		$ 5,401
Office Education	1		48	10,585	3,500		7,085
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	1	1	68	$16,536	$4,050		$12,486

Fiscal Year 1970-71

County Colfax

School District Raton

School Enrollment 957
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture		1	47	$10,549	$ 3,150		$ 7,399
Distributive Education							
Health Occupations							
Home Economics	1	1	215	13,561	1,780		11,781
Office Education	1		166	20,008	3,500		16,508
Pre-Vocational Exploratory							
Trades and Industry	2		104	16,836	6,821		10,015
GRAND TOTAL	4	2	532	$60,954	$15,251		$45,703

Fiscal Year 1970-71

County Colfax

School District Springer

School Enrollment 272
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture		1	39	$11,040	$2,905		$ 8,135
Distributive Education							
Health Occupations							
Home Economics		1	58	6,921	840		6,081
Office Education	1		89	23,158		$10,008	13,150
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	1	2	186	$41,119	$3,745	$10,008	$27,366

Fiscal Year 1970-71

County Curry

School District Clovis

School Enrollment 4,124
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	2		151	$34,866	$ 3,500	[illegible]0,008	$21,358
Distributive Education		1	50	6,760	2,905		3,855
Health Occupations	1		18	10,008		10,008	
Home Economics	5		640	44,876	6,000		38,876
Office Education	2		298	20,194	7,000		13,194
Pre-Vocational Exploratory							
Trades and Industry	3		166	40,096	3,500	20,016	16,580
GRAND TOTAL	13	1	1,323	$156,800	$22,905	$40,032	$93,863

Fiscal Year 1970-71

County Curry

School District Grady

School Enrollment 92
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture		1	25	$ 9,750	$3,150		$ 6,600
Distributive Education							
Health Occupations							
Home Economics		1	29	5,429	540		4,889
Office Education							
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL		2	54	$15,179	$3,690		$11,489

Fiscal Year 1970-71

County Curry

School District Melrose

School Enrollment 144
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	1		33	$ 9,978	$3,500		$ 6,478
Distributive Education							
Health Occupations							
Home Economics		1	39	8,040	1,020		7,020
Office Education	1		43	12,314	3,500		8,814
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	2	1	115	$30,332	$8,020		$22,312

Fiscal Year 1970-71

County Curry

School District Texico

School Enrollment 195
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	1		44	$12,045	$3,500		$ 8,545
Distributive Education							
Health Occupations							
Home Economics		1	48	8,470	780		7,690
Office Education	1		54	11,407	3,500		7,907
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	2	1	146	$31,922	$7,780		$24,142

Fiscal Year 1970-71

County De Baca

School District Fort Sumner

School Enrollment 301
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	1		55	$11,998	$3,500		$ 8,498
Distributive Education							
Health Occupations							
Home Economics	1		67	8,684	1,200		7,484
Office Education	1		53	10,247	3,500		6,747
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	3		175	$30,929	$8,200		$22,729

Fiscal Year 1970-71

County Dona Ana

School District Gadsden

School Enrollment 1,936
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	1		62	$12,696	$3,500		$ 9,196
Distributive Education							
Health Occupations							
Home Economics	3		334	30,421	3,600		26,821
Office Education							
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	4		396	$43,117	$7,100		$36,017

Fiscal Year 1970-71

County Dona Ana

School District Hatch

School Enrollment 447
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	1		65	$12,382	$3,500		$ 8,882
Distributive Education							
Health Occupations							
Home Economics		1	58	7,792	960		6,832
Office Education							
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	1	1	123	$20,174	$4,460		$15,714

Fiscal Year 1970-71

County Dona Ana

School District Las Cruces

School Enrollment 7,089
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	2		110	$ 31,980	$ 3,500	$10,008	$ 18,472
Distributive Education	1	1	86	18,690	4,655		14,035
Health Occupations							
Home Economics	11	1	1,752	143,530	14,220		129,310
Office Education	3		589	16,592	10,500		6,092
Pre-Vocational Exploratory							
Trades and Industry	4	2	254	72,706	15,750	10,008	46,948
GRAND TOTAL	21	4	2,791	$283,498	$48,625	$20,016	$214,857

Fiscal Year 1970-71

County Eddy

School District Artesia

School Enrollment 1,855
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	1		70	$16,355	$ 3,500		$12,855
Distributive Education	1		43	11,494	3,500		7,994
Health Occupations	1		20	5,908	1,750		4,158
Home Economics	1		117	10,605	1,200		9,405
Office Education	1		228	10,048	3,500		6,548
Pre-Vocational Exploratory							
Trades and Industry	2		82	12,018		$10,008	2,010
GRAND TOTAL	7		560	$66,428	$13,450	$10,008	$42,970

Fiscal Year 1970-71

County Eddy

School District Carlsbad

School Enrollment 3,480
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	1		63	$ 14,838	$ 3,500		$ 11,338
Distributive Education	1	1	122	12,456	4,575		7,881
Health Occupations	1		28	10,463		$10,008	455
Home Economics	2	1	327	35,374	3,420		31,954
Office Education	2		354	12,752	7,000		5,752
Pre-Vocational Exploratory							
Trades and Industry	4		177	60,852	7,000	10,008	43,844
GRAND TOTAL	11	2	1,071	$146,735	$25,495	$20,016	$101,224

Fiscal Year 1970-71

County Eddy

School District Loving

School Enrollment 125
7–12 Level
7-8-9 Level Only

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education							
Health Occupations							
Home Economics							
Office Education							
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL							

Fiscal Year 1970-71

County Grant

School District Cobre

School Enrollment 1,316
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture		1	51	$14,701	$ 2,695		$12,006
Distributive Education							
Health Occupations	1		20	21,825	5,250		16,575
Home Economics	3		347	31,688	3,600		28,088
Office Education	1		219	18,670	3,500		15,170
Pre-Vocational Exploratory							
Trades and Industry	1		10	7,103	1,168		5,935
GRAND TOTAL	6	1	647	$93,987	$16,213		$77,774

Fiscal Year 1970-71

County Grant

School District Silver City

School Enrollment 1,496
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture		1	50	$14,737	$ 2,810		$11,927
Distributive Education							
Health Occupations							
Home Economics		1	54	8,588	900		7,688
Office Education							
Pre-Vocational Exploratory							
Trades and Industry		1	58	20,247	10,008		10,239
GRAND TOTAL		3	162	$43,572	$13,718		$29,854

Fiscal Year 1970-71

County Guadalupe

School District Santa Rosa

School Enrollment 575
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education		1	15	$ 9,108	$ 2,905		$ 6,203
Health Occupations		1	17	5,159	3,500		1,659
Home Economics		1	45	5,697	780		4,917
Office Education	1		96	10,632	3,500		7,132
Pre-Vocational Exploratory	1		93	11,523	3,500		8,023
Trades and Industry							
GRAND TOTAL	2	3	266	$42,119	$14,185		$27,934

Fiscal Year 1970-71

County Guadalupe

School District Vaughn

School Enrollment 139
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education							
Health Occupations							
Home Economics							
Office Education	1		53	$11,121	$3,500		$ 7,621
Pre-Vocational Exploratory							
Trades and Industry	1		12	9,155	3,500		5,655
GRAND TOTAL	2		65	$20,276	$7,000		$13,276

Fiscal Year 1970-71

County Harding

School District Mosquero

School Enrollment 63
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education							
Health Occupations							
Home Economics							
Office Education	1		32	$ 7,811	$1,750		$ 6,061
Pre-Vocational Exploratory	1		50	9,262	3,500		5,762
Trades and Industry							
GRAND TOTAL	2		82	$17,073	$5,250		$11,823

Fiscal Year 1970-71

County Harding

School District Roy

School Enrollment 122
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture		1	35	$ 8,757	$3,150		$5,607
Distributive Education							
Health Occupations							
Home Economics		1	25	4,789	550		4,239
Office Education							
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL		2	60	$13,546	$3,700		$9,846

Fiscal Year 1970-71

County Hidalgo

School District Animas

School Enrollment 100
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture		1	28	$10,043	$3,186		$ 6,857
Distributive Education							
Health Occupations							
Home Economics	1		48	8,359	1,200		7,159
Office Education							
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	1	1	76	$18,402	$4,386		$14,016

Fiscal Year 1970-71

County Hidalgo

School District Lordsburg

School Enrollment 479
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education		1	18	$11,150	$ 8,340		$ 2,810
Health Occupations							
Home Economics	1		80	14,070	1,200		12,870
Office Education	1		86	10,326	3,500		6,826
Pre-Vocational Exploratory	1		80	24,976	3,500		21,476
Trades and Industry							
GRAND TOTAL	3	1	264	$60,522	$16,540		$43,982

Fiscal Year 1970-71

County Lea

School District Eunice

School Enrollment 462
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education	1		35	$13,120	$13,000		$ 120
Health Occupations							
Home Economics							
Office Education							
Pre-Vocational Exploratory							
Trades and Industry	1		23	5,337	1,750		3,587
GRAND TOTAL	2		58	$18,457	$14,750		$3,707

Fiscal Year 1970-71

County Lea

School District Hobbs

School Enrollment 3,823
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture		1	55	$ 13,326	$ 2,940		$ 10,386
Distributive Education	1		48	20,619	4,375		16,244
Health Occupations							
Home Economics	4		144	19,956	2,000		17,956
Office Education	2		331	68,692	7,000		61,692
Pre-Vocational Exploratory							
Trades and Industry	2	1	99	41,010	5,427		35,583
GRAND TOTAL	9	2	677	$163,603	$21,742		$141,861

Fiscal Year 1970-71

County Lea

School District Jal

School Enrollment 465
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education							
Health Occupations							
Home Economics							
Office Education	1		92	$ 9,538	$3,500		$6,038
Pre-Vocational Exploratory							
Trades and Industry		1	28	5,309	1,750		3,559
GRAND TOTAL	1	1	120	$14,847	$5,250		$9,597

Fiscal Year 1970-71

County Lea

School District Lovington

School Enrollment 1,501
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	1		53	$10,118	$3,500		$ 6,618
Distributive Education							
Health Occupations							
Home Economics	1	2	211	29,639	3,000		26,639
Office Education							
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	2	2	264	$39,757	$6,500		$33,257

Fiscal Year 1970-71

County Lea

School District Tatum

School Enrollment 210
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture		1	45	$11,408	$2,800		$ 8,608
Distributive Education							
Health Occupations							
Home Economics		1	54	10,810	1,020		9,790
Office Education							
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL		2	99	$22,218	$3,820		$18,398

Fiscal Year 1970-71

County Lincoln

School District Capitan

School Enrollment 127
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education							
Health Occupations							
Home Economics	1		59	$8,735	$1,200		$7,535
Office Education							
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	1		59	$8,735	$1,200		$7,535

Fiscal Year 1970-71

County Lincoln

School District Carrizozo

School Enrollment 196
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education							
Health Occupations							
Home Economics		1	74	$6,200	$600		$5,600
Office Education							
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL		1	74	$6,200	$600		$5,600

Fiscal Year 1970-71

County Lincoln

School District Corona

School Enrollment 91
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education							
Health Occupations							
Home Economics	1		50	$ 7,912	$1,200		$6,712
Office Education							
Pre-Vocational Exploratory							
Trades and Industry		1	12	4,295	1,750		2,545
GRAND TOTAL	1	1	62	$12,207	$2,950		$9,257

Fiscal Year 1970-71

County Lincoln

School District Hondo Valley

School Enrollment 126
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture		1	19	$8,925	$2,975		$ 5,950
Distributive Education							
Health Occupations							
Home Economics							
Office Education	1		39	8,065	3,500		4,565
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	1	1	58	$16,990	$6,475		$10,515

Fiscal Year 1970-71

County Lincoln

School District Ruidoso

School Enrollment 392
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education		1	31	$11,000	$11,000		
Health Occupations							
Home Economics	1		84	10,361	1,200		$9,161
Office Education							
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	1	1	115	$21,361	$12,200		$9,161

Fiscal Year 1970-71

County Los Alamos

School District Los Alamos

School Enrollment 2,294
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education		1	5	$11,146	$3,500		$7,646
Health Occupations							
Home Economics							
Office Education	2		281	11,146	3,500		7,616
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	2	1	286	$22,292	$7,000		$15,292

Fiscal Year 1970-71

County Luna

School District Deming

School Enrollment 1,667
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education							
Health Occupations							
Home Economics	1		146	$11,041	$1,200		$9,841
Office Education							
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	1		146	$11,041	$1,200		$9,841

Fiscal Year 1970-71

County McKinley

School District Gallup

School Enrollment 4,691
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	5		354	$ 72,628	$17,500		$ 55,128
Distributive Education		2	46	28,688	17,345		11,343
Health Occupations							
Home Economics							
Office Education	8		635	101,073	10,500	$40,032	50,541
Pre-Vocational Exploratory							
Trades and Industry	3	1	129	48,901	12,250		36,651
GRAND TOTAL	16	3	1,164	$251,290	$57,595	$40,032	$153,663

Fiscal Year 1970-71

County Mora

School District Mora

School Enrollment 553
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	1		75	$11,944	$3,500		$ 8,444
Distributive Education							
Health Occupations							
Home Economics	1		102	10,100	1,000		9,100
Office Education							
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	2		177	$22,044	$4,500		$17,544

Fiscal Year 1970-71

County Mora

School District Wagon Mound

School Enrollment 127
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education							
Health Occupations							
Home Economics		1	47	$ 7,685	$ 850		$ 6,835
Office Education	1		121	20,689	10,008		10,681
Pre-Vocational Exploratory	1		50	12,455	3,900		8,555
Trades and Industry							
GRAND TOTAL	2	1	218	$40,829	$14,758		$26,071

Fiscal Year 1970-71

County Otero

School District Alamogordo

School Enrollment 4,189
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education							
Health Occupations							
Home Economics	4		441	$ 49,711	$ 6,900		$42,811
Office Education	1		188	12,880	3,500		9,380
Pre-Vocational Exploratory		1	69	2,202	800		1,402
Trades and Industry	5		203	59,033	10,500	$10,008	38,525
GRAND TOTAL	10	1	901	$123,826	$21,700	$10,008	$92,118

Fiscal Year 1970-71

County Otero

School District Cloudcroft

School Enrollment 149
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture		1	28	$10,782	$ 3,165		$ 7,617
Distributive Education							
Health Occupations							
Home Economics							
Office Education	1		53	11,186	6,500		4,686
Pre-Vocational Exploratory		1	27	9,452	1,300		8,152
Trades and Industry							
GRAND TOTAL	1	2	108	$31,420	$10,965		$20,455

Fiscal Year 1970-71

County Otero

School District Tularosa

School Enrollment 672
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture		1	52	$ 9,269	$3,115		$ 6,154
Distributive Education							
Health Occupations							
Home Economics	1		115	7,791	1,200		6,591
Office Education	1		96	8,562	3,500		5,062
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	2	1	263	$25,622	$7,815		$17,807

Fiscal Year 1970-71

County Quay

School District House

School Enrollment 51
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education							
Health Occupations							
Home Economics							
Office Education							
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL							

Fiscal Year 1970-71

County Quay

School District Logan

School Enrollment 107
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture		1	39	$ 7,636	$2,345		$ 5,291
Distributive Education							
Health Occupations							
Home Economics		1	49	5,763	840		4,923
Office Education							
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL		2	88	$13,399	$3,185		$10,214

Fiscal Year 1970-71

County Quay

School District San Jon

School Enrollment 113
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture		1	25	$ 9,950	$2,227		$ 7,723
Distributive Education		1	10	6,285	1,800		4,485
Health Occupations							
Home Economics		1	20	4,571	660		3,911
Office Education	1		46	13,193	3,500		9,693
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	1	3	101	$33,999	$8,187		$25,812

Fiscal Year 1970-71

County Quay

School District Tucumcari

School Enrollment 1,043
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	1		46	$11,022	$ 3,500		$ 7,522
Distributive Education							
Health Occupations							
Home Economics	1	2	192	24,556	2,460		22,096
Office Education	1		92	11,415	3,500		7,915
Pre-Vocational Exploratory							
Trades and Industry	1		30	10,000	3,500		6,500
GRAND TOTAL	4	2	360	$56,993	$12,960		$44,033

Fiscal Year 1970-71

County Rio Arriba

School District Chama Valley

School Enrollment 435
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	1		44	$10,008		$10,008	
Distributive Education							
Health Occupations							
Home Economics	1		83	10,648	$1,000		$ 9,648
Office Education	1		103	8,304	3,500		4,804
Pre-Vocational Exploratory	1		82	10,896	3,500		7,396
Trades and Industry							
GRAND TOTAL	4		312	$39,856	$8,000	$10,008	$21,848

Fiscal Year 1970-71

County Rio Arriba

School District Dulce

School Enrollment 246
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture		1	48	$11,093	$3,150		$ 7,943
Distributive Education							
Health Occupations							
Home Economics	1		73	8,450	1,000		7,450
Office Education	1		82	8,446	3,500		4,946
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	2	1	203	$27,989	$7,650		$20,339

Fiscal Year 1970-71

County Rio Arriba

School District Espanola

School Enrollment 2,850
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	3		293	$45,195	$ 7,000	$10,008	$28,187
Distributive Education							
Health Occupations							
Home Economics	1		106	10,737	1,200		9,537
Office Education	3		384	25,797	7,000		18,797
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	7		783	$81,729	$15,200	$10,008	$56,521

Fiscal Year 1970-71

County Rio Arriba

School District Jemez Mountains

School Enrollment 265
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture		1	72	$10,058	$3,150		$ 6,908
Distributive Education							
Health Occupations							
Home Economics	1		61	7,924	1,000		6,924
Office Education							
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	1	1	133	$17,982	$4,150		$13,832

Fiscal Year 1970-71

County Roosevelt

School District Causey

School Enrollment 50
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture		1	20	$12,292	$3,185		$9,107
Distributive Education							
Health Occupations							
Home Economics							
Office Education							
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL		1	20	$12,292	$3,185		$9,107

Fiscal Year 1970-71

County Roosevelt

School District Dora

School Enrollment 112
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture		1	42	$10,360	$3,150		$ 7,210
Distributive Education							
Health Occupations							
Home Economics	1		63	11,227	1,200		10,027
Office Education							
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	1	1	105	$21,587	$4,350		$17,237

Fiscal Year 1970-71

County Roosevelt

School District Elida

School Enrollment 74
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	1		31	$ 9,251	$3,500		$ 5,751
Distributive Education							
Health Occupations							
Home Economics		1	21	7,217	840		6,377
Office Education							
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	1	1	52	$16,468	$4,340		$12,128

Fiscal Year 1970-71

County Roosevelt

School District Floyd

School Enrollment 107
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture		1	35	$ 8,619	$3,115		$ 5,504
Distributive Education							
Health Occupations							
Home Economics		1	26	8,058	1,020		7,038
Office Education	1		57	9,634	3,500		6,134
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	1	2	118	$26,311	$7,635		$18,676

Fiscal Year 1970-71

County Roosevelt

School District Portales

School Enrollment 1,353
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	1		67	$10,500	$ 3,500		$ 7,000
Distributive Education	1		69	8,128	3,500		4,628
Health Occupations	1		20	10,394	5,250		5,144
Home Economics	1	1	160	15,904	1,980		13,924
Office Education	1		226	9,198	3,500		5,698
Pre-Vocational Exploratory	1		114	10,615	3,500		7,115
Trades and Industry	2		35	8,926	3,500		5,426
GRAND TOTAL	8	1	691	$73,665	$24,730		$48,935

Fiscal Year 1970-71

County Sandoval

School District Bernalillo

School Enrollment 1,227
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	1		39	$10,431	$ 3,500		$ 6,931
Distributive Education							
Health Occupations	1	1	16	9,503	5,250		4,253
Home Economics	1		47	7,524	600		6,924
Office Education	1		188	8,463	3,500		4,963
Pre-Vocational Exploratory							
Trades and Industry	5		240	64,048	16,500	$10,008	37,540
GRAND TOTAL	9	1	530	$99,969	$29,350	$10,008	$60,611

Fiscal Year 1970-71

County Sandoval

School District Cuba

School Enrollment 450
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education							
Health Occupations							
Home Economics	1		99	$16,624	$1,000		$15,624
Office Education	1		136	17,340	3,500		13,840
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	2		235	$33,964	$4,500		$29,464

Fiscal Year 1970-71

County Sandoval

School District Jemez Springs

School Enrollment 320
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education							
Health Occupations							
Home Economics	1		87	$10,965	$1,000		$ 9,965
Office Education							
Pre-Vocational Exploratory	1		107	11,066	3,500		7,566
Trades and Industry							
GRAND TOTAL	2		194	$22,031	$4,500		$17,531

Fiscal Year 1970-71

County San Juan

School District Aztec

School Enrollment 983
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	1		83	$15,870	$ 3,500		$12,370
Distributive Education							
Health Occupations							
Home Economics	1		137	16,391	10,600		5,791
Office Education	1		97	19,431	3,500		15,931
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	2		317	$51,692	$17,600		$34,092

Fiscal Year 1970-71

County San Juan

School District Bloomfield

School Enrollment 795
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture		1	34	$25,351	$3,185		$22,166
Distributive Education							
Health Occupations							
Home Economics	2	1	179	21,064	2,000		19,064
Office Education	1		62	21,612	3,500		18,112
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	3	2	275	$68,027	$8,685		$59,342

Fiscal Year 1970-71

County San Juan

School District Central

School Enrollment 1,617
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	2		174	$34,354	$7,000		$27,354
Distributive Education							
Health Occupations							
Home Economics							
Office Education							
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	2		174	$34,354	$7,000		$27,354

Fiscal Year 1970-71

County San Juan

School District Farmington

School Enrollment 3,323
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture		1	53	$ 11,094	$ 2,625		$ 8,469
Distributive Education							
Health Occupations	1		11	1,894	1,750		144
Home Economics	4	1	516	53,561	5,580		47,981
Office Education	1		338	12,882	3,500		9,382
Pre-Vocational Exploratory							
Trades and Industry	2		94	26,172	6,560		19,612
GRAND TOTAL	8	2	1,012	$105,603	$20,015		$85,588

Fiscal Year 1970-71

County San Miguel

School District Las Vegas – Robertson

School Enrollment 1,251
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture		1	49	$10,316	$ 2,625		$ 7,691
Distributive Education		1	7	4,626	1,155		3,471
Health Occupations	1		17	4,701	3,500		1,201
Home Economics	2		163	19,540	2,400		17,140
Office Education	1		136	10,828	3,500		7,328
Pre-Vocational Exploratory							
Trades and Industry	1		41	8,507	3,500		5,007
GRAND TOTAL	5	2	413	$58,518	$16,680		$41,838

Fiscal Year 1970-71

County San Miguel

School District Las Vegas West

School Enrollment 1,234
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education							
Health Occupations							
Home Economics	2	1	194	$27,506	$ 3,000		$24,506
Office Education	2		252	16,973	8,500		8,473
Pre-Vocational Exploratory							
Trades and Industry	1	1	80	19,997	5,250		14,747
GRAND TOTAL	5	2	526	$64,476	$16,750		$47,726

Fiscal Year 1970-71

County San Miguel

School District Pecos

School Enrollment 401
7-12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture		1	42	$10,848	$ 3,185		$ 7,663
Distributive Education							
Health Occupations							
Home Economics	1		67	8,413	1,000		7,413
Office Education	1		73	21,107	12,000		9,107
Pre-Vocational Exploratory	1		90	9,539	3,500		6,039
Trades and Industry							
GRAND TOTAL	3	1	272	$49,907	$19,685		$30,222

Fiscal Year 1970-71

County Santa Fe

School District Pojoaque

School Enrollment 553
7-12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	1		59	$31,366	$3,500		$27,866
Distributive Education							
Health Occupations							
Home Economics		1	76	11,438	1,020		10,418
Office Education	1		94	18,116	3,500		14,616
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	2	1	229	$60,920	$8,020		$52,900

Fiscal Year 1970-71

County Santa Fe

School District Santa Fe

School Enrollment 4,961
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education	2		125	$ 29,703	$23,500		$ 6,203
Health Occupations							
Home Economics							
Office Education	5		403	39,581	10,500		29,081
Pre-Vocational Exploratory							
Trades and Industry	8		207	53,498	10,373	$10,008	33,117
GRAND TOTAL	15		735	$122,782	$44,373	$10,008	$68,401

Fiscal Year 1970-71

County Sierra

School District Truth or Consequences

School Enrollment 575
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	1		68	$10,102		$10,008	$ 94
Distributive Education		1	20	4,237	$1,750		2,487
Health Occupations							
Home Economics	1		96	10,422	1,000		9,422
Office Education	1		98	7,730	3,500		4,230
Pre-Vocational Exploratory	1		102	13,665	3,500		10,165
Trades and Industry							
GRAND TOTAL	4	1	384	$46,156	$9,750	$10,008	$26,398

Fiscal Year 1970-71

County Socorro

School District Magdalena

School Enrollment 232
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education							
Health Occupations							
Home Economics	1		67	$ 8,400	$1,200		$7,200
Office Education							
Pre-Vocational Exploratory							
Trades and Industry		1	19	1,750	1,750		
GRAND TOTAL	1	1	86	$10,150	$2,950		$7,200

Fiscal Year 1970-71

County Socorro

School District Socorro

School Enrollment 999
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	1		94	$ 9,424	$3,500		$ 5,924
Distributive Education	1		25	13,352		$10,008	3,344
Health Occupations							
Home Economics	1		113	11,389	1,200		10,189
Office Education	1		126	11,394	3,500		7,894
Pre-Vocational Exploratory							
Trades and Industry	1		19	12,087	1,750		10,337
GRAND TOTAL	5		377	$57,646	$9,950	$10,008	$37,688

Fiscal Year 1970-71

County Taos

School District Ojo Caliente

School Enrollment 291
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education							
Health Occupations							
Home Economics		1	43	$ 9,944	$ 800		$9,144
Office Education							
Pre-Vocational Exploratory							
Trades and Industry				2,502*	2,502*		
GRAND TOTAL		1	43	$12,446	$3,302		$9,144

* Transportation to El Rito for secondary students.

Fiscal Year 1970-71

County Taos

School District Penasco

School Enrollment 431
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education							
Health Occupations							
Home Economics							
Office Education	1		74	$15,167	$3,500		$11,667
Pre-Vocational Exploratory							
Trades and Industry	2		74	14,853	6,160	$7,348	1,345
GRAND TOTAL	3		148	$30,020	$9,660	$7,348	$13,012

Fiscal Year 1970-71

County Taos

School District Questa

School Enrollment 496
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture		1	44	$ 8,032	$2,660		$ 5,372
Distributive Education							
Health Occupations							
Home Economics	1		108	7,100	1,000		6,100
Office Education	1		72	11,381	3,500		7,881
Pre-Vocational Exploratory							
Trades and Industry	1		50	11,827		$10,008	1,819
GRAND TOTAL	3	1	274	$38,340	$7,160	$10,008	$21,172

Fiscal Year 1970-71

County Taos

School District Taos

School Enrollment 1,436
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education							
Health Occupations							
Home Economics	3		298	$30,509	$ 3,600		$26,909
Office Education	3		348	22,050	12,000		10,050
Pre-Vocational Exploratory							
Trades and Industry	2		65	15,810	11,653		4,157
GRAND TOTAL	8		711	$68,369	$27,253		$41,116

Fiscal Year 1970-71

County Torrance

School District Encino

School Enrollment 91
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education							
Health Occupations							
Home Economics							
Office Education							
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL							

Fiscal Year 1970-71

County Torrance

School District Estancia

School Enrollment 262
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	1		42	$13,019	$ 3,500		$ 9,519
Distributive Education							
Health Occupations							
Home Economics	1		76	24,566	16,200		8,366
Office Education	1		76	13,380	3,500		9,880
Pre-Vocational Exploratory	1		60	10,411	3,500		6,911
Trades and Industry		1	18	5,409	1,750		3,659
GRAND TOTAL	4	1	272	$66,785	$28,450		$38,335

Fiscal Year 1970-71

County Torrance

School District Moriarty

School Enrollment 315
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	1		65	$11,047	$ 3,500		$ 7,547
Distributive Education							
Health Occupations							
Home Economics	1		75	9,458	1,200		8,258
Office Education	1		79	9,190	3,500		5,690
Pre-Vocational Exploratory	1		84	10,835	3,500		7,335
Trades and Industry		1	17	4,889	1,750		3,139
GRAND TOTAL	4	1	320	$45,419	$13,450		$31,969

Fiscal Year 1970-71

County Torrance

School District Mountainair

School Enrollment 226
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education							
Health Occupations							
Home Economics		1	73	$ 7,148	$1,020		$ 6,128
Office Education	1		68	9,024	3,500		5,524
Pre-Vocational Exploratory	1		67	7,449	3,500		3,949
Trades and Industry							
GRAND TOTAL	2	1	208	$23,621	$8,020		$15,601

Fiscal Year 1970-71

County Union

School District Clayton

School Enrollment 526
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	1		71	$11,362	$3,500		$ 7,862
Distributive Education							
Health Occupations							
Home Economics	1		115	10,833	1,200		9,633
Office Education	1		67	10,845	3,500		7,345
Pre-Vocational Exploratory							
Trades and Industry		1	28	5,878	1,750		4,128
GRAND TOTAL	3	1	281	$38,918	$9,950		$28,968

Fiscal Year 1970-71

County Union

School District Des Moines

School Enrollment 124
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture		1	29	$ 9,777	$3,185		$ 6,592
Distributive Education							
Health Occupations							
Home Economics							
Office Education	1		48	9,176	3,500		5,676
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL	1	1	77	$18,953	$6,685		$12,268

Fiscal Year 1970-71

County Valencia

School District Belen

School Enrollment 1,590
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	3		157	$ 44,960	$ 8,590	$10,008	$26,362
Distributive Education		1	26	12,970	12,970		
Health Occupations	1		12	12,508	2,500	10,008	
Home Economics	3		305	34,054	3,600		30,454
Office Education	1		282	8,757	6,000		2,757
Pre-Vocational Exploratory							
Trades and Industry	3		131	34,462	8,012		26,450
GRAND TOTAL	11	1	913	$147,711	$41,672	$20,016	$86,023

Fiscal Year 1970-71

County Valencia

School District Grants

School Enrollment 2,455
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education		1	20	$ 9,446	$1,157		$ 8,289
Health Occupations							
Home Economics							
Office Education	1		286	7,584	3,500		4,084
Pre-Vocational Exploratory							
Trades and Industry	2		95	25,153	3,500	$10,008	11,645
GRAND TOTAL	3	1	401	$42,183	$8,157	$10,008	$24,018

Fiscal Year 1970-71

County Valencia

School District Los Lunas

School Enrollment 1,533
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture	2		173	$ 38,792	$3,500	$10,008	$25,284
Distributive Education							
Health Occupations							
Home Economics	1		209	8,921	1,200		7,721
Office Education	1		278	23,357	3,500		19,857
Pre-Vocational Exploratory							
Trades and Industry	2		110	42,245		20,016	22,229
GRAND TOTAL	6		770	$113,315	$8,200	$30,024	$75,091

Fiscal Year 1970-71

County

School District

School Enrollment
7–12 Level

	TEACHERS		ENROLLMENT	TOTAL FUNDS	FEDERAL	STATE	LOCAL
	Full-Time	Part-Time					
Agriculture							
Distributive Education							
Health Occupations							
Home Economics							
Office Education							
Pre-Vocational Exploratory							
Trades and Industry							
GRAND TOTAL							

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EXTENDED DRIVER EDUCATION LABORATORY ENRICHMENT PROJECT (APPLIED RESEARCH PROJECT REPORT).

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DESCRIPTORS - *DRIVER EDUCATION; SECONDARY GRADES; *PARENT PARTICIPATION; ENRICHMENT PROGRAMS; *PILOT PROJECTS; RESEARCH PROJECTS; PARENT TEACHER CONFERENCES; HOME PROGRAMS; TESTING; PROGRAM EVALUATION

ABSTRACT - THIS PILOT STUDY WAS CONDUCTED TO TEST THE EFFECTIVENESS OF PLANNED COORDINATED PARENTAL ASSISTANCE IN HIGH SCHOOL DRIVER EDUCATION PROGRAMS. STUDENTS WHO HAD SUCCESSFULLY COMPLETED THE DRIVER EDUCATION COURSES AND THEIR PARENTS WERE USED AS EXPERIMENTAL AND CONTROL GROUPS, WITH THE EXPERIMENTAL GROUP PARENTS MEETING WITH TEACHERS FOR SUPPLEMENTARY MATERIALS AND INFORMATION TO ASSIST IN COORDINATION OF HOME-SCHOOL EFFORTS. THE PROJECT WAS EVALUATED THROUGH TESTING THE EFFECTIVENESS BETWEEN APPROACHES WITH STUDENTS AS TO KNOWLEDGE, PERSONAL FEELINGS, AND DRIVING SKILLS. AN UNEXPECTED FINDING WAS THAT KNOWLEDGE TEST SKILLS WERE LOWER IN BOTH GROUPS FOLLOWING THE PROJECT. PARENTS GIVEN SCHOOL DIRECTION SHOWED A SIGNIFICANT DECREASE IN DRIVING KNOWLEDGE, AND SCHOOL HELP HAD LITTLE EFFECT ON PERSONAL FEELINGS. WHILE OPINIONS OF STUDENTS, PARENTS, SCHOOL, AND DRIVER LICENSE EXAMINERS WERE GENERALLY FAVORABLE, THE EXAMINERS FOUND THAT THE EXPERIMENTAL AND CONTROL GROUP STUDENTS SHOWED NO DIFFERENCE IN DRIVING SKILLS IN THE ROAD TEST. A HIGHER THAN NORMAL FAILURE RATE IN THE ROAD TEST FOR THE PROJECT STUDENTS WAS ATTRIBUTED TO LACK OF PRACTICE AT HOME. MANY VARIABLES NEED TO BE TESTED IN REPEATED STUDIES BEFORE DEFINITE RECOMMENDATIONS FOR DRIVER EDUCATION CAN BE MADE, BUT SOME COMMENTS FROM THE FINDINGS ARE DETAILED IN THE REPORT. (MF)

VT 017 618

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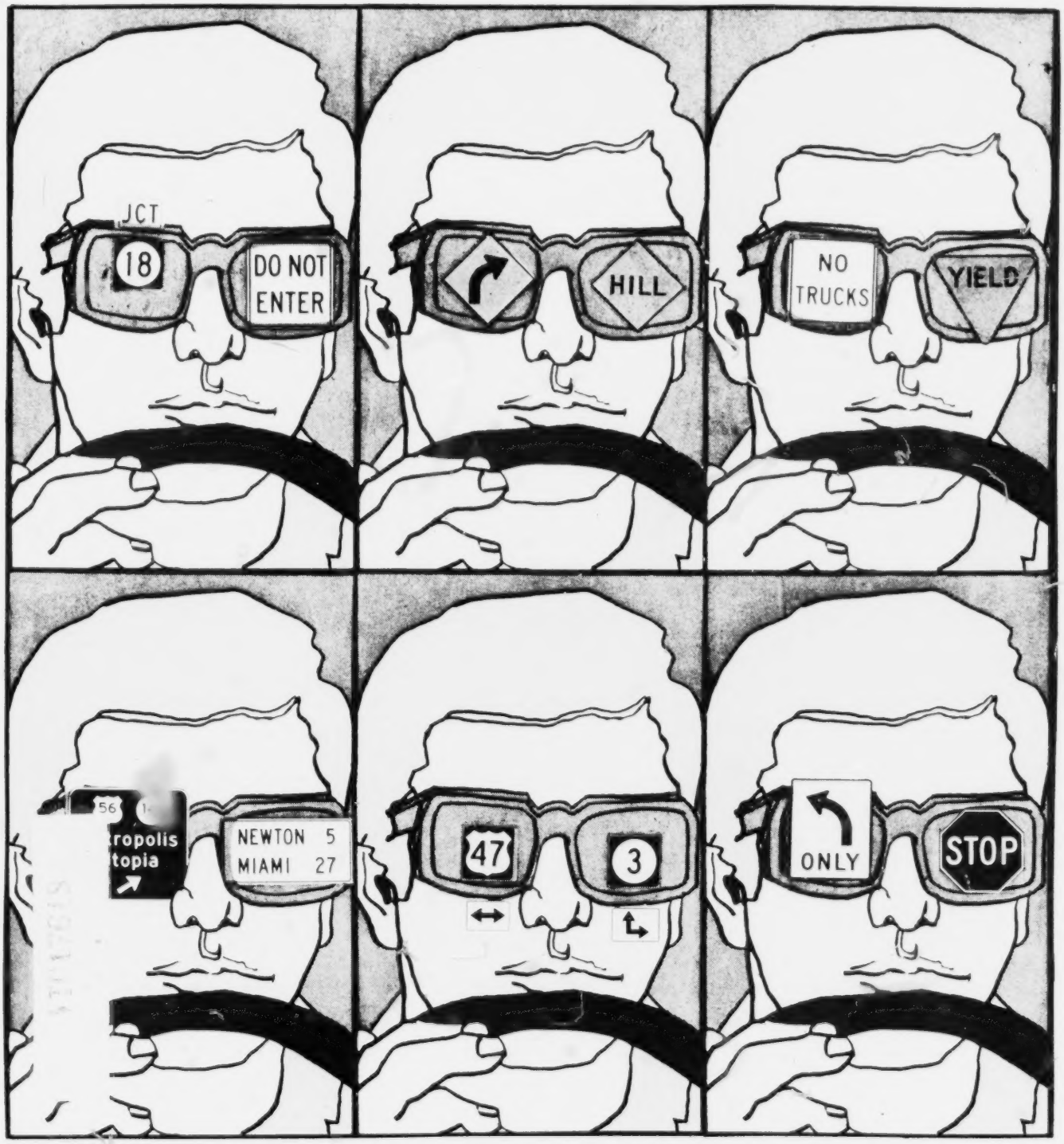
EXTENDED DRIVER EDUCATION LABORATORY ENRICHMENT PROJECT (Applied Research Project Report)



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EXTENDED DRIVER EDUCATION LABORATORY ENRICHMENT PROJECT

Applied Research Project Report

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Acknowledgements

The extended driver education laboratory enrichment project is an applied Research Project Study to test the effectiveness of coordinated parental assistance in secondary school driver education laboratory programs.

Coordinated in cooperation with the Wisconsin Department of Public Instruction and the Janesville Public Schools under a grant provided by the Automotive Safety Foundation.

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Introduction

Driver education courses in secondary schools throughout the United States have the potential to provide the nation's youth with an excellent foundation for safe driving. However, because of the limited time allowed to conduct these programs, the schools can, at best, only begin to prepare their students for meeting the increasingly complex driving task.

It remains for parents to provide their youngsters the necessary time and miles of supervised behind-the-wheel driving experience needed. This driving at home should be done simultaneously with the school course as well as after completion of the school program. Upon receiving their initial state driver's license, the youthful beginning driver should have the benefit of parental supervision, so as to gain the needed exposure and varied experiences while driving.

This is a gigantic parental responsibility that has become increasingly more difficult in many homes. It is too important an activity for parents and youth to discharge lightly or avoid. Time must be granted in the home setting to develop the skills and knowledge acquired in the formal school program and immediately thereafter. When parents and youth both agree that a minimal level of ability has been reached (varying environmental and emergency situations), this responsibility will have been met.

There are some psychologists who have studied the process of learning the complex task of driving and they have recognized that accidents most frequently occur in the early stages of learning or exposure. They further define that successful learning is the gradual elimination of mistakes. This writer accepts this learning theory as being a truism and, if this is true, the accident frequency is a learning problem as well as a youthful problem. This learning theory appears to support the need for appropriate supervision in the learning process of behind-the-wheel driving especially in the early exposure.

The responsibility of the parent is fulfilled by giving proper guidance, setting good examples and with appropriate discipline. This should include actively involving the young driver of the family in many of the responsibilities. Contributing a share toward maintenance of the family car is one example.

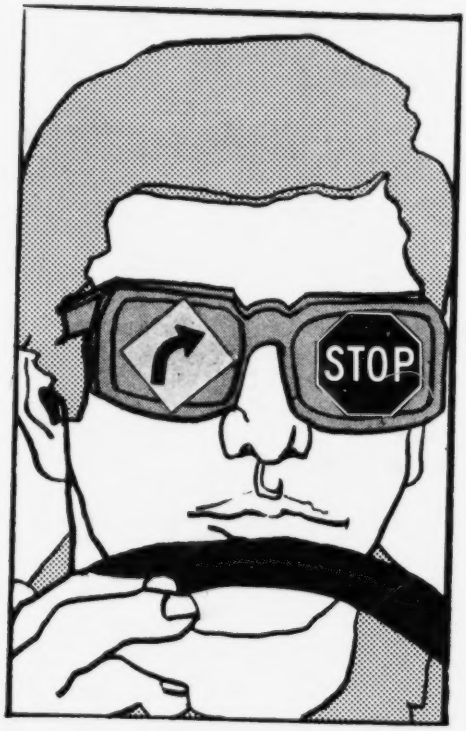
Helping a young driver become an accident-free driver requires cooperation of the home and school in a coordinated program of driver education.

It has become necessary to develop and test the effectiveness of home instruction in high school driver education programs.

This applied research study is unique in that it is the first known experiment to extend the laboratory driving phase of driver education in a formal, systematic way through parental assistance.

The "Extended Driver Education Laboratory Enrichment Project" was conducted by the Craig and Parker Senior High Schools of Janesville, Wisconsin, during the second semester of the 1967-68 school year. This pilot study may have national significance. This test of the effectiveness of planned coordinated parental assistance in high school driver education programs may be helpful to schools wishing to inaugurate a similar program.

It should be emphasized that parental assistance is not intended to replace the high school course. Rather, it is meant to supplement the formal laboratory instruction portion of the high school course.



Approach

This study was an attempt to help determine both the effectiveness and acceptability of the parent-assisted approach in behind-the-wheel high school driver education.

The "Extended Driver Education Laboratory Enrichment Project" was conducted by Mr. Norman Gesteland and Mr. Donald Swanson, driver education teachers in the Janesville Public Schools, Janesville, Wisconsin. The experiment, conducted during the second semester of the 1967-68 school year, was coordinated by the Wisconsin Department of Public Instruction under a grant awarded by the Automotive Safety Foundation.

Time is of essence to the driver education teacher, especially during the laboratory phase of instruction. Many teachers have attempted various ways to give the beginning drivers more experience than normally possible during currently allotted and required practice time.

This project applied a systematic-coordinated approach to improving the laboratory phase of driver education through parental assistance.

It was believed that a coordinated effort between school and home could relieve the high school teacher of supervising many hours of practicing basic driving skills with the student and permit him to devote more time to teaching advanced driving skills, night driving, and meeting emergency conditions. For many students, the allotted time in the formal school program (generally 6 hours) for practical experience is insufficient. Such students have little opportunity to learn the more advanced driving techniques under competent supervision.

A secondary interest of the study was to determine if parental involvement would also create a voluntary parental driver improvement program. In addition, the hope was to provide a framework for closer parent-child relationships, confidence, and mutual trust regarding the safe and responsible use of the automobile.

The project involved 104 students from the two Janesville high schools, with 52 students chosen from each high school. All students participating had successfully completed the driver education classroom instructional course during the preceding 18 week semester (first semester of the 1967-68 school year). The school letter which announced the project to parents appears as Appendix A.

After participants were selected, student experimental and control groups were matched by guidance counselors from the two schools using age, sex, I.Q., grade point average, and parent occupation and background as criteria. One-half (26) of the participants at each school served as a control group, the other half (26) as an experimental group. Each

student group received the same driver education instructional program from the school. Both groups would receive parental assistance at home.

The 52 parents in the control group continued to be "normal parents," representing the national posture of little or no systematic practice at home, during the formal school program. Many of these parents did indicate a desire to participate in the experimental group.

Parents in the experimental group attended four parent-teacher meetings and received supplementary materials. Control group parents did not receive the benefits of the meetings and materials. However, the student progress sheet and practice driving guides were made available to the control group parents through their children.

The experimental group parents met with the driver education faculty from the two Janesville high schools in a joint meeting at specified intervals during the semester to acquaint themselves with the program and to prepare for the home instruction. The parents were asked to contribute two hours of their time for each hour which students spent behind-the-wheel in formal classes,[1] or 12 hours.

The approach involved two media. Four two-hour parental meetings were conducted during the project period. Four primary materials were developed or purchased for parental and student use as another method to coordinate efforts. The meetings and materials were essentially the basis for the program.

The first of the parent-teacher meetings was held during the week prior to the students' starting the laboratory driving phase. The purposes of the first meeting were: to inform the parents of the purpose, background and development of the project; to present the goals and the objectives of driver education; and to emphasize the parents role in the driver education program. It was pointed out that driver education was more than just learning basic skills which permit the student to pass the driver license test. The parental role was defined as reinforcing skills introduced by the driver education teacher. Parents were not to introduce new skills. A second meeting would be held before the parents would be asked to start home practice. It was stressed that the school could not be liable when the student was driving the family car and the matter of insurance was discussed. Instruction permit limitations and parental responsibilities were subjects of concern. Discussion of the importance of parents setting good driving examples was followed by a film regarding use of restraining devices.

[1] The *Wisconsin Administrative Code* authorizes the Department of Public Instruction to approve only driver education programs meeting the minimum time requirements – 30 clock hours of classroom instruction and 6 clock hours of behind-the-wheel driving with 6 clock hours of observation time.

A part of the meeting was spent in pretesting the parents on the Columbia Driver Judgement Test (driving knowledge) and the Mann Inventory Test (personal feelings).

Parents were given *How to Drive* from the American Automobile Association [1] as a classroom reference source. A parental guide for teaching practice driving was developed for this project by the Automotive Safety Foundation. [2] To encourage common means of performing basic skills, the Janesville staff had developed a series of localized student driving guides. All students, in both groups, were given the same basic course of study. [3] A student progress sheet was to be updated with each practice driving session received either at home or at school so both would be aware of progress and needs. Duplicate copies kept with the parents were compared with the school copies at each joint parent meeting. Time was allotted for individual questions at the conclusion of the discussions.

To assist in coordination of home-school efforts, common basic driving skills had been grouped into six categories or stages, *(Helping Your Teenager Learn to Drive):*

STAGES OF INSTRUCTION

Driver education programs are generally divided into six stages for development of skills. Approximately one hour of school instruction is devoted to the skills included in each of these stages:

First Stage
- Starting
- Stopping
- Backing
- Curb Parking
- Turning

Second Stage
- Driving in Light Traffic
- Negotiating Intersections
- Lane Changing
- Turnabout

Third Stage
- Hill Parking
- Driving in Moderate Traffic
- Diagonal Parking

Fourth Stage
- Parallel Parking
- Driving in Heavy Traffic
- Passing

Fifth Stage
- Driving on Limited Access Highways
- Handling Emergency Conditions

Sixth Stage
- Night Driving
- Following Prescribed Routes

[1] American Automobile Association, *How to Drive*, Washington, D. C., 1962.

[2] Automotive Safety Foundation, *Helping Your Teen-Ager Learn to Drive*. 200 Ring Building, Washington, D. C., 1968.

[3] Janesville Public Schools, *Driver Education Laboratory Phase Student Guide*; 1968. Available from the Driver Education Section, Wisconsin Department of Public Instruction, 126 Langdon Street, Madison, Wisconsin 53702.

Summary of Parent Meeting – No. 1

The first meeting of the combined parents of Craig and Parker High Schools resulted in a representation of both experimental groups of 88 per cent present. Twenty-four of the students were represented by the attendance of both parents. The topics presented and discussed included the following:

1. Project purpose, background and development.
2. Purpose of driver education – explanation of school program.
3. Role of school and home – parental role.
4. Insurance (liability) information – responsibility of school and home.
5. Automobile loan – duel control cars.
6. Licensing – temporary school permits.
7. Record keeping – distributed and discussed.
8. Discussion and distribution of materials – guides.
9. Pre-testing – *Mann Personal Inventory* and *Columbia Driver Judgement Test.*
10. Film and discussion – "Broken Glass.[1]

After the majority of students were able to perform the basic skills in Stage I (start, stop, back, turn, and curb park the driver education dual-control car) a second parental meeting was held. Insurance and learning permit usage were reviewed. Parents were informed of when, where and how safe practice driving should be given in the family car. Transparencies were used to demonstrate correct steps for performing basic skills in the first stage. The skills in Stage II, which would be introduced before the next parent-school meeting were also demonstrated. A record-filmstrip presentation emphasizing proper seeing habits was used. The meeting ended with individual teacher-parent conferences.

Summary of Parent Meeting – No. 2

1. Review and discussion of driving permits, insurance, and use of the family car.
2. The "how, when and where to practice."
3. Basic skills – transparencies, handouts, and discussion (Stage I – Parent Guide).
4. Record-filmstrip presentation – "Seeing Habits for Expert Driving."[2]
5. More advanced skills (Stage II – Parent Guide) demonstrated and discussed. A-V aids were utilized.
6. Parent-teacher conferences.

[1] "Broken Glass," Charles Cahill & Associates film – Hollywood, Calif. Color, 17 minutes.

[2] *Seeing Habits for Expert Driving;* Traffic Safety and Highway Improvement Department, Ford Motor Company, Dearborn, Michigan.

The third meeting was conducted as parallel parking was being introduced at school, but before it was reinforced at home. Parking methods were discussed and demonstrated and problems encountered in moderate to heavy traffic were of common interest. Parents appreciated the fact that mutual problems were encountered by teachers and parents.

Since the last meeting would be held after the laboratory phase was completed, night driving, passing, and other remaining skills were demonstrated and discussed. Parents were also given hints on helping their children spot hazards and develop selective visual perception. A highlight of every meeting was the conferences held at the end in which parents could discuss individual problems.

Summary of Parent Meeting – No. 3

1. Parking skills (advanced) – angle, parallel, and hill position (Stages 3 and 4 – Parent Guide).
2. Highway and freeway driving – heavy traffic (passing procedures) (Stage 5 – Parent Guide).
3. Hazard presentation (perception) – spotting, reacting, and driving performance.
4. Increase individual ability and confidence.
5. Night driving techniques and skills. Begin in lighted residential areas before country and business district (distractions) driving (Stage 6 – Parent Guide).

The fourth and final meeting was utilized to help prepare parents for the post-driver education period. The question of what to do after formal driver education classes ended was presented as a challenge to the parents and the importance of parental control was emphasized. A major part of the evening was set aside for individual conferences for each family. The student progress sheet and the state driver's license tests were the basis for each conference. Each parent was informed of their child's progress and needs. Parents were again tested for their driving knowledge and personal feelings.

Summary of Parent Meeting – No. 4

1. Results of student participation and testing with the driver license examiner discussed.
2. Parental post-testing was conducted – to help determine secondary project purposes of a voluntary self-improvement program.
3. The role of the home after the project program is completed. What should the parent do in this post project period.
4. Final evaluation and individual parent-teacher conferences.
5. Project program review – 101 of the 104 students selected actually began the program, 96 completed the program.

Project Evaluation

Testing Methods

To investigate the differences between the two parental assistance approaches to enhance the laboratory phase of driver education, participants were tested on driving knowledge, personal feelings, and driving skills.

Driving knowledge was tested through the administering of the "Columbia Driver Judgment Test." The test was given before and after the experiment to students in both groups. The parents in the experimental group were also administered this as a pre-test and post-test.

The "Mann Inventory" was given to measure the personal feelings of both groups of students and the parents in the experimental group before and after the project.

The "Wisconsin Driving Test," which is the road skill test conducted by the Wisconsin Driver License Examiners to test driver license applicants, was given to each student group near the completion of the project. The examiners were not told which group a student participated in.

The analysis of variance was used as the statistical technique on the final scores of all testing instruments to determine the effectiveness of the two approaches. The "t" test of significance was used to compare mean differences between the driving knowledge scores of the control students and the scores of the experimental students. The "t" test was also used to test the differences of means between the initial and final driving knowledge scores of both groups of students and of parents in the experimental group.

The chi square statistical technique was used to test significant difference between control students and experimental student personal feeling score between pre and post-testings. Four aspects of personal feelings measured by the "Mann Inventory" were analyzed for significance.

The McNemar Test was used to determine the level of significance between initial and final "Mann Inventory" scores of control students, experimental students, and experimental parents. All four scores on the "Mann Inventory" were analyzed.

The five per cent level of confidence was held constant throughout all the statistical procedures and interpretations. The statistical data is available upon request from the Automotive Safety Foundation.

Student

The results obtained from testing the effectiveness between approaches used with the students produced the following findings:

A. Knowledge

1. A non-significant "t" value of 2.07 was obtained from analysis of the mean differences between driving knowledge scores of control and experimental students with unequal variance. Driving knowledge scores did not vary significantly between the two groups.

2. An analysis of the difference between control group students' pre and post-test scores of driving knowledge resulted in a significant "t" value of 7.51. Driving knowledge decreased.

3. A significant "t" value of 11.66 was determined by analysis of experimental group students' initial and final driving knowledge scores. Scores decreased during the experiment.

B. Personal Feelings

1. The chi square analysis of differences between control and experimental student scores revealed non-significant findings in the following aspects of personal feelings: adjustment – .481; aggressive – .979; withdrawal – .687 and average adjustment – .000008.

2. The McNemar Test analysis of personal feeling variances between the control student group's pre and post-test scores revealed the following: adjustment scale – .09 (to +) n.s.; aggressive scale – .00 – n.s.; withdrawal scale – 3.6 (to –) n.s.; and average adjustment scale – .22 (to +) n.s.

780

3. The NcNemar Test analysis of personal feeling variances between the experimental student group's initial and final scores resulted in the following: adjustment scale – .40 (to +) n.s.; aggressive scale – 2.66 (to +) n.s.; withdrawal scale – .20 (to –) n.s.; and average adjustment scale - .49 (to +) n.s.

4. A non-significant "t" value of .457 was obtained from an analysis of the mean differences between driving skill scores of control and experimental students.

C. Driving Skills

The road test administered by the two state driver license examiners to the 96 students completing the course averaged 20 minutes in duration covering a route of five miles. The Wisconsin Road Test is scored on a system of pass or fail. There are no numerical values given for a score. There are twenty skill maneuvers checked during the administration of the test. Any dangerous action and/or violation committed by the license applicant results in an unsatisfactory grade (failure). The examiners were not aware of which group each student participated in during this study.

Following are the available results:

1. Nineteen of the 37 boys who took the skill test passed, while the remaining 18 failed. For the 59 girls who took the test, 25 passed and 34 failed. 54.1% of the total number of students failed.

2. Fifty students participated in the experimental group with 24 (48%) passing the test and the remaining 26 (52%) failing the test. In the control group consisting of 46 students, 20 (43.5%) passed and 26 (56.5%) failed the test.

3. Those in charge of the study inadvertently did not instruct the examiners to retain the student exam cards. Consequently, the road exam results could not be evaluated further.

Findings

1. As measured by the test implement employed (Columbia Driver Judgment Test), an unexpected phenomenon appears evident. Knowledge test scores were lower among each group following the completion of the program than was evidenced prior to treatment. The greatest decrease, though not significantly different, was among the group of students whose parents received help.

2. As measured by the "Mann Inventory" the adjustment scores of the students in the experimental group in each of the behavioral categories tended to show some improvement. They became less aggressive to a degree. They tended to withdrawal less than students whose parents did not receive help from the school. Their average adjustment tended to improve, but not significantly.

3. Assistance from parents receiving direction from the driver education teacher did not improve the students' driving skills in this study.

Parent

Testing the degree of effect the experiment had upon the experimental parent group resulted in the following findings:

A. Knowledge

Analysis of mean differences between pre and post-testing of experimental parents' driving knowledge resulted in a significant "t" value of 5.56.

B. Personal Feelings

Using the McNemar Test analysis of personal feeling variance between initial and final scores of the experimental parents revealed no significant changes.

Findings

1. Parents given school direction showed a significant decrease in driving knowledge as measured by the Columbia Driver Judgment Test.

2. Help given by the driver education teacher appears to have little effect upon the parents' personal feelings. They became less aggressive during the experience, but it was not at a significant level.

It should be stated here that in driver and traffic safety education, as in the total educational environment, many intangibles are difficult to measure by testing procedures.

Questionnaires

The project was also evaluated through questionnaires. Separate questionnaires were developed and used by all students, parents, administrators, and staff members. The driver license examiner was also questioned. The questionnaire sought opinions only.

Student

An evaluation questionnaire (note Appendix B) was given to all students participating in the project. The students completed this questionnaire and returned it to the instructors involved in that part of the program.

The questionnaire was the same for both the experimental and control groups. This questionnaire purposed to answer two questions:

1. How does the student feel about parental help?

2. Should a method of this sort be an integral part of a driver education program?

Findings

In the experimental group, 82% of the total felt that they received enough help from parents, 14% did not and 4% gave no definite answer or were not ready to respond to question 2 on the evaluation questionnaire.

In the control group, 58.7% felt the parents had given enough help in meeting the request of 2 hours at home for each hour in school, while 36.9% felt the parents had not given enough help and 4.3% did not respond.

Appendix C, Tables I-VI give the specific responses fo practice time in question 3 and to the skill areas in question 4 on the student evaluation questionnaire. It should be remembered that a minimum of 12 hours of home instruction was requested to compliment the six hours given by the school.

A summary of the remaining questions on the student questionnaire showed the following:

1. Question 3 indicated help was given as requested within both groups, while the parent questionnaire indicated that the experimental group received more help. This is a discrepancy between response of the two questionnaires. The opinion of the school staff is that the parents probably responded more accurately because the students may have wanted to meet with favor from the school staff.

2. Both groups felt they had sufficient time to practice in light and heavy traffic.

3. Control group students indicated they needed and received more parental help with parallel parking.

4. In question 5, more students felt they would like to have more help from the school staff.

5. Question 6 showed that 91% of the experimental group students found the student driving guides helpful, while 80.4% of the control group students found the guides helpful. Only 4.4% of the experimental group believe the guides to be of little value while 11% of the control group said that the guides were of little help.

6. Most students stated in question 7 that they appeared satisfied with the parental assistance they received from home. Forty-eight per cent of the experimental group indicated satisfaction, while 20% were dissatisfied and 31% were indifferent. The control group stated 34.8% satisfied, 31.9% were not satisfied, 21% were indifferent and 4% did not respond.

7. There were many reasons listed by both groups for enrolling in the course program. The two most common reasons which most every student listed were: Wanted to learn how to drive properly and safely, and to receive the benefits of lower insurance rates.

8. Question number 9 seemed to be irrelevant to the situation. However, 8.8% of the experimental group indicated a desire to participate in the summer laboratory program and only 2.1% of the control group indicated this desire. It should be noted that the summer driver education laboratory program in Janesville include multiple-car driving range instruction.

9. The final question indicated that 91.8% of the experimental group expressed a desire for this project to continue and 2.2% expressed a negative response. In the control group 93.5% thought this program worthy of continuation and only 4.2% responded negatively.

Parent

A questionnaire was given to *all* families participating in the project (see Appendix D-1 and D-2). The majority of the experimental group received and completed their questionnaires at the final parental meeting; those not in attendance completed a copy sent home with the student. The control group parents received and returned their questionnaires through the student.

Thirty-seven questionnaires were returned from the control group representing about 75 per cent of the families assigned to this group.

Between 75-80 per cent of the families in the experimental group completed and returned questionnaires. The larger number of responses (48) is the result of *both* parents in several families completing questionnaires.

The experimental group was also asked to evaluate the additional help they received through the experiment by attending the meetings and using the prepared materials.

Findings

Compilation of the questionnaire responses revealed:

1. In the experimental group: 83 per cent of the parents felt they made a valuable contribution to the future driver in their family, 5 per cent felt their contribution was questionable, and 12 per cent thought they made no

contribution. The control group replied yes in 75 per cent of the cases, questionable in 11 per cent and no in 14 per cent.

2. For each hour a child received under school supervision, his parents were asked to give two hours of practice driving. In the experimental group 71 per cent gave at least two hours, 11 per cent did so most of the time, and 18 per cent did not provide this assistance. The control group responses were 63 per cent 6 per cent, and 31 per cent respectively.

Those in both groups who failed to give this assistance most frequently cited a conflict with working hours as their reason.

3. The major problem encountered by the experimental group was the lack of time, and the control group found it hard to relax with their children driving (4).

A problem encountered in dealing with skills in the experimental group was speed control (4).

The control group had the greatest problem in the skill area with parking (6) and speed control (4).

Many in the experimental group (8) and in the control group (10) indicated that they encountered no major problem.

4. Seventy-eight per cent of the experimental group encountering any problems felt they were able to solve the problems, 9 per cent solved most of the problems, and 13 per cent were unable. In the control group 66 per cent solved the problems, 26 per cent solved most of the problems, and 8 per cent were unable to solve them.

5. When asked if they felt safe with their child driving at the completion of the project, the experimental group answered yes – 73 per cent, sometimes – 15 per cent, and no – 12 per cent. The control group answered yes – 86 per cent, sometimes – 10 per cent, and no – 4 per cent.

6. Forty-eight per cent of the experimental group had older children who had completed driver education whereas 43 per cent of the control group answered yes to this question.

7. Of those parents with older children having had driver education, the experimental group felt that the earlier program helped their children as much as this experiment in 48 per cent of the cases, about the same in 2 per cent, and not as much in 48 per cent of the cases, about the same in 7 per cent, and not as much in 53 per cent of the cases.

8. When asked if they felt their involvement in this project improved their own driving, the experimental group replied yes – 76 per cent, somewhat – 19 per cent, no – 5 per cent. The control group replied with yes – 80 per cent, somewhat – 9 per cent, and no – 11 per cent.

9. When the experimental group was asked to make any additional comments, the following were given: Course was well planned (7); Program should continue (5); Outstanding teachers (4); More behind-the-wheel at school (3); Better than regular course (3); Beginners need lots of practice (2). Many other comments were mentioned once.

The control group made the following comments: Project was good (5); Instructors were patient (4); Program should continue (4); More behind-the-wheel at school (2); How parents can assist (2); Gained self confidence (2); More progress reports from school (2). They also listed many other points.

When the experimental group was asked further questions related to the instruction they recieved at the parental meetings and the materials for their use, the following was revealed:

1. The things they felt most helpful at the meetings were the visual aids used (5), being told what would be taught next (3), having individual conferences with the teachers (3), and discovering their problems were the same as the teacher was having (3). They appreciated the sincerity of the instructors, books and lesson sheets distributed, and discussion of turning techniques; all mentioned twice.

2. The only recommendation for the parental meetings that was mentioned more than once was the placing of more emphasis on parents giving the proper kind and amount of practice.

3. Thirty-eight commented on the use of the ASF booklet. Twenty-one said they used the booklet, eight did sometimes, and nine did not use it. The uses of the book included: preparation for practice driving (6), solving parking problems (5), using the book during the early stage of the program (3), improving turns (2), and as a general review (2).

4. Very few comments were made as to ways of improving the booklet. Each suggestion was mentioned only once: Complete as is; How to maintain proper speed; Pedestrian problems.

5. The AAA book "How to Drive" was used by 19 parents most of the time, by 3 sometimes, and 15 never used it.

To summarize, the parental questionnaires revealed the following:

1. The majority of parents involved felt they helped their children become safer drivers. There appeared to be no difference of feelings on this question between the

experimental and control groups.

2. Not all parents were able to give the two hours of practice time that they had indicated they were willing to give to the experiment. The experimental group did satisfy this requirement more often than the control group.

3. Several parents felt they did not encounter any major problems in helping their children. The experimental group indicated they lacked time to help, but earlier had indicated that they could find the time. The skills they found hard to improve differed between groups, but they both had trouble with speed control. The control group had an abnormal number of problems when the child was learning to park the car.

4. Parents encountering problems seemed to be able to solve them. However, the experimental group appeared to have been more capable of solving their problems.

5. The majority of the parents felt safe riding with the child at the completion of the course. More of the experimental group felt unsafe than did the control group.

6. The control group felt the older children learned less from a regular course, but the experimental group felt there was little difference between the two approaches.

7. The majority of parents felt their own driving had improved as a result of their involvement in this project.

8. The experimental group gave high praise for the way the project was conducted. The control group also praised the program, but gave more constructive criticism. The latter group proposed more progress reports from the school and more information on how they could assist. Very few parents replying indicated a dissatisfaction in the parental-assistance approach.

9. The visual aids used during the parental meetings appeared to have been very valuable. The parent-teacher conference and knowing what would be taught next seemed to have been helpful to the parents.

10. The experimental group parents indicated satisfaction with the meetings. They had very few recommendations for improvement.

11. Most experimental group parents used the ASF booklet and found it useful to prepare for each practice session, solve parking problems, and help the child during the early phase of the program.

12. The ASF booklet appears to be satisfactory in its present form.

13. "How to Drive" was not extensively used as a reference.

Administration and Staff

Teacher and administrator questionnaires revealed many interesting conclusions. Administrators felt this was outstanding school public relations, but most were unable to evaluate any further because of their lack of involvement in the project. The evaluation form in Appendix E was utilized by the administration and teaching staff during a one day workshop at the conclusion of the program. The school staff agreed on the following conclusions:

1. This program approach does provide the high school teacher with more time to teach advanced driving skills.

2. Parents can be helpful, but need constant help and guidance.

3. Student practice driving guides play an important part.

4. Testing during parental meetings consumed needed time.

5. Five shorter, regularly spaced meetings should be held instead of four two-hour meetings.

6. Parental conferences at the conclusion of meeting were most beneficial. It may be best to use one meeting time just for parental conferences.

7. Visual aids used during meetings helped parents better understand driving skills.

8. A driver license examiner or other resource people should be included during the parental meetings.

9. Over-all, it was believed by the school staff that the experimental students progressed further and more consistently than the control group.

10. Conducting the in-car demonstrations for the parents during a part of the meeting time should be considered.

11. It should be emphasized that the students not be introduced to new skills by the parents.

12. One semester (18 weeks) was too long for the laboratory phase when parents were assisting. Six to twelve weeks would be better.

13. Preparation for parental meetings is very important.

14. Ideally, this approach should be repeated in the same school, with the same school staff, to further evaluate its merits.

Driver License Examiner

During the one-day followup evaluation workshop, the project staff met with Mr. Charles Raymond, Supervisor of the Janesville area driver license examiners, to discuss their participation in the project. Mr. Raymond was one of two examiners who conducted the road test for all students one week before the conclusion of the project. It must be made clear that the state road test was administered before the formal termination of this study. The normal and encouraged home practice time was limited. The road test should have been administered after the completion of the study. The examiners agreed on the following conclusions.

1. Student inexperience was the primary difficulty. The high failing rate of 54.1% was due to a lack of desired practice time at home.

2. The amount of parental help given to a student, regardless of group, determined to a degree success on the Wisconsin driving skill test. The examiners as well as the students agree that more time should be spent with parents in the practice of skills taught in the school program rather than on just straight road driving.

3. During the administration of the road test, the examiners could not distinguish the difference between the experimental and control group students as there was little or no difference in observed driving skills.

4. As a result of premature road testing the failing rate for students in this study was much higher than normal for graduates in the Janesville driver education program. The procedure for graduates of the Janesville program is normally a letter report sent home for each student suggesting the type and length of practice at home before reporting to the examiner.

Conclusion

The findings listed above which were drawn from the evaluation workshop conducted at the termination of the project should be utilized by schools considering this for improving their high school driver education program. This was only one experimental study intended to initially investigate a systematic home-school approach in driver education. It is recommended that other schools utilize this approach with the findings from this applied research report. This study needs to be repeated, with improvements, to see what the real merits of this approach can be.

This approach requires time beyond the regular school schedule. Therefore, teachers and schools must be willing to give the necessary time and support.

The purpose for encouraging more investigation into the home-school approach elsewhere must not be overlooked. There are many variables to be tested and retested before definite recommendations can be considered for driver and traffic safety education across the United States. Other findings include:

1. Parents give more hours of systematic instruction in this type of program than in a traditional driver education concurrent program.

2. The student experimental group received more systematic instruction and driving time in traffic than the student control group.

3. The students in the control group demanded more time and help in learning skills and developing a degree of competence equal to the level of the experimental group. This was due chiefly to the problem of the control group parents requiring more time to accomplish a degree of competency in the development of skills and confidence. The lack of knowledge in teaching techniques and methodology was apparent.

4. The experimental parent group reported a greater degree of efficiency in problem solving during the practice lessons than the control group parents.

5. Some of the control group parents found it harder to relax with their children during the driving lessons. This group of parents requested more help from the staff.

6. The remainder of the control group parents reported that they felt safer riding with their children. But this may be partly due to the fact that this group of parents did not understand all of the problems encountered in the process of learning the driving task.

7. Parents from both groups reported that they felt their own driving improved as a result of this program.

8. As reported by the parents, more emphasis should be placed upon meeting the two hour requirement (for each hour spent in school) in home instruction. The majority stated that it should have been stressed more. This included that the proper kind of help be stressed, such as advanced skills and emergency driving rather than straight road driving.

9. The book, "How to Drive," was not utilized extensively to a satisfactory degree. Apparently the guide, "Helping Your Teenager Learn to Drive" was sufficient for the purposes of this experiment.

10. More individual parent-teacher conferences should be conducted. Perhaps parent conferences conducted during the regular school day would be helpful.

11. More group discussion should be encouraged during a part of the parent-teacher meetings. Many problems are common to all. Group discussion can serve to reduce the amount of time necessary to solve many of the common problems as well as reduce the formal atmosphere of the meeting.

12. Students should be tested for evaluation of the program and not for a driver's license. Numerical scores should be applied and made available to the project staff in order to compare the two groups of students. In Wisconsin these test results are normally discarded. These should be made available when information is necessary for research purposes. The test for the driver's license should be given after sufficient practice time at home is allowed. Twenty minutes is not enough time to evaluate student skills.

13. It was found that the teacher does have more time with each student for more advance driving skills as a result of this kind of program.

14. This approach should be repeated in the same school with the same staff, to further test its merits.

The organization and communication process remain important criteria in determining the success of applied research projects. Many problems encountered in this study can be avoided in future studies to further the knowledge and feasibility of home-school programs in driver and traffic safety education. The weakness in skill testing procedures is a problem that can be avoided in future attempts.

The nature of high school driver education is changing. This is true in the classroom instructional program as well as in the laboratory instructional program. One thing remains constant – the teacher is the key to success in any instructional program.

An attempt has been made in this report to present and interpret what a systematic home-school program can accomplish beyond the traditional course.

The parent *can* play an important role in assisting the school in upgrading and improving the total driver education instructional program.

Appendices

Appendix A

November 30, 1967

Dear Parents:

The Janesville senior high schools have been chosen to conduct a unique experiment in driver education sponsored by the Automotive Safety Foundation and in cooperation with the State Department of Public Instruction during the second semester.

The project is entitled the *Extended Driver Education Laboratory Enrichment* project. Janesville will be the only city in the United States to conduct this project. Arrangements are being made so that two staff members can work directly with parents as well as students in a program of behind-the-wheel instruction.

The purpose of the experiment will be to determine if interested parents can help supplement the instruction given for behind-the-wheel training. As you know, state law requires that a minimum of six hours of behind-the-wheel time be given each student. This is usually not an adequate amount of time to turn out a finished product capable of driving on the complicated roads and in the traffic situations we can expect to encounter in the years ahead. Our driver education staff spends more than the minimum amount of time so that they can expose our student drivers to freeway driving experience, emergency situations and the dangers of night driving in addition to that regularly taught in the course.

This will be the first time that behind-the-wheel instruction will be offered during the regular school term at Janesville as we have concentrated our efforts in the past during the summer term.

To be eligible to participate in this program the following general rules will be in effect.

1. Student must attain his 16th birthday by February 15, 1968.
2. Student must have a passing grade of "C" or better in Driver Education.
3. Student may not have a current temporary permit or drivers license.
4. Student must have permission of parent, pay $5.00 laboratory fee, and agree to complete course if accepted. Driving will be during school time with some night driving required. (The $5.00 laboratory fee is to be paid *after* the student is accepted in the program. The fee should be paid in check form payable to the Board of Education.)

All applicants will receive this letter of invitation and after the applications are returned, screening will begin. The applications should be returned to the student's driver education instructor. We expect to announce the names of those participating by December 15, 1967.

The parents' role will be as follows. Fifty-two students at each school will be chosen to participate. One-half will be designated as control group and the other half as experimental. Each group will receive exactly the same instruction from our staff. All parents must agree to spending the necessary time if they are accepted. However, only half will participate.

The parents of the experimental group will meet with the driver education staff at specified intervals during the semester to acquaint themselves with our program and to answer questions that may arise. We will supply an AAA text program and related material to the parents. Under terms of the experiment, two hours of parental help is required for each hour of time spent behind the wheel. It is expected that four group meetings will be required to realize our goal. Each family must have at least one legally licensed parent who agrees to spend the necessary time in practice driving.

As this will be a national experiment, it can be expected that a lot of publicity will be generated from this project. Additional information will be forthcoming as soon as we select the participants. Any questions should be directed to Mr. Norman Gesteland, Parker Senior High, who will be in charge of the experiment on the local level.

Assisting him will be Mr. Donald Swanson of the Craig staff. Mr. Russell Hutter will represent the State Department of Public Instruction and Mr. Arthur Opfer will be in charge of the over-all project from the Washington, D.C., office of the Automotive Safety Foundation.

If you are interested in this project, please return the application form as soon as possible, but no later than December 8, 1967.

Sincerely yours,

Appendix B

STUDENT EVALUATION OF DRIVER
EDUCATION LABORATORY ENRICHMENT PROJECT

Name_____

During the past semester you have been contributing to an experimental project attempting to improve the quality of high school driver education. Without your cooperation this project could not have been conducted.

We would appreciate your honest answers to the following questions so that we might further evaluate this project.

1. Which group were you in? Experimental Control
2. Did you feel you received enough help from your parents? Yes No
3. Approximately how much time in hours did you practice with your parents?_____
4. Of the above amount of time, how much time was given for each area?
   a. Light traffic, country driving, etc._____
   b. Heavy city traffic_____
   c. U-turn, Y-turn, driveway turn_____
   d. Parallel park, angle park_____
   e. Highway, freeway_____
5. If you were taking this course again, what changes would you like to see?_____
6. Did the manual which was given to you help in learning to drive? _____
7. Do you feel parents make good driving instructors?_____
8. List your reasons for taking this course.
   a._____
   b._____
   c._____
9. Do you intend to take further instruction by enrolling in driver education for the summer course?_____ _____
10. Would you recommend continuing a project of this type?_____

Appendix C

Table I - Question 3, Student Questionnaire

Total Practice Hours	Experimental	Control
less than 1 hour	2.2%	2.1%
1-2 hours	2.2%	4.2%
2-5 hours	2.2%	8.4%
5-10 hours	6.2%	4.2%
10-15 hours	35.2%	12.6%
15-20 hours	8.8%	4.2%
20-25 hours	8.8%	18.9%
25-30 hours	13.3%	-----
30-35 hours	6.7%	14.7%
over 35 hours	8.8%	18.9%
no response	4.4%	8.4%

Table II - Question 4,a

Light Traffic

Total Practice Hours	Experimental	Control
less than 1 hour	13.2%	16.8%
2-5 hours	35.2%	25.2%
5-10 hours	35.2%	31.5%
10-15 hours	11.0%	4.2%
over 15 hours	4.4%	12.6%
no response	1.0%	9.7%

Table III - Question 4,b

Heavy Traffic

Total Practice Hours	Experimental	Control
less than 1 hour	26.4%	23.1%
2-5 hours	46.2%	35.7%
5-10 hours	22.0%	16.8%
10-15 hours	4.4%	2.1%
over 15 hours	-----	10.5%
no response	-----	10.8%

Table IV - Question 4,c

Turning

Total Practice Hours	Experimental	Control
less than 1 hour	28.6%	37.4%
2-5 hours	59.4%	39.6%
5-10 hours	11.0%	8.4%
10-15 hours	-----	2.1%
over 15 hours	-----	2.1%
no response	-----	10.4%

Table V - Question 4,d

Parking

Total Practice Hours	Experimental	Control
less than 1 hour	41.8%	35.7%
2-5 hours	50.6%	29.4%
5-10 hours	6.6%	10.5%
10-15 hours	-----	-----
over 15 hours	-----	4.2%
no response	-----	20.1%

Table VI - Question 4,e

Highway Freeway Driving

Total Practice Hours	Experimental	Control
less than 1 hour	33.0%	35.7%
2-5 hours	48.4%	29.4%
5-10 hours	15.4%	2.1%
10-15 hours	2.2%	2.1%
over 15 hours	-----	8.4%
no response	-----	22.2%

Appendix D

Parental Evaluation

Experimental Group

During the past semester you and your son/daughter have been contributing to an experimental project attempting to improve the quality of high school driver education. Without your cooperation this project could not have been conducted.

The future of the parental-assistance is still undertermined. We have attempted to evaluate its effectiveness through tests. Test results can be very meaningful, but your opinions can offer much to evaluating the program. Your honest opinion to the few following questions will be sincerely appreciated.

Which group was your child in? Experimental Control (Circle One)

Do you feel you were able to make a valuable contribution to the future driver in your family? _____

Did your son/daughter receive at least two hours of your assistance for each hour of driving received at the high school? _____
If not, what were the reasons? _____

Describe briefly the major problems, if any, you faced in assisting your son/daughter learn to drive. _____

Did you feel you were able to solve most of these problems? _____

Do you really feel safe riding with your son/daughter at this time? _____

Do you have older children who have completed driver education? _____. If so, do you feel they learned as much from the laboratory phase as the son/daughter you have helped in this project? _____

Has this experience improved your driving habits, skills and attitudes? _____

What information received at our meetings was the most helpful in assisting your child learn to drive? _____

What other topics do you feel should have been discussed at the meetings? _____

Did you use "Helping Your Teenager Learn to Drive"? _____
If so, when did you find it most useful? _____

What additional information do you feel could be added to make the booklet more useful? _____

Did you frequently use ' How to Drive"? _____

Do you have any additional comments regarding the project? _____

Control Group

During the past semester you and your son/daughter have been contributing to an experimental project attempting to improve the quality of high school driver education. Without your cooperation this project could not have been conducted.

The future of the parental-assistance is still undertermined. We have attempted to evaluate its effectiveness through tests. Test results can be very meaningful, but your opinions can offer much to evaluating the program. Your honest opinion to the few following questions will be sincerely appreciated.

Which group was your child in? Experimental Control
(Circle One)

Do you feel you were able to make a valuable contribution to the future driver in your family? _____

Did your son/daughter receive at least two hours of your assistance for each hour of driving received at the high school? _____
If not, what were the reasons? _____

Describe briefly the major problems, if any, you faced in assisting your son/daughter learn to drive. _____

Did you feel you were able to solve most of these problems? _____

Do you really feel safe riding with your son/daughter at this time? _____

Do you have older children who have completed driver education? _____. If so, do you feel they learned as much from the laboratory phase as the son/daughter you have helped in this project? _____

Has this experience improved your driving habits, skills and attitudes? _____

Do you have any additional comments concerning the project? _____

Appendix E

Project Evaluation

Questionnaire - Administrators, Guidance, and Instructors.

Please answer questions as completely as possible and bring completed questionnaire with you for evaluative discussion during the workshop. Your questionnaire will be collected at the conclusion of this session. We ask you to sign your name and title (at end) only to see your role and its relationship in this kind of program (for possible future programs).

1. From your vantage point, did this project create new assets (strengths) or new problems in your educational program which you have not experienced previously? Describe according to the following categories:

	Advantages	Disadvantages/ Problems	Outcomes
Staffing ex. Instruction			
Administration ex. Supervision			
Scheduling			
Financial			
Student Body			
Other			

2. The same question as in number 1, above, except you are asked to assume that you have had a classroom laboratory concurrent program previously. What do you believe would have been the strengths and weaknesses of this study, if any?

	Advantages	Disadvantages/ Problems	Outcomes
Staffing ex. Instruction			
Administration ex. Supervision Scheduling			
Financial			
Student Body			
Other			

3. In your view, does the parental assisted approach appear to be a better program? (Why or why not)

4. Would you, or are you planning to continue a concurrent program in the future?

   With the parental home/school approach:

   Without the parental home/school approach:
   (a regular-traditional-concurrent program)

5. From your vantage point, does a concurrent driver education program, as you have just concluded, provide a higher quality program?

6. What response, feedback, have you received from the community, regarding this project good and/or bad? (Parent, police, business, etc.)

7. Please feel free to discuss any aspect of this study not included above.

Thank you for your cooperation.

Your signature _____

Title _____

VT 017 623
MOVE IN '71. MISSOURI VOCATIONAL EVALUATION--
1971. FINAL EVALUATION REPORT. 2ND ANNUAL
REPORT.

MISSOURI STATE ADVISORY COUNCIL ON VOCATIONAL
EDUCATION, JEFFERSON CITY
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PROGRAMS; PROGRAM IMPROVEMENT; PROGRAM
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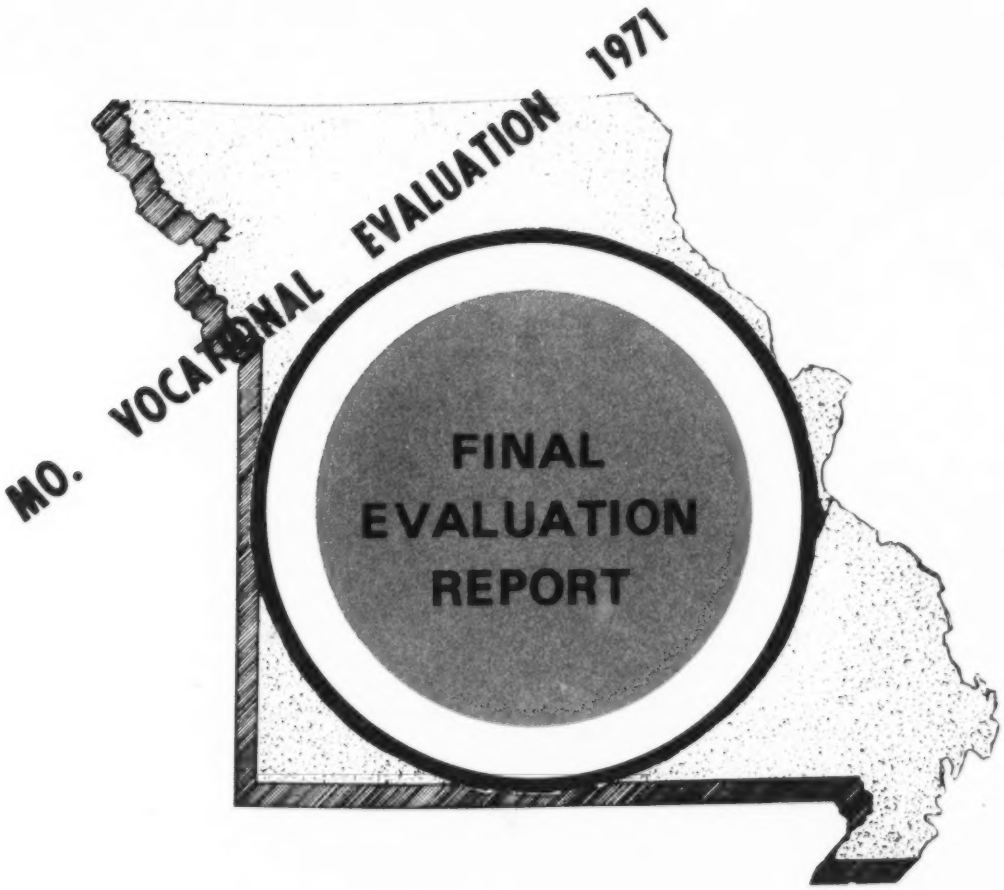
PLANNING
IDENTIFIERS - *MISSOURI; EDUCATIONAL
AWARENESS

ABSTRACT - THIS ANNUAL REPORT EVALUATES THE
VOCATIONAL EDUCATION PROGRAM IN MISSOURI IN
1971 AND OFFERS RECOMMENDATIONS FOR ITS
RESTRUCTURING. BASED ON THE PHILOSOPHY THAT
THE PUBLIC SCHOOLS HAVE A RESPONSIBILITY TO
EDUCATE ALL STUDENTS TO A DEGREE OF ENTRY-
LEVEL EMPLOYABILITY, MOST OF THE
RECOMMENDATIONS INVOLVE A RESTRUCTURING OF
PRIORITIES TO PROVIDE FOR ADEQUATE LOCAL
PLANNING DISTRICTS, GUIDANCE SERVICES, AND
UPGRADING OF FACILITIES AND STAFF MEMBERS IN
THE PROGRAM. THE REPORT SETS FORTH THREE
GOALS TO BE USED AS GUIDELINES FOR PROGRAM
EVALUATION, FOCUSING ON: (1) THE STATE'S
GOALS AND PRIORITIES AS STATED IN THE STATE
PLAN, (2) THE EFFECTIVENESS WITH WHICH PEOPLE
AND THEIR NEEDS ARE SERVED, AND (3) THE
EXTENT TO WHICH COUNCIL RECOMMENDATIONS HAVE
RECEIVED DUE CONSIDERATION. (KH)

VT 017 623

MOVE IN '71



Second Annual Report

MISSOURI ADVISORY COUNCIL

ON VOCATIONAL EDUCATION

VT017623

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SECOND ANNUAL REPORT

OCTOBER, 1971

MISSOURI ADVISORY COUNCIL
ON
VOCATIONAL
EDUCATION

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WILLIAM E. CLARK
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FRED J. ZAISER

Mr. Sidney R. Redmond
705 Chestnut
St. Louis, Missouri 63101

Dear Mr. Redmond:

The Missouri Advisory Council on Vocational Education is pleased to transmit our Second Annual Report to you. We have entitled the report "Move in '71." This title should help denote the feeling of our Council that our educational system should be restructured by appropriate and timely actions as recommended within the body of the compilation.

It is the desire of our group to outline some methods which we feel will help the educational system to serve more effectively the total needs of the community, its people as individuals, and the State.

On May 24, 1971, a public hearing held by the Council on vocational education brought out several ideas and feelings of interested groups and citizens from throughout Missouri. You have previously received a summary report of the concerns brought out at this meeting in a letter report to Governor Hearnes which was also submitted to your Board members.

It is hoped that your Board will accept this report, and add any comments and suggestions deemed appropriate.

After acceptance of this report, it is urged that your Board study and adopt or reject each specific recommendation. If adopted, the notation of an appropriate time constraint for action would be helpful for our evaluation process.

The Council will endeavor to pursue every avenue available to further develop vocational education for the enhancement of the lives of the citizens of the State. We will be happy to meet with you to discuss this report or any phase of this report.

Your continued interest and support is most appreciated.

Respectfully,

William E. Clark

William E. Clark
Chairman

WEC/bab

SECOND ANNUAL REPORT

of the

State of Missouri

ADVISORY COUNCIL ON VOCATIONAL EDUCATION

INTRODUCTION

The Missouri State Advisory Council for Vocational Education was established in May, 1969, in accordance with the 1968 Amendments to the Vocational Education Act of 1963. Membership includes men with broad understanding and professional expertise in the needs and problems of labor and management, in secondary, post-secondary, and adult vocational-technical education, and in the needs and problems of handicapped and socially or educationally disadvantaged persons.

It is the responsibility of this group to give direction to the required evaluation report of vocational education for the State of Missouri. The first annual report was contracted to the Educational Evaluation Center from the University of Missouri. This, the second annual report, will cover some of the basic items which must be considered in an effort to restructure the system as we presently know it.

A BRIEF PHILOSOPHY

Everyone has the right to expect the schools to furnish the background necessary for useful citizenship. This implies that the responsibility for educating for at least an entry-level occupation with minimal-level, marketable skills is not only within the province of the local educational agency, but is, indeed, mandated. The State must, through its regulations and plans, do all within its power to set a structure--a restructure--so that vocational education will in no sense be considered "second class." The big pitch for all students to go on to college must be balanced with a realistic look at the waste of time, effort, and money, not to mention the frustration, distress, and anguish caused. In order to achieve this balance, first priority must be given to programs which will educate to a level of adequate employability. The idea that the only good education is one which includes four years of college must be changed. We, as a nation, seem to transmit this notion through our values, our aspirations, and our supports while knowing full well that it is snobbish and undemocratic. We know that even into the 1980's, it will still be true that fewer than 20 percent of our job opportunities will require a four-year college degree. All work has dignity, and only the arrogant will allow themselves to feel that one job is more worthy than the other. Every child must be educated to his highest potential. This means our local districts and our state regulations must take into account an organized program of orientation and exploration into the world of work at the elementary level. Job-related instruction should be made available for some pupils.

We must begin to Move in '71 to implement these concepts.

RECOMMENDATIONS

Recommendation I: Restructure the Priorities of Our Educational System

It is generally accepted that a goal of preparing for college has been adopted by approximately 60-65% of our high school students in Missouri. This is in striking contrast with statistics from the United States Department of Labor which indicate that the 1980 educational requirements of the labor force will be 20% with a baccalaureate or higher degree, 25% with technical training, and 55% with occupational skills below the technical level. Assuming the validity of this data, it is evident that there must be substantial changes in the educational processes and resulting product.

The Council, therefore, recommends:

1. *That the State Board of Education establish a mechanism, with the objective of restructuring the educational system to accommodate the relevant and occupational needs of individuals and prepare them for the work force in keeping with the needs of such work force.*

2. *That it become the policy and philosophy of the State and local boards of education that options be left open to students through a flexible education system to encourage adjustment of individual education programs in keeping with the interests, aptitudes, abilities, and circumstances of the individual to the end that all be successful in achieving a worthwhile life goal. (Considering such items as allowing more electives, fewer required courses, and more credit for occupational training on the job.)*

3. *That the State Board of Education adopt as a priority concern the feasibility of occupational education exposure for every child in Missouri public schools. (Place a requirement for inclusion of career education in the elementary program and offer monetary incentive for each program begun.)*

a. *In an effort to encourage this type of activity, initiate models through the exemplary program monies allocated to the State for distribution.*

Recommendation II: Creation of Planning Districts

It has been suggested by the Swanson Study (1966), "A Gateway to Higher Economic Levels," that the State be divided into six Vocational Education Administrative Districts for more efficient administrative operation. Further, the Missouri School District Reorganization Commission (1968) recommended 20 regional districts to carry out the several functions recommended. Smith's Study (1968), "Final Report Missouri Public Junior College Study," proposed fifteen junior college districts be formed. From the expertise as assembled to create these fine reports, the validity of larger than single local units working together has been established.

The Council, therefore, recommends to the State Board:

That the State be divided into educational planning districts by some feasible method in order that more efficient and effective coordination can be developed in such items as general program approvals, forming area vocational schools, and other State priorities for all educational purposes. These districts should be provided and given information about the six major labor markets within the state.

Recommendation III: Improving the Data Base for Planning

The validity and reliability levels of data gathered for the tabulations displayed in Part II and Part III of the State Plan must be increased. This is recognized as a problem by the various levels and departments of both State and Federal government as evidenced by many efforts to correct or improve the situation. The efforts begun by the Missouri Department of Education are to be commended, but much more is necessary.

The Council, therefore, recommends to the State Board:

1. *That plans be immediately set into motion to assure that funds will be available to carry on the collection and analysis of manpower data presently being studied and planned in the manpower needs study (MOTIS - Missouri Occupational and Training Information Survey) presently being funded by the Ozark Regional Commission. This is a mandatory requirement if the data to be used in planning is to become more reliable and usable.*

2. *As a necessary corollary to the prior recommendation, it is further recommended that the State initiate a coordinated system of data collection for both State and local planning. The Educational Data Processing procedures, equipment, and personnel that are needed to implement this system should be given a priority rating of high import. All forms for vocational programs, both financial and statistical, should be converted to electronic data processing forms so that the information could be almost "instantly" available to evaluators, planners, and administrative directors of vocational programs and students.*

3. *That information on the "product" of any vocational program in the state be available to the evaluation team without having to ask for additional information from the school and program under surveilance. This could expedite the time required to make these evaluations and certainly decrease the cost involved and still offer recommendations of the same caliber and import presently tendered.*

4. *That the data collected by the State Department of Education on form FD/5, Section I, Dropout Data be significantly improved in the requirement, collection procedure, and follow-up of reported data.*

Recommendation IV: Require Planning Instrument of Local Districts

In an effort to improve the data inputs required of the Directors of the various sections in the State Department of Education at the time the planning instruments are required by the U.S.O.E., it would be extremely helpful if this data were on electronic file from the various programs around the state.

Therefore, the Council recommends to the State Board:

1. *That Local Plans for Vocational Education be made mandatory as required in Section 123 (a) (6) (F) (IV) of P.L. 90-576. These plans should supply the data required to complete the data requirements of the Missouri State Plan for Vocational Education. This should be more than an application for funds. The*

plan should be set up to state performance objectives of the programs which could be evaluated by a committee of S.D.E. personnel as to the adequateness of program, supplies, equipment, and qualified personnel to carry out the program. The additional requirement of projecting for a period of five years should be made a requirement of the plan.

2. That workshops be instituted by the Department of Education to train local personnel in the gathering of data, writing objectives, and planning for adequate evaluation of programs to insure a degree of standardization compatible with a general regulation instituted for compliance.

3. That the S.D.E. require an annual agreement that the plan was checked and is agreed to by a majority vote of the local advisory committee and is signed by the chairman of this committee. Missouri Revised Statutes 178.560 require that local advisory committees be set up. This should be considered a minimal use of these groups.

Recommendation V: Create a Planning Instrument at the State Level.

A plan is by definition a scheme, a design, or a plot of what we know about where we are, where we would like to go, and some mechanism or vehicle showing how to get there. This design, of course, includes priorities which show, at the State level, which items are considered of greater import than others and will even, in the rationale, explain the derivation of the priorities. This planning must of necessity be an ongoing process. It will require a constant evaluation and input to create a new plan or change the present existing plan. This can not really be a once-a-year task.

Therefore, the Council recommends to the State Board:

1. That the Vocational Division set into motion the machinery necessary to devise a plan which will encompass all the data available from the previous year to set out in explicit terms and separate parts the following items: to wit, the priorities as given by U.S.O.E.; the priorities as seen by the Missouri Department of Education, Vocational Division; the objectives, stated in performance criteria, as denoted by the Directors of the sections in the Vocational Division. This plan need not wait on any directive from U.S.O.E., but could begin to be formed immediately.

2. *An evaluation instrument, simplistic in design, be initiated annually, and included as a portion of the Annual Plan, to ask each director to answer explicitly--yes or no--if he met the goals and objectives set up. This can then be followed with an explanation of how the objectives were met or why they were not met in his subjective opinion. Also, this could be a real prelude to the compliance document presently required by the U.S.O.E.*

Recommendation VI: Guidance Be Given High Priority

The Vocational Advisory Council believes that present guidance and counseling services related to vocational education, its programs, and opportunities are inadequate. Far too many schools and students in Missouri Secondary Schools are not served by a counselor in an approved vocational guidance program. (Approximately one-half of the students in secondary schools, Grades 9-12.) Even in approved programs there are some extenuating circumstances which somewhat negate the probability of making any impact upon students even by qualified personnel. The youth of Missouri must be informed of the opportunities and rewards, the choices available, and the challenges open to those interested in pursuing vocational skill training as well as technical and professional possibilities.

The Council, therefore, recommends to the State Board:

1. *That the requirements for a AAA school in the state include the requirement of a qualified counselor for not more than 250 pupils in secondary schools. AA and A requirements should be commensurate.*

2. *That the S.D.E. require one counselor for not more than 750 elementary students or an administrative unit. This requirement should be required for AAA rating.*

3. *That State funds from the V.E.A. of 1963, amended in 1968, be increased to fund programs of guidance, which will be explicitly outlined by the Guidance Section of the S.D.E.*

4. *That inservice workshops and programs be developed by the S.D.E. and required of all counselors presently certificated. These workshops should include facts, figures, statistics, and re-*

quirements necessary to meet the needs of the many youths in the State as seen by the Department of Labor and felt by the individual after he has had the opportunity to express his personal interests, abilities, and aptitudes. If this requires additional funding, then this should be studied for inclusion as a high priority in funding.

5. That special attention be given to the identification and placement in vocational training programs by guidance personnel of the handicapped and disadvantaged personnel, particularly at the secondary level, if this is compatible with individual needs. Minority groups must receive special attention.

Recommendation VII: Mandatory Licensure of Proprietary Schools

Proprietary vocational schools play an important part in the education of many of the citizens of the State of Missouri. These institutions help supply the personnel for many of the manpower needs in our state. In order to protect the image of vocational-technical education and to expand the contributions of legitimate proprietary schools, it is necessary that unscrupulous private school operations be removed from Missouri. There are some disreputable private schools now operating in our state and exploiting numerous citizens who can least afford such exploitation.

The Council, therefore, recommends to the State Board:

That the State Board of Education support mandatory licensure of proprietary schools to include the following provisions:

1. The Missouri State Department of Education be responsible for administration of the act with the advice and counsel of an advisory council.

2. An adequate system of reporting of enrollments, completions, and placements by occupational categories be incorporated.

3. Minimal standard should be established to assure a quality product and should include factors such as teacher qualifications, curricula and facilities.

4. Regulations in methods of operation should be incorporated to govern such items as a pro rata refund policy; promissory

employment practices should be valid; schools and their salesmen should be bonded; and recruitment policies including solicitation and advertising should be carefully assayed.

5. *Proprietory school resources be considered in the total resources available to school administrators for developing comprehensive occupational programs in discharging their responsibilities for occupational preparation of youth and adults.*

Recommendation VIII: Staffing For Restructured Priorities

The personnel needs of the Vocational Division are readily apparent when one considers the restructured priorities sought in the educational system. The number of staff members presently employed limits the expansion of programs to meet the needs of people in vocational education at a time when resources are available to expand and meet the priorities as established by the U.S.O.E. and concurred in by the Missouri Department of Education.

The Council, therefore, recommends to the State Board:

1. *That the additional personnel called for in the Missouri State Plan for Vocational Education be authorized.*

2. *That a priority order be placed on each position requested and a master plan developed showing the time required to fulfill this recommendation.*

RECOMMENDED EVALUATION QUESTIONS FOR
CONSIDERATION BY STATE ADVISORY COUNCILS
FROM
THE DIVISION OF VOCATIONAL AND TECHNICAL EDUCATION
U.S. OFFICE OF EDUCATION
(WITH ADDITIONAL RECOMMENDATIONS)

GOAL I.

EVALUATION SHOULD FOCUS ON THE STATE'S GOALS AND PRIORITIES AS SET FORTH IN THE STATE PLAN.

1. *How appropriate were the state's goals and priorities?*

The priorities and goals (objectives) as given in the annual and long-range program plans appear to be adequate to the need of giving some general direction to each section as they approve program applications in accord with their prescribed policy.

a. *Were they suitable in terms of student needs and employment opportunities?*

In the vast majority of objectives presented the available data in terms of student needs and also for employment opportunities noted appear to be quite compatible. The question of the validity and reliability of the data is certainly one which must be answered. The State staff in developing the State Plan did not have adequate input data available from the local education agencies. The Advisory Council believes that if a true "plan" is required of the local education agencies providing one year and long-range plans, a portion of the inadequate data will be remedied.

The Department is to be congratulated on obtaining special funding from the Ozarks Regional Commission in order to study and plan for an adequate data collection system and manpower needs analysis which will begin to correct the deficiency existing in this area of inadequate and perhaps somewhat unreliable data for job opportunities. While this planning effort is a laudable lurch forward, steps must be taken to insure that the collection and analysis of data for employment opportunities be made on a regular systematized basis.

Specific discrepancies which must be pointed up include:

1. Production agriculture programs are designated to increase in number.

2. The need for replacement and expansion needs is reported to be decreasing annually over the next 5 years.

3. It would appear that this would create a rather extreme oversupply in the state.

Also,

1. 81% of the increase in T. and I. programs is attributed to new courses in the construction area.

2. In aggregate, the construction manpower need is increasing over the next 5 years when considering the expansion and replacement needs reported.

3. There will be, however, an oversupply of the trainees during this period if the projected supply is correct, in aggregate.

It appears that much difficulty was encountered to obtain the data required in the U.S.O.E. Compliance Document, but that in projecting and creating goals (objectives) that even the best available data was not adequately taken into account. At best, it was unexplained. These are isolated cases and should not tend to discredit the analysis which supports the continuation and/or expansion activities designated.

b. Were they sufficiently comprehensive in terms of specific population groups such as disadvantaged and handicapped?

It would appear that the planning did include the areas of disadvantaged and handicapped youth. Little or nothing has been done for adult programs from the setaside money under V.E.A. Manpower projects are certainly a notable exception to this statement and these projects are under the same division within S.D.E.

It is recommended that additional help be given to the Director of Disadvantaged and Handicapped Programs. This help should be a professional supervisor in the area.

It is further recommended that specific priorities within this specialized area be established and set down in guidelines.

Cooperation in reporting data in these categories must be fostered, indeed demanded, if funding be continued. This is not a part of the act which is optional.

c. Were they related appropriately to manpower development in the State?

The data input from private or proprietary vocational schools in the state is practically nonexistent. This must be improved for more effective total planning. Data from industry is supplied largely from the Missouri State Employment Security and does not include any except the reported openings. (as it should) This "need" data may only account for a small percentage of the actual. Additional data is made available in some areas from the Bureau of Labor Statistics and specialized agencies as in the health field. CAMPS data is used where appropriate and compatible and the Vocational Division is to be commended highly for working closely with this planning agency.

Cooperation with proprietary schools is to be encouraged for more effective planning. This cooperation must be developed so that advantages will be noted by both public and proprietary programs. Cordial relations exist among leaders from the reputable private institutions and the State Department of Education.

2. Were procedures set forth in the State Plan to accomplish <u>each</u> stated goal and/or objective or priority?

Procedures are treated in a very general fashion throughout the Plan. It is the feeling of the Advisory Council that tasks or procedures should be explicitly set out under each goal (objective) which fits under a priority. In most cases they are included, but must be sought out.

The Advisory Council recommends that a plan be devised in such manner that priorities are listed in hierarchical order. In outline fashion would follow the objectives designed to meet this priority. Then, again in outline format, it would be logical to follow with the tasks and/or procedures which will be implemented to insure accomplishment of the objective and ultimately the priority. The objectives could carry budget items as a matter of course. Time constraints could be added to the tasks/procedures or for the objectives.

3. To what extent were the State's goals met during the year under review and to what extent does this represent improvement over last year?

The goals specified were met in almost an extra-ordinary fashion. This tends to show that the one-year goals are almost too conservative. This may be very realistic, but

over the long range (5-year plan), perhaps a bit more optimism should be employed which will dictate to bringing the labor market needs into reality in the training programs planned in vocational programs.

GOAL II.

EVALUATION SHOULD FOCUS UPON THE EFFECTIVENESS WITH WHICH PEOPLE AND THEIR NEEDS ARE SERVED.

1. *Are there valid data available on job opportunities and manpower needs for planning purposes?*

   This question has been subsumed and the answer is given under Goal I, 1. a. and 1. c. above. To elaborate somewhat, however, the Department is to be commended for the efforts they have made to get valid data in these areas. Even though they cite the need for improvement and efforts are being made to insure its collection, the sources are broader this year than last year, denoting an exerted effort to try to solve this difficult problem.

2. *To what extent is there coordination of training opportunities among agencies?*

   This is a difficult problem to solve among the many agencies which offer some type of vocational training courses. It is very easy to assume that each agency need only think of a program, implement it, and good will result. This can be fallacious reasoning, however, and more coordination is encouraged.

   The Advisory Council recommends that at least one person on the S.D.E. Vocational Staff be charged with the responsibility of meeting with and coordinating training programs among at least the handicapped population of the states. It should be pointed out that some liaison work in this area is going on in the area of retarded children. This, also, must be expanded. Again, this points up the need for an additional supervisor in this section.

3. *To what extent is there coordination and articulation among secondary, post secondary, and adult education agencies?*

   The major effort in this area appears to be the State conferences in various vocational areas. Also, in certain areas of the state, Area Schools provide leadership in this necessary activity.

   The Advisory Council recommends that the various professional associations work to accomplish an amalgamation or federation of associations to the stated end or objective of real articulation among levels of training.

4. *To what extent are the employer needs being considered in program planning?*

The validity and reliability of the data employed in the planning process is certainly open to question. However, this is recognized by the S.D.E.

The Advisory Council recommends that local surveys be completed to provide a somewhat more acceptable base than may presently be available to show the manpower needs and job opportunities. This is a necessity if local planning will ever become a meaningful activity. Also, this type statistic will fill a real void until the statewide collection system can be implemented.

5. *To what extent are the educational institutions assuring job placement of candidates?*

A special study is presently being undertaken by the Advisory Council to more adequately determine the true status of job placement in the Area Vocational Schools of Missouri.

In the meantime, the short term (3 month) follow-up indicates a very good record of placement in the field of training or a related field. In several local educational agencies, the placement procedure is only of secondary import.

The Advisory Council recommends that all area schools study the feasibility of setting up a special office to handle placement on a coordinated basis. This should not discourage the many accomplishments of individual instructors in placing students. The idea is to assure consideration for all students in all programs.

6. *To what extent is vocational education involved in total manpower development programs of the State?*

The Missouri S.D.E. is to be complimented in their efforts to encourage adult manpower programs where these are seen as a need. In many cases where difficulty in instituting a specific program arises, it has been found that some local agencies are somewhat lax in their prescribed duty. The S.D.E. tries to stay aware of programs where they do not have any responsibility, but certainly want to be cognizant of the projects being promoted, e.g., the Model Cities programs which involve vocational training, and the O.E.O. programs for skill training, as well as others.

7. *To what extent are there vocational education opportunities available to all the people at the secondary, post secondary, and adult levels?*

While the best job appears to be accomplished at the secondary level, the availability of more vocational technical

opportunities is certainly obvious at the junior college level. It appears that much more needs to be accomplished at the adult level.

8. *What indications are there that students feel that vocational programs meet their needs?*

The follow-up study completed by the Guidance Section of the S.D.E. in 1968 and again in 1969, studying high school graduates of 1965 and 1966, respectively indicate that about 50% of the girls and 39% of the boys took a vocational course in high school and that 49% of the girls and 38% of the boys are in the same field they chose while in high school.

It is further noted that one outstanding vocational program in St. Louis County shows that 68.5% of its graduates are employed as opposed to 55.5% of the nation as a whole.

9. *What is being done about occupational awareness and orientation at the elementary level?*

There is a commitment on the part of the S.D.E., by virtue of the exemplary program money expended to create a pilot program which is designed to create occupational awareness at the elementary level. The general idea behind this program is to have incorporated into the regular ongoing curriculum, a specific design to concommitantly teach orientation to the world of work. Curriculum guides have been developed and will be tested during the coming year. This is an excellent program which should yield much information to other schools working and planning in this same area.

It is recommended that the Department of Education write or cause to write a summary which can be used for dissemination to other interested districts.

In addition to the exemplary program, stressing early introduction to careers, group guidance-pre-vocational activities are being encouraged by the Guidance Section of the S.D.E. Seven new programs are planned for the coming year. Ten were in existence last year.

The Advisory Council recommends that consideration be given to the formulation of a regulation requiring a local district to institute this type program in their total plan before approval be given.

GOAL III.

EVALUATION SHOULD FOCUS ON THE EXTENT TO WHICH COUNCIL RECOMMENDATIONS HAVE RECEIVED DUE CONSIDERATION.

1. *To whom were recommendations made?*

Recommendations from the First Annual Report were made only to state educational agencies. No additional reports have been issued, except as advisements for the formulation of the State Plan. These were reported to the State Director of Vocational Education and formulated in a letter of information to the Governor with copies being sent also to the members of the State Board of Education and the State Commissioner of Education.

2. What actions have been taken and to what extent have these actions fulfilled the intent of the recommendations?

In the first evaluation report submitted by the Council in October of 1970, certain goals were suggested. The Department of Education has made these goals a part of its program for work. Most have been accomplished. The Council called for an improved evaluation process, and this has been developed. Refinement has been made in procedures to more clearly identify program planning with labor market needs. The State is beginning a study for development of a procedure to obtain these data on a Statewide basis.

The Council commended the Department for its cooperative approach to the CAMPS Organization and stressed continued and expanded activities.

This has been done. They also commended the Department for the publication, Vocational-Technical Schools and Programs in Missouri. They asked that this be updated each year. This too has been done. Commendation was made for the efforts to improve the image of vocational and technical education in Missouri. The Department is continuing activities to improve this image.

The Council noted that progress had been made in the State in meeting the major priorities and program emphases of the Vocational Education Amendments of 1968. The Council recommended that program administrators and teachers must be encouraged to adopt the philosophy and intent of the new legislation. A consistent and planned program is being utilized to incorporate this philosophy in program planning and execution. Recommendations were made by the Council on the use of more current data particularly emphasizing the use of 1970 census data. In preparing the State Plan this year it was found that many sources of needed data were not yet using the last census information. The Council recognized the need to encourage smaller school districts to participate in area school programs. This has been and continues to be an area of concern of the State staff. Our efforts are being rewarded with an annual increase each year of out-of-district students enrolling in area vocational programs.

The Council expressed concern with the vocational guidance function in the schools. Several programs are in operation

to make counselors more acutely aware of the world of work. Provision has been made for placement of vocationally trained counselors in area vocational schools, with placement a primary function. Institutes spend half of each day in industrial and business visitations; the other half of the summer program is spent in studying related information. Members of the guidance staff have been given definite functions in enrollment, follow-up, and evaluation.

3. What factors influenced the success or failure of implementation of the recommendations?

The Advisory Council feels that the success they see in the implementation of previous recommendations is directly attributable to the fine relationship of the State Advisory Council and the State Department of Education. It has been both pleasant and profitable.

For about the first year of operation the State Director of Vocational Education served as an unofficial executive of the State Council. This provided for a smooth functioning of the Council-Department activities. The State Advisory Council has employed an Executive Secretary and the State Director of Vocational Education and other staff members are available to the Council at each meeting for consultation. The contributions of the Council have been predicated on this cooperative relationship.

4. What follow-through is being maintained by the Council?

With the submission of this report to the State Board of Education, the Governor, the news media, The U.S.O.E., and other interested parties, it is hoped that initially a personal presentation can be effected to obtain acceptance of the report. Then, adoption of the recommendations by the State Board will be sought at which time it would be desirable to have a realistic time constraint agreeable to the Council, State Board, and the State Department of Education. It is hoped that this adoption and time table could be activated thirty days after the initial presentation.

Effective follow-up and evaluation can be carried out and any re-submission or submission of new recommendations can be planned and executed under this type system.

VT 017 624

THE ADVISORY COUNCIL FOR TECHNICAL-VOCATIONAL EDUCATION IN TEXAS SECOND ANNUAL REPORT.

TEXAS STATE ADVISORY COUNCIL FOR TECHNICAL-VOCATIONAL EDUCATION, AUSTIN.
OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C.
MF AVAILABLE IN VT-ERIC SET.
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DESCRIPTORS - ANNUAL REPORTS; *VOCATIONAL EDUCATION; TECHNICAL EDUCATION; EDUCATIONAL PROGRAMS; *STATE PROGRAMS; *PROGRAM EVALUATION; ORGANIZATIONAL CHANGE
IDENTIFIERS - *TEXAS; EDUCATIONAL AWARENESS

ABSTRACT - THE ADVISORY COUNCIL FOR TECHNICAL-VOCATIONAL EDUCATION IN TEXAS HAS ENTITLED THIS ANNUAL REPORT, "A COMMITTED EDUCATIONAL SYSTEM," TO EXPRESS THE REDIRECTION OF THE SYSTEM TO BE MORE RESPONSIVE TO THE NEEDS OF THE INDIVIDUAL. THIS EVALUATION REPORT POINTS OUT SUBSTANTIAL VARIANCE IN THE QUALITY OF EDUCATIONAL OPPORTUNITY IN THE STATE AND PRESENTS RECOMMENDATIONS TO OVERCOME PROBLEMS IN AREAS OF LEADERSHIP, RESOURCES, AND LIMITED PROGRAMS. THESE RECOMMENDATIONS INCLUDE: (1) STRENGTHENING ADULT AND CONTINUING EDUCATION IN TEXAS, (2) FURTHER DEVELOPMENT OF TECHNICAL-VOCATIONAL PROGRAMS IN THE STATE, (3) STRENGTHENING THE COUNSELING PROCESS IN PUBLIC SCHOOLS, (4) RESOLUTION OF SITUATIONS LEADING TO BARRIERS TO EMPLOYMENT, AND (5) STRENGTHENING THE STATE PLAN FOR VOCATIONAL EDUCATION AS A "PLANNING AND MANAGEMENT DOCUMENT." ALSO COVERED IN THE REPORT IS AN EVALUATION OF THE EXTENT TO WHICH THE 1970 RECOMMENDATIONS HAVE BEEN RECEIVED. (KH)

VT 017 624

SECOND ANNUAL REPORT

The Advisory Council for Technical-Vocational Education in Texas

"A COMMITTED EDUCATION SYSTEM"

September 1, 1971

VT017624

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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SECOND ANNUAL REPORT

The Advisory Council for Technical-Vocational Education in Texas

"A COMMITTED EDUCATION SYSTEM"

September 1, 1971

THE ADVISORY COUNCIL FOR TECHNICAL – VOCATIONAL EDUCATION IN TEXAS

(Advisory Council to the State Board of Education)
P. O. Box 1886
Austin, Texas 78767

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Dr. Richard D. Strahan
Houston
W. H. Townsend
Austin
Marcos A. Vann
San Antonio

September 1, 1971

Mr. Ben Howell, Chairman
State Board for Vocational Education
Austin, Texas 78701

Dear Mr. Howell:

In accordance with Section 102.23(c) Federal Rules and Regulations, PL 90-576, the Advisory Council for Technical-Vocational Education in Texas hereby submits to the State Board for Vocational Education its evaluation report and Council recommendations for the consideration of the Board, and further transmittal to the Commissioner of Education, U. S. Office of Education and the Chairman of the National Advisory Council on Vocational Education.

The First Annual Report and Recommendations of the Advisory Council appropriately acquired the title "A Redirected Education System." Progress has been made in this effort to redirect the education system and the Advisory Council is well aware that the ultimate success of the redirection of our education system is greatly dependent on the acceptance and support generated by all concerned throughout the State, and that the best of plans and projections are of little value without this. Much of our energies and direction have been in keeping with this thought.

The Council, in its Second Annual Report, has sought to build upon previous activities and reports and would expect to develop further these concepts in subsequent reports.

The Council would like to express appreciation for the cooperation and support of the State Board for Vocational Education, the Texas Education Agency and other state agencies and groups with whom we have worked in making our evaluation and this report.

Sincerely,

E. D. Redding
Chairman
EDR:nl

PURPOSE: "To establish a climate conducive to the development of technical, vocational, and manpower training in educational institutions in the State of Texas to meet the needs of industrial and economic development of the state."

THE ADVISORY COUNCIL FOR TECHNICAL – VOCATIONAL EDUCATION IN TEXAS

The Advisory Council for Technical-Vocational Education in Texas, was constituted under the provisions of PL 90-576, the Vocational Education Amendments of 1968, and held its first meeting on March 4, 1969.

The Council was reconstituted under provisions of Senate Bill 261, Acts of the 61st Texas Legislature, on September 1, 1969. The state statute included the provisions of the above cited federal statute.

The State statute cited above provides for a 21-member Council. The Council members listed below will indicate two vacancies. It is expected that all vacancies will be consumated within the next 30 days, and the Council will be reorganized when the full membership of the Council has been appointed.

The following members of the Council were certified by U. S. Commissioner of Education, S. P. Marland, Jr., in a letter to the Honorable Preston Smith, Governor of Texas, dated June 15, 1971:

John L. Cockrill - Dallas

Ellwood E. Collins - Texarkana

S. P. Cowan - Rio Grande City

Dewey M. Cox - Orange

W. T. Crouch - Itasca

Roy B. Davis - Lubbock

Michael E. DeBakey - Houston

Roy W. Dugger - Waco

Romeo S. Escobar - Pharr

Gwendolyn M. Foster - Dallas

Roff W. Hardy - Abilene

W. L. Jones, Jr. - Odessa

Vernon A. McGee - Austin

Luis M. Morton - Killeen

E. D. Redding - Houston

Dorothy J. Robinson - Palestine

Richard D. Strahan - Houston

W. H. Townsend - Austin

Marcos A. Vann - San Antonio

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Attachment No. 3 - "Report of Regional Hearings, January - February 1971"

Attachment No. 4 - "Proceedings - Teacher Education Hearing" March 1971

REPORT OF THE ACTIVITIES OF THE COUNCIL

As the Council examined its responsibilities, certain priorities were established: (1) education of the Council; (2) acceptance of the Council by citizens and educators; and (3) evaluation of vocational education in the state and presentation of basic recommendations to the State Board for Vocational Education. It was necessary that (1) and (2) be accomplished to some extent before serious attention could be given to (3). The Council will continue to give attention to the above priorities while moving to a next step, (4) examining the multitude of influences upon "...development of technical, vocational, and manpower training....." and establishing relationships or linkages to support the work of the Council in meeting its responsibilities.

The Council is moving with deliberate speed in responding to the responsibilities as outlined in Senate Bill 261, Sixty-First Legislature, which expanded the responsibilities of the State Advisory Council as envisioned in the Vocational Education Amendments of 1968, U. S. Congress. The responsibilities are summarized broadly in Section 3 of Senate Bill 261, outlining the purpose of the Council, as follows: "...to cause to be established a climate conducive to the development of technical, vocational, and manpower training in educational institutions in the State of Texas to meet the needs of industrial and economic development of the State."

Members of the Council are recommended by the Governor, appointed by the State Board of Education, and approved by the State Senate. This summary will cover the two and one half years activities of the Council. The summary will not cover many of the detailed responsibilities and activities of the Council and staff, and will not give many of the organizational and developmental activities of the Council, as outlined in the First Annual Report to the Governor.

Council members have given over 450 man days to formal Council and committee meetings and hearings. This does not include work done as individual members on Council responsibilities, and work with groups and organizations in the regions served by Council members.

A monthly publication, ACTVE NEWS, is prepared and mailed to over 1500 persons throughout the state. Publication was begun in May 1970.

The following reports have been prepared by the Council during the last 18 months:

"A Concerned Texas," First Annual Report to the Governor - March 1970	4,000 copies	24 pp.
A Brochure on the Advisory Council for Technical-Vocational Education in Texas - May 1970	2,000 copies	46 pp.

"Proceedings of the Governor's Conference on Technical-Vocational Education in Texas" July 1970	4,000 copies	126 pp.
"First Annual Report - The Advisory Council for Technical-Vocational Education in Texas" September 1970 (Submitted to the U. S. Office of Education through the State Board for Vocational Education)	3,200 copies	56 pp.
"First Biennial Report of the Advisory Council for Technical-Vocational Education in Texas to Members of the Texas Legislature" - December 1970	1,000 copies	28 pp.
"Summary of the First Annual Report of the Advisory Council for Technical-Vocational Education in Texas" - January 1971	8,000 copies	12 pp.
"An Occupational Training Study as Requested by S. R. 865, Sixty-First Legislature," March 1971	500 copies	36 pp.
"A Redirected Education System," Second Annual Report to the Governor - April 1971	4,000 copies	40 pp.
"Report of Regional Hearings" by The Advisory Council for Technical-Vocational Education in Texas - March 1971	2,500 copies	216 pp.
"Proceedings...Teacher Education Hearing" The Advisory Council for Technical-Vocational Education in Texas - March 1971	500 copies	56 pp.

Numerous Staff Analyses, Working Papers, Background Information Data, and other Documents have been prepared for use by the Council and others.

During Council activities, meetings are being held in major economic regions of the state with study of the economy of the region as this relates to technical-vocational education. Meetings held to date have included Houston, Dallas, Fort Worth, San Antonio and Lubbock. These do not include nine additional cities in which regional hearings were held in 1971.

Some of the institutions, facilities and programs visited during the two years, include:

- High school vocational programs
- Campuses of eight post secondary institutions offering technical-vocational education programs
- Gary Job Corps Center
- Fort Worth Manpower Skills Center
- Texas Medical Center, Houston
- Apprenticeship Training Program, Houston
- A private vocational-technical school, Dallas
- Industrial complex, Houston
- Industrial complex, Dallas

The Advisory Council produced, with a grant from the Halliburton Education Foundation, a 16 minute color film, entitled "The Future...My Destination," and has distributed twenty copies for utilization throughout the state.

The Advisory Council produced a 16 minute slide/tape presentation entitled "A Redirected Education System," to give some background on the recommendations of the Advisory Council. Fifty sets are being utilized throughout the state with all groups and organizations.

The Advisory Council is directed by Section 102.24, Rules and Regulations of the Department of Health, Education and Welfare, Public Law 90-576, to.. "...provide for not less than one public meeting each year at which the public is given opportunity to express views concerning vocational education."

The Council conducted a public hearing on the State Plan for Vocational Education in May 1969 in Austin; co-sponsored the Governor's Conference for Technical-Vocational Education in Austin, March 23-24, 1970, at which over 800 persons participated. During January-February 1971, the Advisory Council conducted 14 Regional Hearings throughout the state, involving nearly 2700 citizens.

ADVISORY COUNCIL GENERAL STATEMENTS

The Advisory Council has chosen to title this Second Annual Report as "A Committed Education System," believing that there are evidences of movement toward "Redirecting" the education system, special effort must be made to develop the COMMITMENT necessary to implement the needed redirections.

The Council subscribes to and recommends a career education system that is responsive to the direction of each individual as a result of the complete exploration and interaction of the factors of INTERESTS, APTITUDES, ABILITIES and CIRCUMSTANCES, to the end that every individual be supported in his preparation to achieve a challenging and worthwhile goal in life.

The Council has observed substantial variance in the quality of educational opportunity in the state, reflecting a detrimental variance in the areas of LEADERSHIP, RESOURCES and COMMITMENT that result in less than full development of the individual and his achievement of personal fulfillment. Citizens of the state are challenged to respond to these most obvious needs which if not met, will handicap many of their fellow citizens throughout their lifetime.

The top priority for Council study during 1971-72 has been designated as "The Texas Education Product Study." Education managers and planners have given the majority emphasis to the "process of education" with little emphasis to the "product of education." It is hoped the study will point clearly to some urgent directions for the total education effort in the state, while the State Board of Education is establishing a statewide follow-up system of students with resulting analysis on the local and state level, that will produce useful tools for planners and managers of the education resources of the state.

Recommendation IV and VII with 1971 Supplements, underscore the critical nature with which the Council views the establishment of a comprehensive "supply/demand" job market system which merits the confidence of all persons involved or interested in such data. This action is basic to the establishment of a manpower system in the state, to effectively and economically utilize the training resources and human resources for the well being of the individual and the economy of the state.

The evaluation of technical-vocational education and recommendations for its expansion and improvement, as contained in this report, is the result of objective consideration by the Council of the many factors that influence this area of education and recommendations are intended to be constructive.

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PART I ADVISORY COUNCIL EVALUATION

GOAL I. Evaluation should focus on the State's goals and priorities as set forth in the State Plan.

1. *How appropriate were the State's goals and priorities?*

General Statement: As covered elsewhere in this evaluation, the emphasis in the State Plan Guidelines and resulting State Plan, is not on the plan as a planning and management tool, but as a compliance document.

The Vocational Educatior Program Objectives in Section 5.0 of Part II of the State Plan, expressed objectives in terms of projections of trends, not in an estimate of the total long term task expressed in a given quantity, period of time, or similar specific goal or objective.

a. Were they suitable in terms of student needs and employment opportunities?

In view of the statement above, the goals and priorities set forth in the State Plan are appropriate in terms of student needs and employment opportunities. When viewed from the fact that only 25% of secondary students are pursuing gainful occupation training and assuming that at least 50% of secondary students should have occupational training, then the state's goals are "too modest."

The lack of realistic employment opportunities in terms of education needs data renders a precise statement impossible. However, with a tight employment situation, increasing of vocational training, it is IMPERATIVE that realistic employment opportunity data be developed and continuously updated. The data must be in a form making it readily available and usable to education planners on the state and local levels, with sufficient projections to permit realistic education planning and management.

b. Were they sufficiently comprehensive in terms of specific population groups such as disadvantaged and handicapped?

In the absence of a specific quantity statement of the number of disadvantaged and handicapped to be served, the evaluation must deal with the "outcomes sought" aspects of the program.

Special programs for the disadvantaged were initiated in Texas during the 1964-65 school year on a pilot basis, with 25 teacher units enrolling 938 students and the programs were called Occupational Training. During the following school year the program was named Coordinated Vocational-Academic Education (CVAE). Substantial progress was made in both quality of programs and quantity. Effective September 1, 1970, CVAE teacher units were allocated from the Minimum Foundation Program and the number of units jumped from 313 units in 1969-70 to 532 in 1970-71 and preliminary figures indicate

that the total units for 1971-72 will be 730 enrolling approximately 25,000 students from grades 7-12. It has been conservatively estimated that 120,000 students in grades 7-12 in Texas schools, could benefit from the CVAE program. Based upon this position, we are serving only about 20% of the need.

Effective September 1, 1970, the CVAE State Staff was reorganized and assigned to field positions in the traditional Occupational Education fields. The benefits of such reorganization are many and obvious, however, the Council would caution that unless special precautions are exercised that the following could occur:

a. In an attempt to apply standards of traditional programs, the CVAE programs could be rendered inflexible and incapable of effectively serving the disadvantaged student.
b. Do CVAE teachers receive, under this reorganization, the specialized supervision needed?
c. The coordination between vocational and academic education is a strong and imperative aspect of CVAE, and every effort should be made to strengthen this aspect. Identification of the program as "purely" vocational, could have a most detrimental effect upon the program.

A particular concern of the Council in regard to CVAE is that it effectively serve the disadvantaged student, first and foremost. However, a most urgent concern is: What influence does the success of CVAE in reclaiming disadvantaged students have upon the school curriculum and the techniques of teachers that were responsible, to a great extent, for the student being disadvantaged in the first place. Indication to the Council to date is that CVAE is having little influence on the school curriculum and teaching - but faculty members are recognizing the success of CVAE, but instead of looking at the process and correcting it, they give thanks that there is a program to deal with their problems, which does not result in cutting off the flow of students into remedial type programs.

Special programs for the HANDICAPPED were initiated under Vocational Education Acts of 1963 as amended on a pilot project basis. The State Board of Education in July 1971 approved the transfer of ongoing programs of vocational education for the handicapped, to the Minimum Foundation Program of the state for allocation and funding. This action will release funds for further development and initiation of vocational education programs for the handicapped. The Department of Occupational Education and Technology and the Department of Special Education, Texas Education Agency, have joined forces with the Texas Rehabilitation Commission to serve as completely as possible the needs of handicapped persons in Texas.

PART I

It is estimated that 20,000 students will be served during 1971-72, which denotes substantial progress during the relatively short period in which special attention has been given to this critical need.

c. Were they related appropriately to manpower development in the State (e.g., private schools, industry, CAMPS, etc.)?

After considering the content of the general statement in this goal, it is the judgment of the Council that the state's goals and priorities are appropriately related to manpower development in the state. Efforts are being made to strengthen the elements of a manpower development system in the state. Some evidences of this include:

(1) Private schools - the State Board of Education supported a mandatory licensing of private schools which was enacted by the State Legislature, designating the Commissioner of Education as the Administrator. This action should do much to unify the public and private education resources.

The State Legislature also enacted a statute providing for contracting between public and private education agencies.

The Texas Cosmetology Commission was established by the State Legislature to replace the State Board of Cosmetology and this action should strengthen the working relationship between public and private education in this area.

(2) Industry - efforts continue to involve citizens in the improvement and development of the technical-vocational education activities in the state. Local education agencies are required to have advisory committees for vocational education programs. The Environmental Technology program is in its third year, a successful demonstration of joint effort between education and industry at the state and local levels. Efforts are being made to involve additional groups and programs in this type of activity.

(3) Renewed efforts are being made to work with the State Employment Commission and other agencies and groups (CAMPS) in efforts to involve these groups in planning efforts. Further efforts are being made to improve the data collection system for determining occupation needs of the job market and relate these to education planning.

PART I

2. *Were procedures set forth in the State Plan to accomplish each stated goal and/or objective or priority?*

Procedures are set forth in Part I of the State Plan for the accomplishment of each state goal and/or objective or priority set forth in Part II of the Plan. As pointed out in the general statement at the first of this Goal, the Council believes more definitive goals and objectives could be established and would so recommend.

3. *To what extent were the State's goals met during the year under review and to what extent does this represent an improvement over last year?*

Most goals set by the FY 1971 State Plan were exceeded, many in a substantial manner. For example, in FY 1971 State Plan, Part II, Section 5.1(c) Secondary Vocational Program Objectives, Number of instructional programs, Outcomes sought for 1971, Totaled 5,126 while the actual outcome was 6,146.

A review of Secondary Vocational Teacher Units allocated in the state follows:

Year	Total Units	Increase over Previous year	Year	Total Units	Increase over Previous year
1963-64	3409	116	1968-69	4845	328
1964-65	3611	202	1969-70	5323	479
1965-66	3897	286	1970-71	6146	823
1966-67	4023	127	1971-72	6956*	810*
1967-68	4517	494			

*Indicates preliminary figures

Another measure of progress in technical-vocational education is comparison of levels of funding for Post Secondary and Adult Programs for FY 1971 and those appropriated for FY 1972. Funding level increased from $13,895,762 in FY 1971 to $22,329,400 for FY 1972 - an increase of $8,433,638. A further measure is the level of State General Revenue Appropriations for the same period. For FY 1971 this category was $11,266,370 while in FY 1972 $18,775,085 has been appropriated for an increase of $7,488,715. This funding is in addition to the substantially larger amount made available for Technical-Vocational Education through the State Minimum Foundation Program, which finances the state's share of the Secondary Vocational Units referenced in the table above.

PART I

GOAL II. Evaluation should focus upon the effectiveness with which people and their needs are served.

1. *Are there valid data available on job opportunities and manpower needs for planning purposes?*

The data available on job opportunities and manpower needs for planning purposes is in a variety of forms from a variety of sources and there appears to be little agreement as to the reliability of such data.

For Example: In the field of Agriculture, the July 1971 issue of "Texas Manpower Trends," Texas Employment Commission reports an agriculture employment for June 1971 of 328,200 of which 120,200 are classified as seasonal, leaving a work force of 208,000 as farm operators and full-time employees. By D.O.L. definition, persons operating a farm, but working at another job, would be considered in the "other job" work force. Information as to the number of farm operators who work at the "other job" is not available, but persons in this category are known to be substantial. Also, agriculture employment as reported by TEC is for production agriculture activities only, and those individuals who are in agri-business occupations which are of concern to those in education, are not identified separately from the work force.

In a study entitled "Replacement Needs for Farm Operators and Full-Time Farm Workers in Texas -- 1969, 1975, 1979," by Herbert Schumann and Len Steakley, Department of Agriculture Education, Texas A & M University, November 1970, report an annual need for replacements of slightly more than 10,000.

From the viewpoint of the education planner the seasonal workers in agriculture would offer a limited or possibly short term training need while the Farm Operator and Full-time Farm Worker and the Agri-business sector would offer extensive training responsibilities. Based upon the study above, 10,000 replacements are needed annually without considering Agri-business needs.

An analysis of data reveals that approximately 10,000 secondary students complete Vocational Agriculture Programs annually in the state with the following disposition being made:

3% have unknown status; 12% enter armed forces; 47% continue full-time school; 1% other reasons not in labor force and 37% are employed or available for employment. Of the latter category 33% are employed full-time in occupation for which trained; 32% are employed full-time in related occupations; 24% are employed full-time in other occupations; while 4% are employed part-time and 4% are unemployed.

PART I

The education planner looks at 3,700 individuals available for employment from a program, a need for 10,000 replacements in the field, plus agri-business employment opportunities and is satisfied that employment opportunities are available.

Other planners and analysts view the downward trend of production agriculture employment, the requirement for heavy capital outlay to enter production agriculture, the absence of data on agri-business occupations and a multitude of other factors and concludes that training in vocational agriculture is in excess of needs.

The Advisory Council concludes that until such time as the fallacies outlined in the above example are resolved, as well as those in other and similar examples, that education planners and managers cannot do an adequate job.

2. *To what extent is there coordination of training opportunities among agencies?*

Coordination of training opportunities among agencies is substantial in view of several mechanisms which encourage such coordination, such as flow of funds, linkages established by CAMPS and similar groups. Agencies are more responsive to needs of individuals than in recent past and consequently, exercise coordinative efforts as the needs of individuals cross agency responsibilities.

3. *To what extent is there coordination and articulation among secondary, post-secondary and adult education agencies?*

At the state level, administrative responsibilities for secondary, post-secondary and adult technical-vocational education rest within the Department of Occupational Education and Technology, thereby assuring a maximum level of coordination and articulation. At the local levels, a variety of arrangements exist and the coordination and articulation at this level is dependent upon the initiative of parties involved.

4. *To what extent are the employer needs being considered in program planning?*

As indicated elsewhere in this evaluation, employer needs must be reflected accurately and in terms of training requirements, in order to be given adequate consideration in education planning. This situation is inadequate at present.

Throughout the state during the 14 regional hearings conducted by the Advisory Council, there were indications that the lines of communication between education and the community were not adequate and in many cases, function poorly. In many communities secondary and post-secondary institutions are effectively utilizing advisory committees and in such instances, employer needs are more nearly met.

PART I

The Environmental Technology Program, now in its third year of operation in the state, involves employers, organized labor and educators at all levels in the planning, operation and evaluation of programs. This has proven a successful model to date and efforts are under way to expand this concept to other groups of employers.

5. *To what extent are the educational institutions assuring job placement of graduates?*

Some post secondary institutions do an excellent job of placement and follow-up of graduates. However, for the most part, the job placement function is meager to non-existent. Few secondary institutions have either the system or commitment for job placement. A substantial number of vocational teachers are effective in job placement through advisory committees and other contacts.

Cooperative education programs are effective in transition of students from school to work. Chambers of Commerce in several communities are involved in programs to establish lines of communication between education and the community. A program of this nature that is well organized and effectively launched is the "Partners in Learning" joint program of the Fort Worth Chamber of Commerce and Independent School District.

6. *To what extent is vocational education involved in total manpower development programs of the State?*

Vocational education is involved to varying degrees in the various aspects of manpower development programs in the state. A number of communities have strong commitments to the broader concepts of manpower development and are actively involved, while others restrict their involvement to serving K-12 needs as they view them. Improvements are being made in these attitudes and commitments but they are slow at best.

The State of Texas does not have legislation making adult and continuing education an integral part of the education system. Such legislation was not favorably considered by the legislative body during 1971. Because of a lack of commitment on the part of state government, local education agencies are reluctant to respond to the full needs of adults. Provision is not made in the administrative structure of local education agencies. Federally funded programs are demonstrating the need for adult and continuing education, but levels of funding provide only a fraction of the program to meet the needs.

PART I

Several local schools and post secondary institutions are actively involved in Manpower Training activities and some excellent skill centers are operated by public schools in metropolitan areas.

As covered elsewhere in the report, programs for handicapped and disadvantaged are developing rapidly and inter-agency linkages being established to render services more effectively to these and other target populations.

There is a closer working relationship developing between schools and their local employment service as evidenced by hiring of school counselors in employment service offices during the summer. The incidence of employment service counselors and other personnel working in the school with clients is on the increase. There is a close working relationship with Rehabilitation Commission and educators.

7. *To what extent are there vocational education opportunities available to all the people at secondary, post secondary and adult levels?*

Since the passage of the Vocational Education Acts of 1963, technical-vocational programs in Texas secondary and post secondary institutions have grown rapidly, as pointed out in other sections of this report. Funds allocated for adults have been at a low level and appear to be the first to suffer cuts when adjustments must be made in resources. This indicates a lack of understanding of the needs of adults as well as a low priority for their needs.

The state has a comprehensive system of post secondary institions, however, 10 of the 45 institutions have 65% of all technical-vocational enrollments in the state. Even though the level of funding is increasing sharply, the day that comprehensive post secondary offerings will be available to a majority of the state's citizens is still in the future. The state's largest metropolitan area has taken action to establish a comprehensive community college, as well as another of the major cities of the state. There are still relatively large population centers without post secondary technical-vocational programs of a comprehensive nature.

Most secondary schools have vocational offerings, but the comprehensiveness is lacking. This is brought about by the fact that there are nearly 1,000 independent school districts within the state with little or no coordination of resources for offering

vocational education, between districts and in many cases, between campuses within districts. The Council recommended an Occupational Skills Center Jurisdiction concept in Recommendation II of the 1970 Report, but this was not enacted into law. Area schools formed under present statutes have tended to serve the district in which they are located and in too many cases do not have the resources to develop comprehensive programs that are responsive to the needs of employers and the job market.

Even though progress has been substantial, the full realization of vocational education opportunities available to all of the people at secondary, post secondary and adult levels, is still some unidentifiable distance in the future.

8. *What indications are there that students feel that vocational programs adequately meet their needs?*

Even with rapid increases in vocational offerings at secondary and post secondary levels, the programs are well received and utilized. In fact, the number of students per secondary vocational unit allocated has continued to increase over the period of recent years.

The Council has had representatives of vocational youth groups meet with the Council throughout the year and they are enthusiastic about their vocational programs and the contribution that they are making to the youth of the state. There are indications that students often have to overcome barriers in order to enroll in vocational programs, such as, lack of acceptance by parents, lack of adequate school counseling with regard to vocational education, lack of comprehensiveness in offerings, etc.

9. *What is being done about occupational awareness and orientation at the elementary level?*

Ten exemplary programs in Occupational Orientation were operated in the state during 1970-71. Four of the projects were related specifically to "Awareness to the World of Work" involving twelve teachers serving 14,179 students in Grades K-6.

Programs for 1971-72 have been expanded, enlarged and redirected in keeping with experiences of 1970-71.

Inservice training for personnel was conducted during the summer of 1971 to strengthen the program, develop materials and techniques.

The Advisory Council had a special report on this program during April 1971 and the results reported were most exciting and encouraging. The Council emphasizes the importance of this concept being a commitment, not a course. It must permeate the entire education system.

PART I

GOAL III: Evaluation should focus on the extent to which Council recommendations have received due consideration.

1. *To whom were recommendations made? (e.g., agencies, school officials, general public, State Boards, public relations contacts, State officials, news media)*

The recommendations were submitted to the State Board for Vocational Education as a part of the Annual Report to the U. S. Commissioner of Education and the National Advisory Council on September 12, 1970. Over 3,000 copies of the report were printed and most have been distributed. A copy of the report was sent to every school superintendent in the state with a covering letter from the Commissioner of Education. Members of the State Legislature, State Agency heads and others were each mailed a copy of the report. The recommendations were contained in 8,000 copies of a report, as well as in 4,000 copies of the Second Annual Report to the Governor and 2,500 copies of the Regional Hearings Report. In addition, the recommendations were summarized on tape and slides, and utilized in all fourteen regional hearings and numerous other meetings around the state. Fifty sets of the slide/tape presentation, "A Redirected Education System," were produced and are still heavily used.

2. *What actions have been taken and to what extent have these actions fulfilled the intent of the recommendations?*

Actions taken on the recommendations are outlined in the pages to follow. The recommendations are quite far reaching and considerable time will be required to fully implement the recommendations and "course corrections" will no doubt be required.

3. *What factors influenced the success or failure of implementation of the recommendations?*

The State Board of Education received the Council Recommendations on September 12, 1970, evaluated those requiring funding, and prepared budget submissions for the October 1970 submission to appropriate state budgeting offices. It will be noted that only one of the recommendations requiring appropriations received funding by the State Legislature. The lack of funding for Council recommendations by the Legislature should not be considered as a lack of support for technical-vocational education. Some factors influencing this are: (1) the previous session of the Legislature was most responsive to education, and the general word was to hold the line; (2) all state spending had escalated and the state faced a substantial tax increase; (3) the Legislature was faced with other

controversial problems, such as, redistricting, taxing, and other factors competing for the attention of the Legislature.

Many positive actions have been taken on Council recommendations. Much of this can be attributed to an interested and responsive State Board of Education and staff. The Advisory Council has been well received within the education community and by the public in general.

4. *What follow through is being maintained by the Council? (e.g., re-editing, re-submission, new areas for recommendations)*

This is answered in section referenced in item 2 above.

The Council will continue to pursue the implementation of all recommendations until fully implemented.

1970 Recommendations - 1971 Supplements and Responses

The State Board of Education response constituted a report by the Texas Education Agency, which was accepted by the State Board of Education during its July 10, 1971 meeting.

RECOMMENDATION I

1. That the State Board of Education establish a mechanism representative of various educational disciplines, interests, and levels and lay citizens representative of the economy and society of the state with the objective of redirecting the educational system to accommodate the relevant and occupational needs of individuals and prepare them for the work force in keeping with the needs of such work force.

STATE BOARD OF EDUCATION RESPONSE/ACTION:

In June 1971, the Board approved A Design for the Development of Occupational Career Orientation, K-12, which was developed by the Agency Staff. Advisory Committee appointments are in July 1971 Board Agenda.

2. That it become the policy and philosophy of the State and local boards of education that options be left open to students through a flexible education system to encourage adjustments of individual education programs in keeping with the interests, aptitudes, abilities and circumstances of the individual to the end that all be successful in achieving a worthwhile life goal.

STATE BOARD OF EDUCATION RESPONSE/ACTION:

A restatement of the General Philosophy of the State Board of Education (Policy 1201) is contained in the State Board Policies and Administrative Procedures.

The Board's statement of goals for public education includes the following:

> *"The public schools should help each student to develop his personal knowledge, skills, and competencies to the maximum of his capacity, and to learn behavior patterns which will make him a responsible member of society. In terms of their*

individual ability, all students should achieve:

> *...(2) occupational skills prerequisite to enter and advance in the economic system and/or academic preparations for acquisition of technical or professional skills through post-high school training." (3101.1)*

3. That the State Board of Education adopt as a priority concern the feasibility of occupational education exposure for every child in Texas public schools.

STATE BOARD OF EDUCATION RESPONSE/ACTION:

On May 4, 1970, the State Board authorized ten pilot projects in Occupational Orientation. These projects began in September 1970, and included the following programs and activities: Awareness to the World of Work, Survey and Investigation of Occupations and Occupational Exploration.

The above activities will provide students with information to:

- *Develop values and attitudes about work.*
- *Make plans for achieving occupational and career choices through education.*
- *Be aware of the need to adjust to the changing economy and be able to make these changes as needed.*

These projects are to be continued and expanded on a selective basis for 1971-72.

Advisory Council Response/Recommendations

The Council applauds the response and action of the State Board of Education to Recommendation I. The complete accomplishment of this Recommendation will require several years.

To implement a redirected education system will require courses, yes, but much more. It will require a COMMITMENT on the part of the education community and the community in general. The leadership in such a COMMITMENT MUST come from the education community as a part of their responsibility to the community in general.

During the past twelve months, the Advisory Council has availed itself of many opportunities to expose the "Redirected Education System" concepts to a broad cross-section of citizens of the state and is most pleased at the acceptance.

PART I

The general model supported by the Council includes:

K-6 Develop an understanding and appreciation for the dignity of work, the personal and economic relationships of work as a part of total education. This must be done by commitment, not just courses.

7-8 Career Orientation, Career Information and Career Exploration, involving the total education and community resources must be an integral part of educational experiences of all individuals. Achievement of this goal will require commitment and courses.

9-12 Development of specific entry level skills in preparation for work or preparation for further education will be the goal of most students at this level. Opportunities for such development must be comprehensive. Some students may require further exploration in order to clearly identify a career objective or direction.

13-14 In order to accommodate the further education aspiration of many, provision must be made for Technical-Vocational/University Parallel programs at the post-secondary level. Such opportunities must be comprehensive and support the continuing development of previous educational experiences. Many programs at this level require the maturity and additional preparation to enter the world of work or further education.

ADULT The educational community MUST accept the responsibility of the multitude of needs of our adults, whether these be basic education, retraining, upgrading, avocational or other needs.

The total education system must be COMMITTED to a flexible system responsive to the needs of the individual and the economy as a result of the continuous interaction of the factors of INTERESTS, ABILITIES, APTITUDES and CIRCUMSTANCES. The individual must be able to leave school, go to work, return to school or go to school and work, without PENALTY or PREJUDICE.

PART I

RECOMMENDATION II

1. That area technical-vocational schools be established within the following guidelines:

   a. Metropolitan counties may establish one or more technical-vocational school jurisdictions within a minimum of 5,000 High School Average Daily Attendance (HS ADA).

   b. Counties with a HS ADA population of 1,500 or more may establish one county-wide area school jurisdiction.

   c. Counties with a HS ADA population of less than 1,500 may establish a multi-county or regional area technical-vocational school jurisdiction, with a minimum of 1,500 HS ADA. The State Board of Education may approve on an individual basis exceptions to this provision.

2. The administration of the area school jurisdiction would be by a board with one member representing each high school district, junior college or technical institute within the jurisdiction and one citizen for each public school person on the board. The citizen group would be representative of the communities and interests within the jurisdiction. Any special facilities established within the jurisdiction would be under the administration of the vocational administrator and the administrator would be responsible for the overall coordination and supervision of vocational-technical education within the jurisdiction in order to prevent unnecessary duplication and to assure that programs are of high quality and meet the occupational needs of youth and adults within the jurisdiction in keeping with the needs of the labor market served.

3. An area school jurisdiction may be approved by the Texas Education Agency within guidelines after the citizens of the jurisdiction vote under the provisions of Chapter 28, Section 28.01 - Texas Education Code to establish an area school with tax revenue.

   a. State funds would be available to match the revenues raised within the area school jurisdiction.

   b. That funds available from federal sources be utilized for the purchase of equipment for high cost programs in area technical-vocational school jurisdiction.

c. That first priority be given to allocating federally administered funds for area school jurisdictions with 3,000 or more HS ADA populations.

d. That a discretionary fund be appropriated to the Commissioner of Education for utilization in support of adult education programs in technical-vocational education. Such funds would be used to pay costs of instructors and instructional materials. Facilities and equipment for adult education would be the responsibility of the local school district or area school jurisdiction. The area school jurisdiction should provide within its budget a contingency fund to support special training needs which cannot normally be incorporated into the regular program.

STATE BOARD OF EDUCATION RESPONSE/ACTION:

Authorizing legislation was requested of the Legislature by the Board. Bills were introduced in the 62nd State Legislature as Senate Bill 556 and House Bill 1172.

Senate Bill 556 passed the Senate in May 1971 but failed to pass in the House.

4. Transportation of students be provided by the contributing district or campus and such transportation be financed by the State through an allotment of funds for area vocational school students based on a formula to be determined by the Texas Education Agency.

STATE BOARD OF EDUCATION RESPONSE/ACTION:

Authorizing legislation (Senate Bill 555), recommended by the Board, passed the Senate but failed to pass the House.

5. That the Texas Employment Commission will be responsible for compiling labor market data and information with the cooperating support of the Texas Education Agency, Texas Industrial Commission, other state agencies and groups as well as trade associations, employers, labor unions and others. Interpretation and transmittal of the data to the school systems for development of technical-vocational education programs for the most effective utilization of human resources

of the state would be the responsibility of the Texas Education Agency. Funds should be provided for the implementation of this system.

STATE BOARD OF EDUCATION RESPONSE/ACTION:

The staff is presently studying available data to determine additional needs.

Advisory Council Response/Recommendations:

In response to the unfavorable action by the State Legislature to proposals outlined in paragraphs 1-4 of this recommendation, the Council is most disappointed in that failure in the passage of this legislation will delay even longer the day when youth and adults of the state will have a system of technical-vocational education making these programs conveniently available, comprehensive offerings and of high quality. The efficiency and economy of a system utilizing the total resources of the jurisdiction would be an encouragement to the taxpayers and for the further economic development of the area.

The Steering Committee of the Council met in joint session with the Vocational Committee of the State Board of Education and modified the recommendations as incorporated into legislation presented to the Sixty-Second State Legislature.

RECOMMENDATION II-A

RECOMMENDATION: It is recommended that the State Board of Education incorporate into current policies, as many of the concepts outlined in paragraphs 1-4 as possible under present state statute, which will enhance opportunities provided in Occupational Skill Centers.

Recommendation II, paragraph 5, is in all probability one of the most critical needs in the Management and Planning aspects of technical-vocational education in the State of Texas. With rising unemployment, special attention should be given to the development of a "Supply-Demand System" as relating to training and the job market, in order to move individuals into Occupational Areas with the greatest opportunities for employment.

Elements of a system are a part of the operation of the agencies and groups listed in paragraph 5. However, other elements are found in such agencies and groups as Councils of Government, Education Service Centers, Local School District personnel, Post Secondary Institutions and others, could make available valuable information.

When information is gathered and developed into usable form for education planning and management, it should be disseminated to local groups for their evaluation and utilization. Local groups should coordinate their efforts

and make further input - new and corrective - into the system to make it as useful and efficient as possible.

RECOMMENDATION II-B

RECOMMENDATION: That the State Board of Education assign top priority to the development of such a system, dedicating all available resources to such development and implementation.

PART I

RECOMMENDATION III

That provisions be made for financial support to permit maximum utilization of technical-vocational facilities and resources after regular hours and during summer months for enrichment of curriculum for in-school youth, for out-of-school youth, and adults, who are underemployed or unemployed.

STATE BOARD OF EDUCATION RESPONSE/ACTION:

The Legislature did not include the funds requested by the Board in the Appropriations Act.

Advisory Council Response/Recommendation:

In the absence of favorable legislative appropriation, the Advisory Council recommends as follows:

RECOMMENDATION III-A

RECOMMENDATION: That the State Board of Education develop a data base on the utilization of existing facilities within the state, to determine the nature and extent of unmet needs and to establish the resources necessary to implement Recommendation III for resubmission to the State Appropriating Authorities.

PART I

RECOMMENDATION IV

1. That the State Board of Vocational Education request discretionary funds for the establishment of a reservoir of industrial and instructional equipment to provide short intensive instructional programs whenever and wherever needed.

STATE BOARD OF EDUCATION RESPONSE/ACTION:

The Legislature did not include the funds requested by the Board in the Appropriations Act.

2. That the State Board encourage the establishment of a joint task force of appropriate staff members of the Texas Education Agency, Texas Employment Commission, Texas Industrial Commission, the Office of the Governor, and other state agencies and groups, and that it meet at least quarterly to review requirements for new and developing occupations and skills. Recommendations for the appropriate state agency to meet these needs should be made by this joint task force.

STATE BOARD OF EDUCATION RESPONSE/ACTION:

The staff has under preparation a plan for its implementation.

3. The Advisory Council supports the establishment within the Texas Industrial Commission of the Office of Director of Industrial Training. The Director would serve as a member of a coordinating committee to be composed of appropriate staff members of the Texas Education Agency, Office of the Governor, and such other state agencies and organizations as would be involved in order to establish relationships with new and expanding industry to meet such needs. The Council would further support appropriation of discretionary funds to provide training, equipment, supplies, instructional facilities and instructional personnel, when not otherwise available.

STATE BOARD OF EDUCATION RESPONSE/ACTION:

The Legislature did not include the funds requested by the Board in the Appropriations Act.

PART I

Advisory Council Response/Recommendations:

In the absence of favorable legislative appropriation, the Advisory Council recommends as follows:

RECOMMENDATION IV-A

RECOMMENDATION: That the State Board of Education conduct further study on the provision of Recommendation IV (1) and (3) with a view toward renewing the request for funds during the Sixty-third Legislature.

The Council would like to expand Recommendation IV (2) in view of the critical nature of the need for valid data on job opportunities and manpower needs for planning purposes. There are many elements of such a system present in local, area and state organizations, but there is lacking an efficient and effective mechanism at all levels for compilation, coordination, validation and adjustment of data for education planning and evaluation.

RECOMMENDATION IV-B

RECOMMENDATION: That the State Board of Education establish a mechanism within TEA and solicit the cooperation of groups named in part (2) of this Recommendation to act continuously to develop, revise and disseminate data on job opportunities and manpower needs for planning purposes, in addition to action outlined in part (2) of this Recommendation.

PART I

RECOMMENDATION V

1. The State Board of Education initiate a technical-vocational administrator internship program in the state.

STATE BOARD OF EDUCATION RESPONSE/ACTION:

Various aspects of the recommendation are under developmental study by several departments of the Agency. Funds under the Educational Professional Development Act, Section 553, have been obtained for inservice staff development.

Texas A & M University, in cooperation with the Department of Occupational Education and Technology of the Texas Education Agency, is participating in the 552 Leadership Development Program as per Part F of the Education Professions Development Act. Sixteen fellows will receive stipends plus dependent allowance, to pursue advanced degrees in the field of vocational education for a period not to exceed three years.

2. The State Board of Education work for preparatory programs for school administrators to include study and experience programs in the history, philosophy and administration of technical-vocational programs, study of economic factors of a local community, the labor market serving the school, and the relations of these to the needs of students.

3. The State Board of Education make provision for the development of a series of regional seminars during 1970-71 for the attendance of the local school superintendent and his curriculum administrator from the school districts in the state with over 4,000 ADA. The seminars should also include junior college presidents and their deans of technical-vocational education. Seminars should utilize the best available talent in and out of the state in the area of education, technical-vocational education, manpower programs, labor market information, and the influence of those upon education programs.

STATE BOARD OF EDUCATION RESPONSE/ACTION:

None

PART I

Advisory Council Response/Recommendations:

The Advisory Council supports the development within the state of programs for education personnel development, one of which is outlined in the State Board of Education Response above, to Recommendation V (1). Additional comments and recommendations will be found elsewhere in this report.

With regard to Recommendation V (2) and (3), the universal need identified in Regional Hearings around the state was that of "communication" between educator and the community. Employers reported difficulty in relating the product of education to meaningful jobs. Many citizens expressed the view that until such time as the educational leadership understood the economic community and utilized the evaluation of the education product as a guide for adjusting the process, that many youth and adults would continue to occupy the "growing pool of unemployed and underemployed." Governor Preston Smith, in viewing the slide/tape presentation, "A Redirected Education System," identified Recommendation V (3) as one of the key recommendations of the Council.

RECOMMENDATION V-A

RECOMMENDATION: That the State Board of Education assign a high priority to implementing Recommendation V (2) and (3).

PART I

RECOMMENDATION VI

That the State Board of Vocational Education support mandatory licensure of proprietary schools to include the following provisions:

a. Texas Education Agency be responsible for administration of the act with the advice and counsel of an advisory council.

b. Adequate reporting of enrollments, completions and placements by occupational categories.

c. Standards should be established to assure a quality product and should include such factors as teacher qualifications, curricula and facilities.

d. Included in methods of operation should be a pro rata refund policy, promissory employment practices should be valid, schools and their salesmen should be bonded, and recruiting policies including solicitation and advertising should be carefully assayed.

e. Sufficient income from licensing fees, renewal fees and non-compliance penalties to support licensing activities.

f. Proprietary school resources be considered in the total resources available to school administrators for developing comprehensive occupational programs in discharging their responsibilities for occupational preparation of youth and adults.

g. SB 261 be amended to include a representative of proprietary schools on the Advisory Council for Technical-Vocational Education in Texas.

h. State Board for Vocational Education should extend to administrators and teachers in proprietary schools inservice programs to improve the quality of instruction.

PART I

STATE BOARD OF EDUCATION RESPONSE/ACTION:

Authorizing legislation was recommended by the Board and was passed by the Legislature.

Advisory Council Response/Recommendation:

The State Board of Education is commended for its support of Proprietary School legislation. The effective administration of the act will enhance Proprietary Schools as a total education resource in the state.

PART I

RECOMMENDATION VII

That the feasibility of an electronic data system be examined with a view of implementing a coordinated information retrieval system. The State Board for Vocational Education should initiate planning toward this end.

STATE BOARD OF EDUCATION RESPONSE/ACTION:

A committee of seven key staff members was appointed to assist in modifying and developing the necessary forms to gather the data elements required by the United States Office of Education (USOE). One staff member has been assigned full time to this effort. This vocational education retrieval system will be piloted in 15 public schools and 38 junior colleges during the 1971-72 school year. If this schedule cannot be met, the retrieval system will then be piloted in the 1972-73 school year.

The purpose of this proposed system is to automate the collection of data that contains only those elements necessary for the U. S. Office of Education, Texas and United States Legislative data requests, and any other type of data frequently requested of the Texas Education Agency. This system will be compatible and easily integrated into the planned Educational Management Information System (EMIS). This system is being designed and programmed by Agency personnel utilizing Agency facilities.

Some of the vocational education research funds have also been allocated to develop a model system for implementation of this recommendation.

Advisory Council Response/Recommendations:

The Council applauds the efforts made to implement Recommendation VII. The urgency of the project cannot be overstated. The Council's evaluation of technical-vocational education has been hampered by a lack of data in retrievable form. Education is the chief public business in the state and its efficient management is important to every citizen.

PART I

RECOMMENDATION VIII

1. That the State Board for Vocational Education in cooperation with the Coordinating Board on Higher Education establish a consortium to include higher educational institutions with vocational teacher preparation programs for the purpose of training technical-vocational teachers.

2. Programs of industry/education cooperation to provide qualified teachers and to keep the teachers updated in their skills.

3. Institutions of higher education with vocational teacher preparation programs should involve employers in laboratory and internship programs for training.

STATE BOARD OF EDUCATION RESPONSE/ACTION:

A design for the implementation of paragraphs 1, 2, and 3 of Recommendation VIII is being developed for consideration by the State Board.

A task force with representatives from vocational teacher training institutions, secondary and post-secondary institutions conducting vocational-technical programs, Education Service Centers, and the Texas Education Agency is developing a model for implementation of paragraph 1 of the recommendation.

4. That teaching experience credit be given for related non-teaching work experience in determining salary schedules of technical-vocational teachers.

STATE BOARD OF EDUCATION RESPONSE/ACTION:

Relating to granting teaching experience tenure for non-teaching work experience was rejected and returned to the Advisory Council.

PART I

Advisory Council Response/Recommendations:

The Council will be most interested in reviewing the model under development for implementation of Recommendation VIII (1), and applauds the State Board of Education for this action.

The Council is aware that implementation of Recommendation VIII (2) and (3) will rest principally with institutions responsible for preparation of technical-vocational personnel. The Council has been encouraged by some action on the part of individual institutions to move in response to these recommendations. It is hoped that others will join in every effort to take the leadership role in this critical area of preparation of technical-vocational personnel.

During the Hearing on Teacher Education, conducted by the Council on March 17, 1971, (Proceedings of hearing are attached as Attachment No. 3) the principal concerns expressed were as follows:

- A lack of communication within the institutions between departments;
- A lack of communication between institutions, the Texas Education Agency and other principals in the technical-vocational personnel preparation programs;
- The need for continuous review of certification requirements to ascertain that requirements are producing personnel with optimum qualifications, and not an inhibition to having the most effective person doing the job;
- The need for keeping preparation programs related to areas of preparation through cooperative and intern relationships with employers.
- The need for inservice education and other efforts to redirect and upgrade programs, in a climate of rapid change, makes it imperative that such efforts be strengthened and expanded.

In order to provide the coordinative and leadership roles statewide between institutions, Texas Education Agency, employers and other vital groups, the Council recommends as follows:

RECOMMENDATION VIII-A

RECOMMENDATION: That there be established within the Department of Occupational Education and Technology, staff position(s) to perform the coordinative and leadership roles for education personnel development in the field of technical-vocational education and for coordination within the Texas Education Agency with other education personnel development activities.

The Council recognizes the judgmental factors involved in determining the relation of non-teaching work experience to the teaching field as recommended in (4) which was rejected by the State Board of Education. However, it must be recognized that experience necessary for effective

teaching does not occur only in formalized preparation programs. In further study of this subject by the Council, and in consideration of the emphasis being placed upon a commitment from the total education system to relate education to the world of work, work experience outside the field of education would be most helpful to all teachers. Consequently, the Council recommends as follows:

RECOMMENDATION VIII-B

RECOMMENDATION: That the State Board of Education initiate a study to determine such factors as: limits which should be placed upon such work experience, criteria to be used in determining the usefulness of the work experience, the resources necessary to implement such a system and other factors which would be involved in implementation.

PART I

RCOMMENDATION IX

That the State Board of Education establish a statewide comprehensive technical-vocational curriculum and materials system. The system would serve as a resource bank with a publishing capability. An advisory committee would assist in identifying the objectives for the system and developing operating policies. Such an advisory committee would be representative of the education profession and employers.

STATE BOARD OF EDUCATION RESPONSE/ACTION:

The Legislature did not include the funds requested by the Board in the Appropriations Act.

Advisory Council Response/Recommendations:

The Advisory Council has been impressed by success of materials development centers in certain phases of vocational education in the state and recognizes that if the education system is to be "redirected" and if the "commitment" is to be forthcoming, then there must be tools for accomplishing these goals. The Council believes the statewide comprehensive technical-vocational curriculum and materials system is essential to progress in this field, and the Council recommends as follows:

RECOMMENDATION IX-A

RECOMMENDATION: That the State Board of Education move toward the goals outlined in the Recommendation within the resources available and make preparation for renewing the request to appropriating authorities with supporting documentation. Further, that statewide coordination and leadership functions be assigned to staff within the Department of Occupational Education and Technology.

PART I

RECOMMENDATION X

That the State Board of Education initiate on a demonstration basis in a minimum of twelve school districts, representative of the broad cross-section of districts within the state regarding size, geography and other factors, a system of follow-up and report with the view that such a system when proven could be implemented statewide by September 1973. It is further recommended that the State Board make an effort to identify students by a social security number by September 1971 as a base for identification and development of further systems of information and follow-up.

STATE BOARD OF EDUCATION RESPONSE/ACTION:

Budget requests were made by the Board of the Legislature for $750,000 for fiscal year 1972 and $1,225,000 for fiscal year 1973.

The Legislature allocated $250,000 in the Appropriations Act for 1971-72. Planning on the most effective use of these funds is now underway.

Advisory Council Response/Recommendations:

The Advisory Council is appreciative of the priority assigned this Recommendation by the State Board and support given by the Legislature. In the study and development of the follow-up system, it should be emphasized that the first and most important need in follow-up is an adequate information base at the local level for analysis of the education product and subsequent adjustment of the process in keeping with directions determined from the analysis of the product. Such a system should then provide adequate data for state analysis and management responsibilities. It might be necessary to secure legislation to emphasize the importance of response from products of the education system and the responsibility of each individual in making their response.

PART I

RECOMMENDATION XI

That the Student contact hour formula for the funding of all post secondary technical-vocational education be refined, improved and changes made in the formula rates to adequately fund technical-vocational education programs. Further, that provision be made and funds provided for approval on a project basis of special programs to meet particular needs within the service area of an institution.

That the Texas Education Agency devise and require a uniform cost accounting system which will display all elements of cost in technical-vocational education. Information gathered from this system would be used for management and planning.

STATE BOARD OF EDUCATION RESPONSE/ACTION:

Studies to determine the cost of post-secondary vocational education were conducted by the Advisory Council for Technical-Vocational Education and by the Texas Junior College Association. Rates for funding various programs were calculated from these studies. Those rates identified by the Advisory Council were accepted by the State Board and were used by the Agency in preparing budget recommendations to the Legislature. The post-secondary staff will begin another Cost Study in September 1971 to refine present formula rates.

The post-secondary staff of the Texas Education Agency is studying various methods by which junior colleges and other post-secondary institutions may display indirect, as well as direct, elements of cost and thus receive credit for the true fiscal effort going into vocational education. A uniform cost accounting system is also being studied but it is anticipated that development of a system will require at least two years.

Advisory Council Response/Recommendations:

The Council supports the contact hour formula concept and in the absence of Legislative requirement that the line item appropriation be earned, the Council recommends as follows:

RECOMMENDATION XI-A

RECOMMENDATION: That the State Board of Education assign a high priority to the development of the uniform cost accounting system and until such time as this system is operational that a contract be negotiated for maintaining and keeping current the established data base on costs as established in the Advisory Council Study.

PART I

RECOMMENDATION XII

That the State Board make special efforts to provide as much direction through inservice education and other supportive services as possible, to enhance the effectiveness of these ancillary units in the meaningful development and growth of technical-vocational education in the State. The headquarters staff of the Department of Occupational Education and Technology should take the leadership in utilizing the resources of the field staff, applicable services of Education Service Centers, employers and other groups in support of local school districts and their efforts to improve their programs in technical-vocational education. The Council supports staff increases to perform these services.

STATE BOARD OF EDUCATION RESPONSE/ACTION:

This recommendation is being implemented insofar as possible by the present staff. Additional staff needs are under study.

A two-year pilot project was approved by the Agency for the development of a model program of placement and follow-up for secondary school students in the Bryan Public Schools.

The Texas Education Agency contracted with the Texas State Technical Institute for implementation of a Texas Guidance Information Program (S.O.S.) which surveyed students currently participating in vocational-technical education programs in public post-secondary institutions. A second follow-up study will be made of the same students six months after graduation.

Advisory Council Response/Recommendations:

The Council supports staffing to meet the needs to strengthen education personnel development activities as recommended in responses to Recommendation VIII.

Ancillary Vocational Personnel are now in schools in which over 75% of the high school population is located. These ancillary personnel can have a tremendous influence on the quality of vocational programs in the state, and the Council recommends as follows:

RECOMMENDATION XII-A

RECOMMENDATION: That the State Board of Education give high priority to inservice activities with these personnel with special emphasis on the "supply-demand" aspects of the education product and effective utilization of local advisory committees and councils.

PART II - Advisory Council Evaluation Data and Rationale

The priorities of approach of the Advisory Council in discharging its responsibilities are outlined in the first paragraph of the Council Activities section of this report. The fourth step is identified as, "examining the multitude of influences upon '.....development of technical, vocational, and manpower training....' and establishing relationships or linkages to support the work of the Council in meeting its responsibilities."

It is obvious that there must be an assessment of - Where are we? Where do we want to go? Then, how can we most effectively direct our efforts to achieve our identified goals.

In this section the Council will attempt to reduce to tables, charts and narrative summary, many aspects of "Where are we?" We will further provide information on trends, directions and climates, and give some indication of "Where we want to go," as this is a rather elusive goal because of constant changes in the needs of our economy and consequently of individuals.

The "Report of Regional Hearings by the Advisory Council for Technical-Vocational Education in Texas," which is Attachment No. 3 to this report, is a comprehensive "grass roots" assessment of where we are and where we need to go. Nearly 2700 citizens were involved in the input to this report. Even though certain information from the report will be incorporated into this report, the report should be examined carefully for the full impact of these fourteen regional hearings which provided a public forum for technical-vocational education. Particular attention is invited to data provided in the hearing report by the Council of Government Regions, as well as statewide summary of this data.

Citizens must be acquainted with their own responsibilities in the area of preparation of our youth and adults for productive work. Education must be thought of as it relates to the "needs of the individual" and the "needs of the economy." How do we deal with attitudes which make it difficult to think of education in this perspective? How relevant is education to the above criteria? What can be done about the barrier contained in Educational Snobbery? These and other questions and concerns caused the Advisory Council to give high priority to information which it is hoped would help citizens deal with these questions objectively. The wide use of twenty copies of the 16 minute 16mm film, "The Future....My Destination" and the use of fifty sets of the 16 minute slide/tape presentation entitled, "A Redirected Education System" are having some influence on the citizens of the state in this most critical area. The "Redirected Education System" film also carried a preface by Governor Preston Smith as it was used in the Fourteen Regional Hearings. Governor Smith's message is on page 2, and the script of the slide/tape presentation is on pages 5-9 of the "Report of Regional Hearings," attachment No. 3

The concern of school administrators in the state for technical-vocational education is indicated by the study conducted by the Curriculum Committee, of the Texas Association of Secondary School Principals in the spring of 1971.

PART II

In the committee's summary of the responses of 234 principals, the following are some of the recommendations of the committee:

- There is an urgent need to develop career or occupational oriented programs to serve junior high school students at all ranges of the learning scale.
- The number of vocational-technical programs offered in most secondary schools is insufficient to meet the needs of students. The primary reasons for the deficiency are unavailability of certified teachers and the costs involved in establishing the programs.
- The adult image of occupational education has in recent years been elevated to some degree by providing complete information about the vast opportunities through vocational programs. But this image must be enhanced even more.

Selections from the twenty-one questions in the survey have been made to indicate the opinions of Secondary School Principals. The selected responses are as follows:

- Are an adequate number of vocational-technical courses offered in your school to meet the aptitudes of your students? 77% answered NO.
- If additional units in vocational-technical education are offered, would it decrease dropouts? 86% answered YES.
- Since nearly 1/2 of youth drop out of public schools, do you need someone employed or assigned as a job placement counselor? 64% answered YES.
- Does your school provide for youth and adults from a community point of view so that no matter what an individual's needs are (dropped out, unemployed, undereducated or underemployed), she or he can obtain education including vocational job attainment? 85% answered NO.
- Is an active advisory committee meeting as a group to consider the vocational education program? 54% answered YES.
- Does your school have an organized plan to place graduates in the occupation or related occupation trained for? 76% answered NO.

The Advisory Council expresses appreciation for the concern on the part of these school administrators and their assessment of technical-vocational education and related aspects in their schools.

The Council is pleased with the interest and concern expressed in behalf of technical-vocational education in the state in addition to our state agencies, executive and legislative branches of state government as well as local governmental agencies:

- The state, regional and local leadership of the Texas Federation of Women's Clubs, with over 1,000 local clubs.
- The national, state and local Parent, Teacher and Student organizations.
- The state, regional and local Chambers of Commerce.
- State and local units of organized labor.
- Trade, Professional and other Associations and Organizations at all levels.

PART II

- Local Civic Organizations.

These groups and others are actively working as committees and as organizations as a whole to support technical-vocational education activities. Change and development is dependent upon this type of involvement.

Public Law 90-576 in its Declaration of Purpose, Section 101, outlined what the act was to do for whom and set some 'quality' goals for program development in the following statement: " .....will have ready access to vocational training or retraining which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests, and ability to benefit from such training."

The Advisory Council in examining the factors that influence the attainment of this purpose or goal have found that these influences are many and varied. Many are people oriented, many are not. Responsibility lies with many agencies and groups at all levels of activity. The conclusion, therefore, must be that progress toward achieving this most worthy purpose or goal will depend upon many influences and how effectively they are coordinated.

A substantial influence upon the overall purpose and goal as outlined in PL 90-576 is that of geography of the state, population density, and organization of the state for education purposes. Table I, page 43 of this report, indicated that a large number of school districts in the state are small, many of these because of sparse population, and consequently, the comprehensiveness of offerings in vocational education is restricted, thereby denying accessibility to realistic training in light of anticipated employment opportunities. Special attention is given this problem in Council Recommendation II and 1971 supplemental recommendations. It must be pointed out, however, that concentration of students does not necessarily provide comprehensive offerings making vocational education readily accessible. The following observations would indicate that many factors influence this goal:

- Policies for administration of vocational education in the secondary system are established by the State Board for Vocational Education and these policies are administered by the Texas Education Agency. There is substantial latitude in such policies to permit education programs to be tailored to the needs of individual school districts as determined by local Boards of Education. Education leadership, resources, community priorities and other factors influence the final decision made within the community as to the shape of the education program. A specific example of community influences, as these relate to vocational programs, is cited on page 10 of Attachment No. 3.

- It will be noted that 63% of the state's independent school districts offering vocational education programs have less than 300 High School ADA (Average Daily Attendance). In an analysis of the vocational offerings of these districts, it was found that 96% of the offerings were vocational

TABLE I

AN ANALYSIS OF INDEPENDENT SCHOOL DISTRICT BY SIZE AS DETERMINED BY HIGH SCHOOL ADA

GROUP SIZE OF ISD'S	NO. DISTS	TOTAL HS ADA	% OF TOTAL NO. DIST.	% OF TOTAL HS ADA
20,000 or more	3	108,921	.32	16.1
15,000 thru 19,999	1	19,649	.11	2.9
10,000 thru 14,999	3	51,177	.43	7.5
5,000 thru 9,999	11	82,500	1.20	12.2
2,500 thru 4,999	28	105,000	3.00	15.5
1,000 thru 2,499	60	105,000	6.40	15.5
900 thru 999	15	14,250	1.60	2.1
800 thru 899	13	11,050	1.40	1.7
700 thru 799	27	20,250	2.90	3.0
600 thru 699	24	15,600	2.60	2.3
500 thru 599	39	21,450	4.20	3.2
400 thur 499	45	20,250	4.80	3.0
300 thru 399	75	26,250	8.00	3.9
SUB TOTAL 300 thru 20,000	344	601,347	36.90	88.6
200 thru 299	121	30,250	13.00	4.5
100 thru 199	207	30,900	22.10	4.6
50 thru 99	165	12,375	17.70	1.8
under 50	95	3,562	10.20	.53
SUB TOTAL 299 and less	588	77,087	63.10	13.4
TOTAL	932(1)	678,434 (2)	100.00	100.0

(Tabulation made from 1970-71 Vocational Education Unit List, TEA, Utilizing 1969-70 HS Average Daily Attendance data in unit list)

(1) 932 Independent School Districts having Vocational Education out of 1003 Independent School Districts in state.

(2) Total computed by taking actual in first three groups and multiplying Districts x Avg for each of the remaining Groups.

TABLE II

PERIODIC DATA ON VOCATIONAL EDUCATION PROGRAMS AT SECONDARY LEVEL, 1962-71

() indicates duplicated count with grand totals included in program totals.

	1962-63 School Year				1967-68 School Year				1970-71 School Year			
OCCUPATIONAL AREA	NO. SCHOOL DISTS.	NO. TEACH UNITS	TOTAL ENROLL-MENTS	AVG ENROLL-MENT PER UNIT	NO. SCHOOL DISTS.	NO. TEACH. UNITS	TOTAL ENROLL-MENTS	AVG ENROLL-MENT PER UNIT	NO. SCHOOL DISTS.	NO. TEACH. UNITS	TOTAL ENROLL-MENTS	AVG ENROLL-MENTS PER UNIT
AGRICULTURE	873	1,135	46,603	41	866	1,122	49,632	44	844	1,203	54,378	45
AGRICULTURE COOP/PL						(142)	(1.190)	(9)		(338)	(3,578)	(11)
DISTRIBUTION	120	161	5,764	23	196	301	10,511	35	262	448	15,634	35
HEALTH		1				9	194	22	26	43	1,046	24
HOMEMAKING	937	1,618	102,294	62	941	1.948	141,459	72	918	2,241	169,365	76
HOMEMAKING COOP/PL						(26)	(537)	(21)		(125)	(2,815)	(23)
INDUSTRIAL	123	283	12,223	43	213	742	22,663	31	271	1,020	30,809	30
CVAE					59	190	7,367	39	159	532	17,832	34
OFFICE					121	163	5,694	35	196	329	13,330	41
TECHNICAL		5	214	43		37	1,578	43		56	2,451	44
ANCILLARY										275		
TOTAL	965	3,203	167,209	51	966	4,512	239,098	53	932	6,147	304,845	52
HS ENRL. 9-12			553,668				707,900				786,100	

agriculture and homemaking. Even though this involves less than 14% of the state's high school students, it is a significant concern of the Council.

- A study of area schools as presently organized and administered revealed a very insignificant amount of transfer between districts and campuses for students to enhance their opportunities for training. Because of transportation and MANY other influences, there is a rather insignificant movement between campuses in large school districts which have relatively comprehensive offerings as a district, but the barriers are such that accessibility by students is difficult at best.
- Again, in Recommendation II, some solutions were proposed and similar systems in other states are most effective.
- The overriding influence is probably that we have been "educating for education's sake" with little COMMITMENT to preparation of each individual for "living" and "making a living". It is so evident that few schools seriously follow up on their students or attempt to meet their needs beyond grade 12.
- It should be noted that 7% of the state's independent school districts do not offer vocational education. Most of these are very small districts. In addition to the 1003 independent school districts in 1969-70, there were also 216 common school districts, many of the common districts offer only elementary education opportunities, and are relatively small.

In Table 2, the Council has selected the school years 1962-63, 1967-68 and 1970-71 in order to show the status of development of vocational education in the state at the secondary level just prior to the passage of the Vocational Education Act of 1963, then the VEA Amendments of 1968 and the most recent year to show the combined influence of all. Some special comments and explanations on the data are as follows:

- The Health and Technical Occupations at the secondary level are relatively insignificant. The strength of these programs is at the post-secondary level as illustrated in Chart IV, page 52 of this report.
- Health programs listed in this table do not include training in the area conducted by the Vocational Industrial Division through their Industrial Cooperative Training programs. There are more students enrolled in the ICT programs than in the health programs.
- Technical programs at the secondary level consist of electronics and data processing operated by the Vocational Industrial and Office Education Divisions.
- Ancillary units include vocational counselors, supervisors and administrators. Prior to 1970-71 these units were the responsibility of the local school district or were paid for by federally administered funds. They are now a part of the minimum foundation program unit allocations. These personnel play a key role in the quality aspects of vocational education.
- CVAE (Coordinated Vocational-Academic Education) is designed for students with special needs. The program was developed in direct response to Vocational Education Acts of 1963. Information on this program is contained in this report on pages 7 and 8.

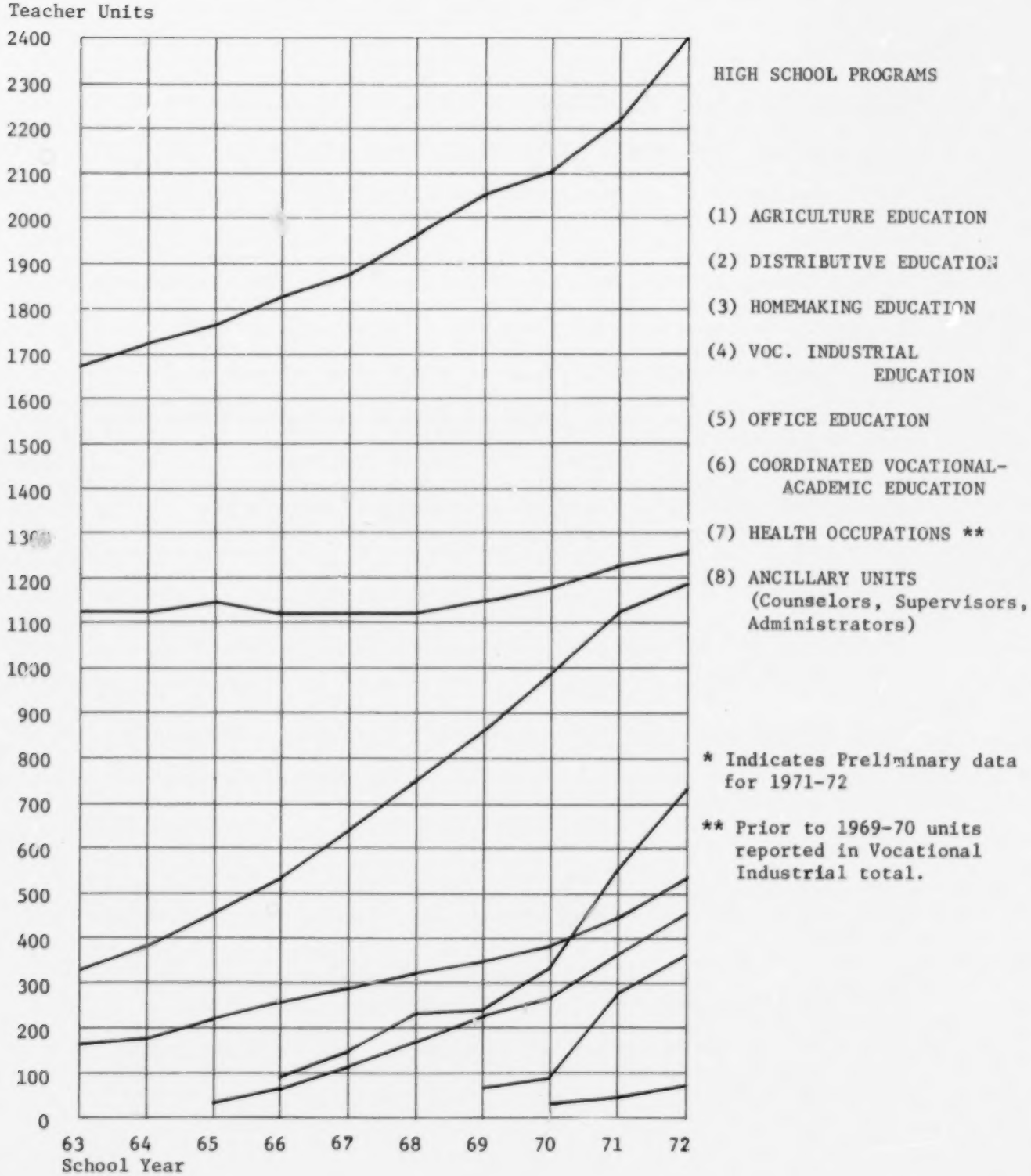
PART II

- Office education became a part of reimbursable vocational education programs in response to the VEA 1963 and were made a part of the MFP (Minimum Foundation Program) effective September 1, 1970. Units listed in this occupational area for 1967-68 were reimbursed with VEA 1963 funding.
- A detailed breakdown of specific program offerings under each of the Occupational areas is contained on pages 12-14 of Attachment No. 3 for both secondary and post-secondary programs.
- Vocational Agriculture and Homemaking were redirected into cooperative and pre-employment programs under provisions of the Vocational Education Act of 1963, in addition to production and useful programs, respectively. It should also be pointed out that enrollments in these two programs are in grades 9-12, while all others at the secondary level are in grades 11-12, or at least 16 years of age. Redirected units and enrollments are included in the overall figures under general headings of Agriculture and Homemaking. Many of these redirected units are combination cooperative/pre-employment, with production agriculture and useful homemaking units.
- All new allocations of units for 1970-71 and 1971-72 school years in vocational agriculture are combination/redirected units. However, some increases may be due to increases from 1/2 and 3/4 units.
- It should be pointed out that redirection of agriculture and homemaking units require (1) special teacher preparation, (2) substantial supervisory staff support at the state and local levels, (3) specialized facilities in the pre-employment programs, and (4) development of community need and support.
- Attention is directed to the number of school districts in which the occupational area programs are located and the development in this area during the last ten years. In checking Table I, page 43, it will be noted that there are 344 school districts with 300 or more High School Average Daily Attendance, and recall that districts with less than 300 HS ADA have 96% of their vocational offerings in vocational agriculture and homemaking.
- Special attention is called to the average enrollment per teacher unit. It should be noted that for the most part these averages have increased during the period under consideration. This is an indication to the Council of the acceptance of vocational education at the secondary level and this is in the face of increasing programs by nearly 100% during this period. Even though vocational units were increased by 20% from 1969-70 to 1970-71 school years, the average enrollments were maintained or gained.

Chart I presents the annual growth of programs by occupational areas from 1962-63 through the 1971-72 estimate. The following comments are made concerning the chart:

CHART I

ALLOCATION OF VOCATIONAL TEACHER UNITS BY OCCUPATIONAL AREAS 1962-63 THRU 1971-72*



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PART II

- Regarding estimates - the estimates are added to 1970-71 units without regard to dropping of units and/or consolidation of school districts and other factors. For example: Even though 55 new units were approved for vocational agriculture in 1970, the net increase was only 40 units, due to the factors above and in some cases, especially in Vocational Industrial Education - teachers were not available or facilities were not ready.
- A special analysis by the Advisory Council staff revealed that from 1966-67 through 1970-71 the number of Vocational Homemaking units have increased by 360, and 298 of the units have gone to school districts in our metropolitan areas with 5,000 or more school average daily attendance. Eighty-three percent of the growth of units in this occupational area occurred in cities of 50,000 or more population.

Chart II is presented to establish relative growth of occupational area units as a part of the total vocational education growth:

- For example: The field of Distribution has experienced substantial growth from 168 units in 1962-63 to an anticipated level of 506 for 1971-72, however, its relative position has increased little.

- The influence of the Vocational Education Acts of 1963 is most evident in this chart in that four new program categories have been established and of the four occupational areas available in 1962-63, the relative positions of vocational agriculture and homemaking have declined, vocational industrial has increased substantially and distribution has remained relatively constant.

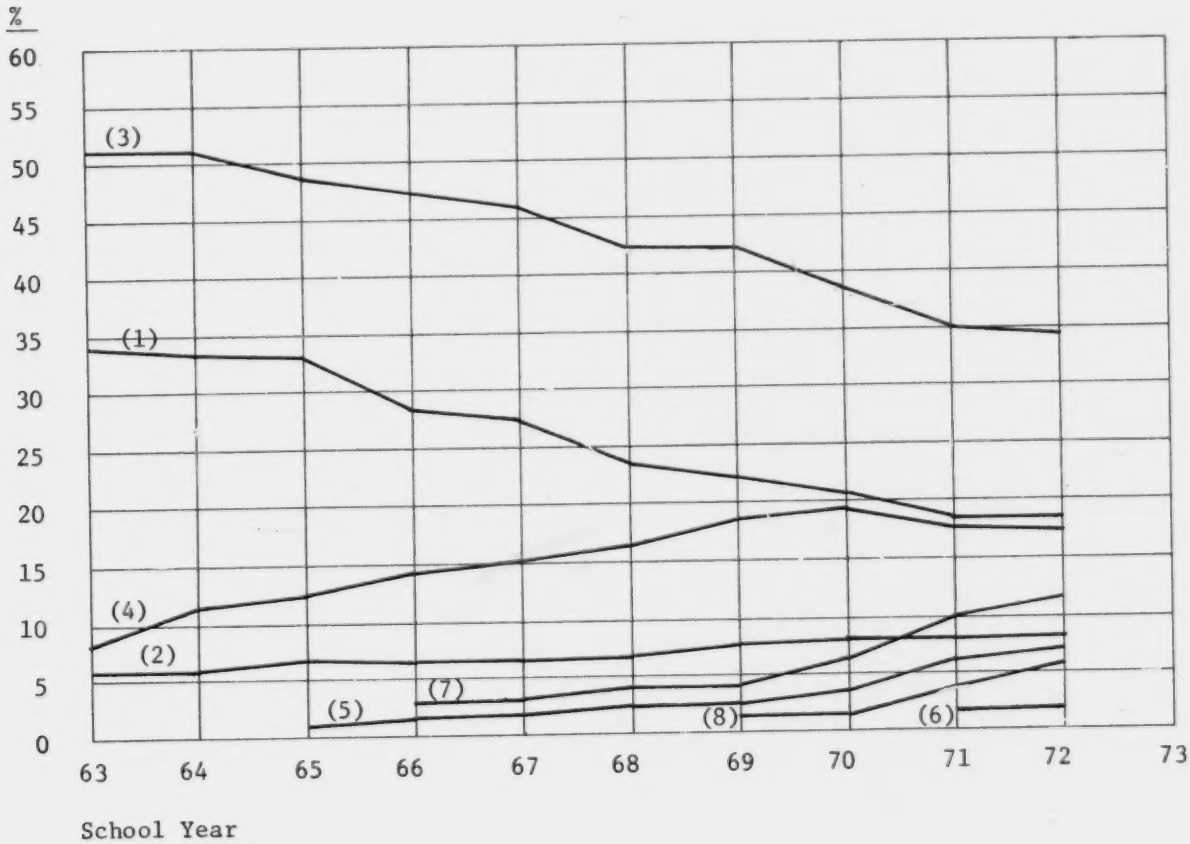
In view of the fact that vocational units are not identified as cooperative, pre-employment laboratory, useful homemaking and production agriculture, the Council staff did a special analysis to determine the relative position of cooperative units to all others and found that cooperative units increased from 20% in 1969-70 to 23% in 1970-71. Absolute figures are from 1065 to 1370 or an increase of 305 cooperative units for a 29% increase in one year.

Chart III presents vocational education enrollments as a percentage of high school enrollment over a twenty year period. The following points may be made from the chart:

- The influence of the Vocational Education Acts of 1963 have had a pronounced effect upon the relationship. It must be kept in mind that funding for the Vocational Education Acts of 1963 was not available until the 1964-65 school year and there is some lag in its impact.
- The actual high school enrollments for 1951-52 were 298,790 and increased to 761,438 in 1969-70.

CHART II

ANALYSIS OF VOCATIONAL TEACHER UNITS BY OCCUPATIONAL AREAS AS A PERCENTAGE OF THE TOTAL VOCATIONAL TEACHER UNITS FOR THE YEARS 1962-63 THRU 1971-72 **

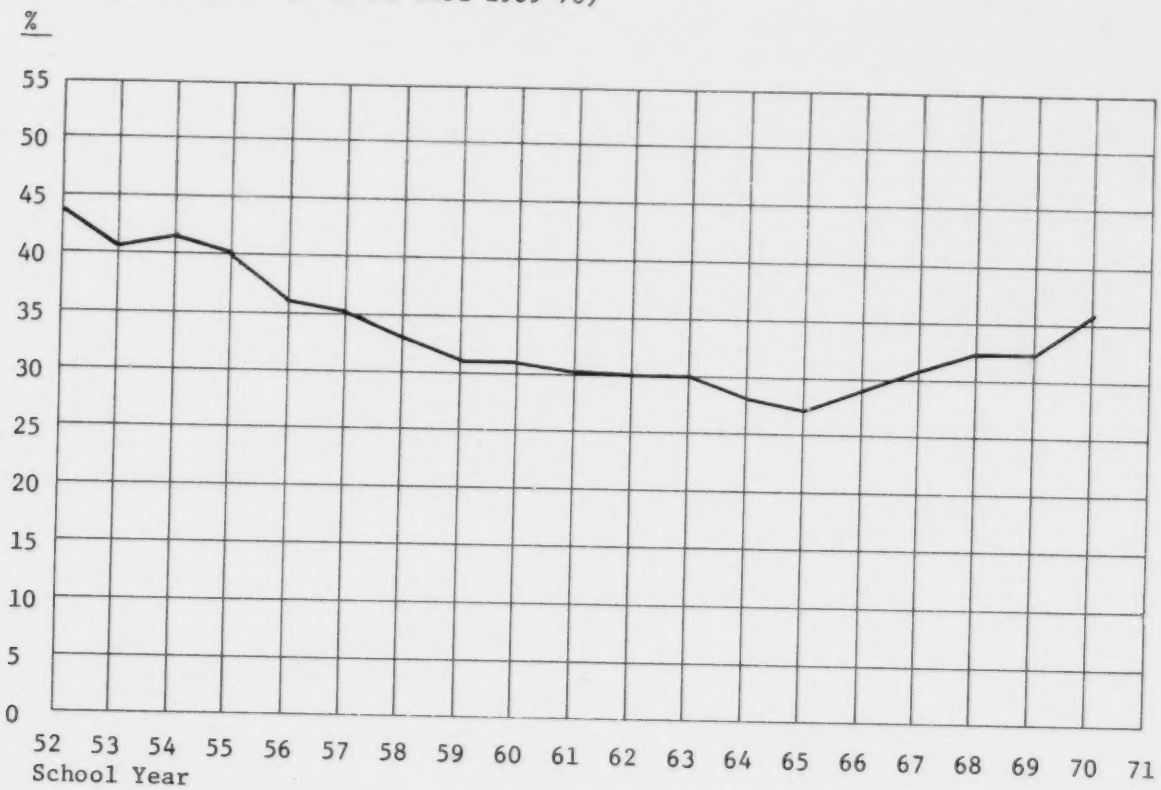


(1) VOCATIONAL AGRICULTURE
(2) DISTRIBUTIVE EDUCATION
(3) HOMEMAKING EDUCATION
(4) INDUSTRIAL VOCATIONAL EDUCATION
(5) OFFICE EDUCATION
(6) HEALTH OCCUPATIONS *
(7) COORDINATED VOCATIONAL-ACADEMIC EDUCATION
(8) ANCILLARY (COUNSELORS, SUPERVISORS, ADMINISTRATORS)

* Health before 70-71 included in Industrial
** Indicates preliminary data for 1971-72

CHART III

VOCATIONAL EDUCATION ENROLLMENTS AS A PERCENTAGE OF HIGH SCHOOL (9-12) ENROLLMENTS (1951-52 Thru 1969-70)



(Year indicates School Year ending)

PART II

Chart IV does not adequately portray the interesting and exciting happenings in post-secondary education in the state, but perhaps with some supplemental information, some appreciation of the situation can be acquired.

- The funding levels for post-secondary technical-vocational education in the state's institutions has increased from $6.5 million in 1969 to 10.5 million in 1970, to an appropriation of over $19 million for 1972.
- The comprehensiveness of program offerings is demonstrated in the fact that in 1966 a total of 127 occupational programs were offered in 46 occupational areas as compared to 540 occupational programs in 92 occupational areas in 1970-71.
- Post secondary enrollments in technical-vocational education have increased from less than 20,000 in 1966 to in excess of 40,000 in 1971. Technical-vocational courses serve as supplemental to certain curricula in post-secondary institutions.
- Health, Industrial and Technical Occupational programs represent 75% of the program area offerings in the post-secondary institutions in the state.

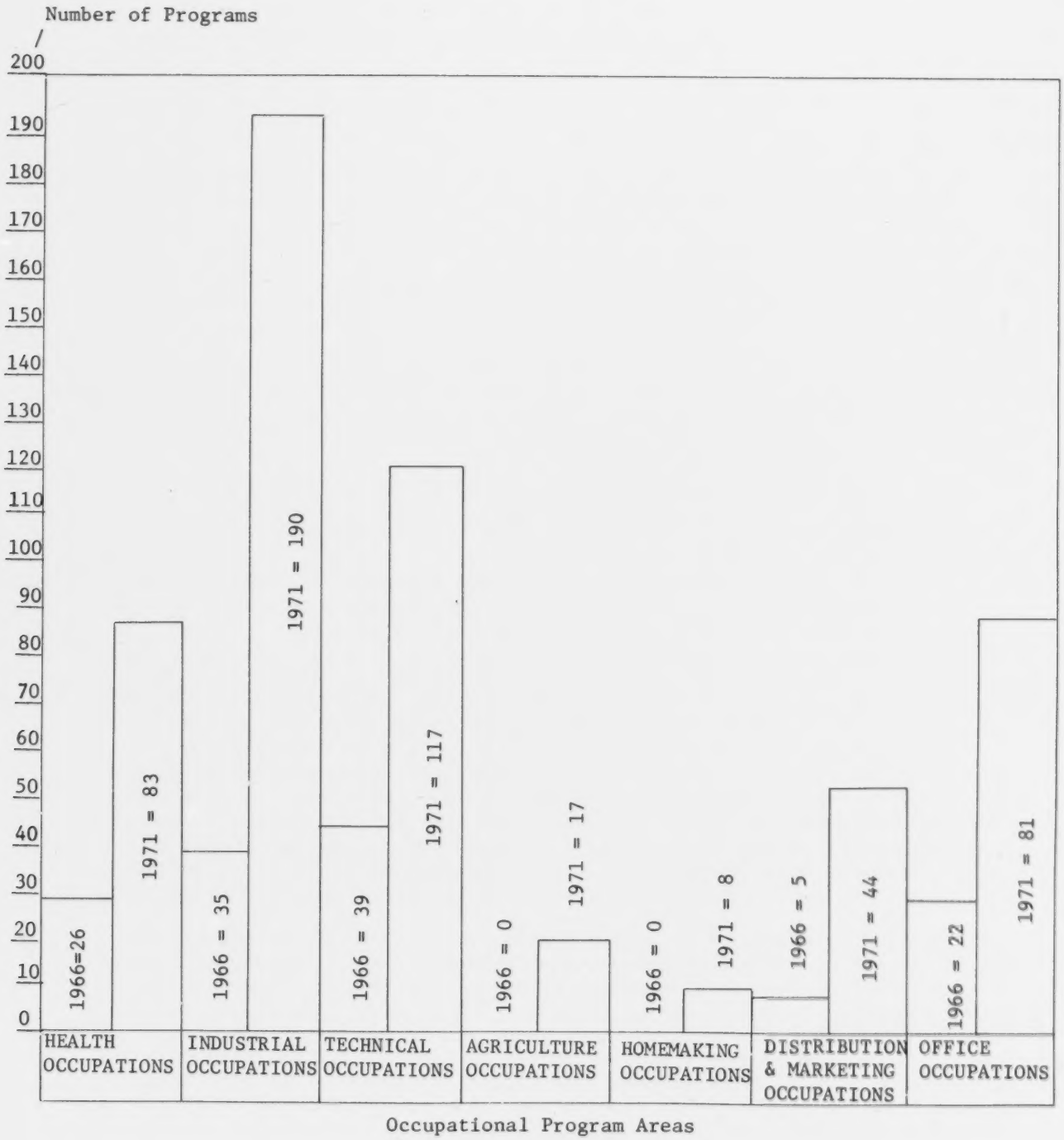
Map I is presented to give the reader a review of the secondary and post-secondary resources available in the state and to point up the urgent need for development and coordination of these resources in jurisdictions of sufficient size to provide comprehensiveness and accessibility.

- It will be noted from the map that only 66 of the 254 counties of the state have 1500 or more High School Average Daily Attendance (HS ADA). This is an indication that some of these 66 counties should extend their jurisdictions to other counties to establish a feasible resource, to say nothing of the coordination necessary with the remaining 188 counties. Even though the 66 counties have 82% of the student population, the 188 counties must seek every means to serve their population.
- The concepts set forth in Recommendation II, if enacted into law, would provide a management structure and funding source to effectively and economically serve the training needs of in excess of 90% of the state's population. Because of the sparse nature of the remaining population, of the state, it would be necessary to provide mobile facilities, itinerant programs, scholarships and other similar means to make comprehensive programs of high quality accessible to this group of citizens.
- The provisions now being made for contracting between public secondary and post-secondary institutions is commendable. Statutory provision for similar contracting with private institutions should be of assistance in more effective utilization of total resources within the jurisdictions.

Table III is the result of an analysis made by the Advisory Council of the present technical-vocational education offerings in public secondary and post-secondary institutions in a county of 80,000 population, with nearly 5,000 HS ADA and twelve accredited high schools. The proposed program offerings are based upon an analysis of the employment in the county and are within the allocation formulas of the Texas Education Agency. The analysis was made with 1969-70 data. The presentation is made to demonstrate the deficiency between training in the public institutions and what is believed to be a reasonable assessment of the job market in the county.

CHART IV

AN ANALYSIS OF THE DEVELOPMENT OF POST SECONDARY TECHNICAL-VOCATIONAL PROGRAMS
1966 THROUGH 1971



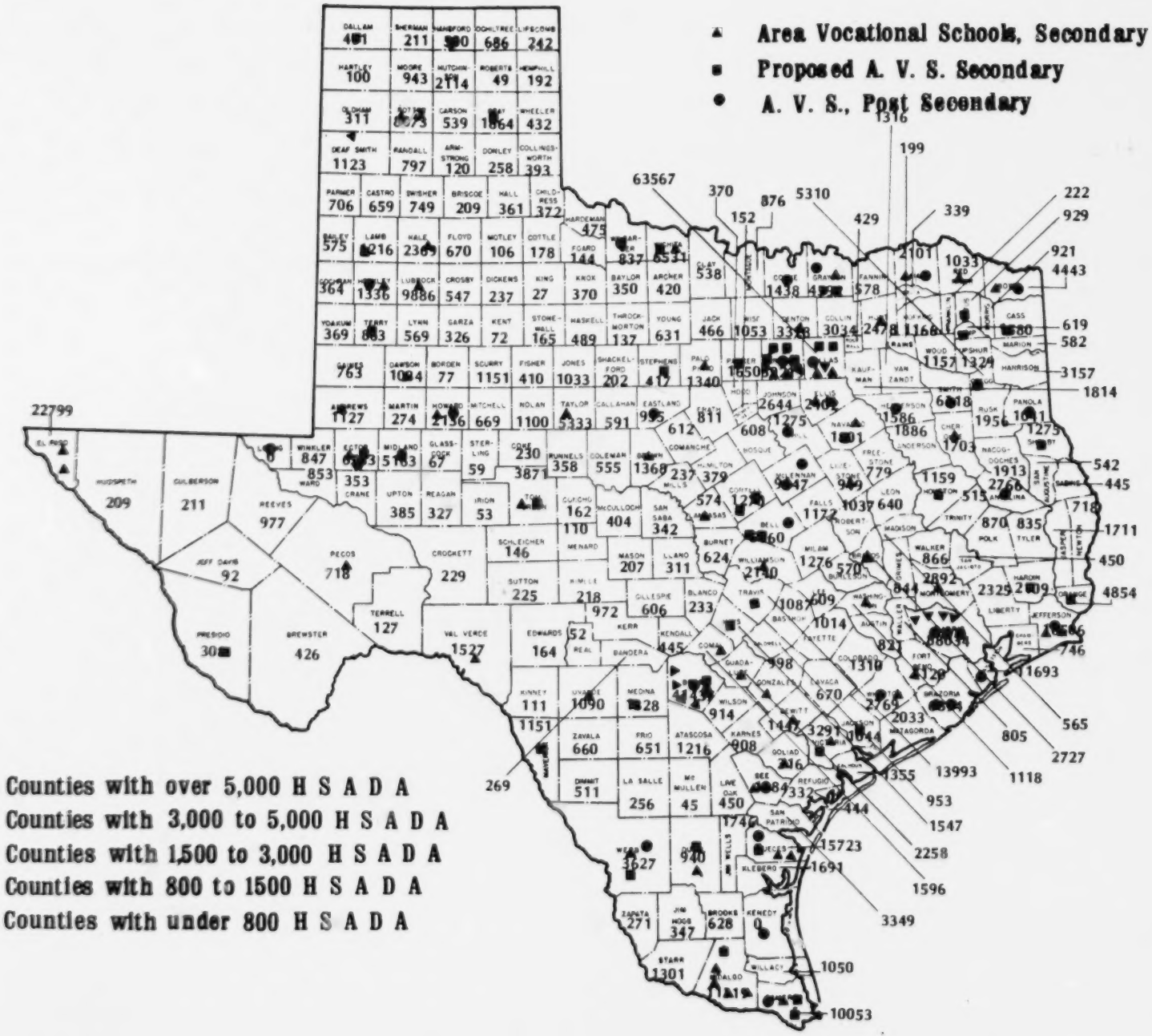

Area Vocational Schools, Secondary
Proposed A. V. S. Secondary
A. V. S., Post Secondary
Counties with over 5,000 H S A D A
Counties with 3,000 to 5,000 H S A D A
Counties with 1,500 to 3,000 H S A D A
Counties with 800 to 1500 H S A D A
Counties with under 800 H S A D A

TABLE III

A STUDY IN SUPPLY/DEMAND ASPECTS OF TRAINING AND THE JOB MARKET OF A TEXAS COUNTY

PRESENT OFFERINGS		TITLE OF VOCATIONAL UNITS AND CLUSTERS	Proposed Area School Offerings
Jr Col	Sec		
		Agriculture	
		Farm Machinery and Mechanics	1
		Ornamental Horticulture	1
	12	Vocational Agriculture-Production/Co-op	
		Distributive Education	
	2	Distributive Education Co-op	
1		Mid-Management Training	
		Restaurant Management	1
		Office Education	
	2	Co-op Office Education	
1		Data Processing	
		Specialized Secretary	1
		Health Occupations	
	1	Health Occupations--Co-op	
1		Associate Degree Nursing	
1		Licensed Vocational Nursing	
		Home Economics Occupations	
		Commercial Cooking	1
		Dietician's Aide	1
		Interior Design	1
	25 1/2	Vocational Homemaking (useful & gainful)	
		Industrial Vocational-Technical Education	
	2	Industrial Cooperative Training	
		Auto Body Repair	1
1		Auto Mechanics	2
		Diesel Mechanics	1
1		Industrial Engine Repair	1
		Small Engine Repair	1
		Building Trades	1
1		Drafting	1
		Masonry	1
		Mill and Cabinet	1
		Piping Trades	1
		Appliance Repair	1
		Electrical Trades	1
		Electronics	1
		Instrumentation Technology	1
1		Radio and Television	
		Refrigueration and Air Conditioning	1
		Machine Shop	2
	1	Metal Trades	1
		Sheet Metal	2
		Welding	2
		Vocational Plastics	1
		Needle Trades	2
		Upholstery	1
	2	Cosmetology	2

TABLE IV

SUMMARY OF ADULT AND CONTINUING EDUCATION PROGRAM IN THE STATE OF TEXAS

Name of Program and What it Does	Student Enrollment By Fiscal Year						
	1966	1967	1968	1969	1970	1971	TOTAL
Adult Basic Education(ABE): Provides Educational opportunities to those adults 16 years of age or older with less than a high school education. The course of instruction includes reading, writing, and arithmetic as well as citizenship, social studies, consumer education, and preparation for the General Education Development (GED) Test.	57,137	31,673	44,772	46,171	51,000	55,000	285,753
Civil Defense Education(CED): Provides adults and high school students with the training to handle both man-made and natural disasters through a program of personal and family survival.	19,368	23,858	23,982	25,802	30,000	48,040	171,050
Manpower Development and Training (MDT): Provides occupational training and/or basic education needed by the unemployed or underemployed adults to enable them to obtain jobs in skill occupations; also provides refresher of additional training needed to upgrade the underemployed into higher paying positions: training is offered only in skills identified by the Texas Employment Commission as "shortage occupational."	6,411	7,312	12,723	10,500	10,612	13,349	60,907
Veterans Education (VE): Provides a wide scope of educational training to veterans who have served on active duty in the Armed Forces since the end of the Korean War. Training is available in institutional courses, including college, vocational, and business schools, as well as apprenticeship and other programs of on-the-job training.	-	21,237	25,952	36,090	45,000	48,080*	168,279
Work Incentive (WIN): Provides basic education, skilled training, and instructional preparation for GED for eligible welfare recipients. (Many industries in Texas now recognize the GED certificate awarded to persons who pass the test as the equivalent of a high school diploma.)	300	325	350	400	1,086	2,618	5,079
GRAND TOTALS	83,216	84,405	107,779	118,963	137,698	167,087	691,068

* Estimated

PART II

Table IV is a summary of program enrollments 1966-71 for the adult and continuing education division. It must be pointed out that adult programs that are the responsibility of the Occupational areas are not included in the totals in Table IV. Occupational area adult programs enroll approximately 215,000 and are identified by occupational areas as follows: Agriculture - 45.4%; Distribution - 7.1%; Health - 1.3%; Homemaking - 26.6%; Technical - 1.5%; and Trades and Industry - 9.2%. These figures may represent duplicated count and the periods of instruction may vary from a matter of hours to instruction of substantial length.

The programs for which the Adult and Continuing Education Division is responsible are primarily the result of programs from federal initiation and funding. The state legislature has not favorably considered legislation and appropriations for Adults in Texas. Consequently, programs for adults at the local level are those established through the initiative of local administrators and/or local groups. There is not a COMMITMENT to adult education in Texas at the state and local levels that gives (1) Legislation, (2) Funding, and (3) Administrative structure for development and coordination with other resources.

Some of the target groups for which ongoing and dependable programs must be provided if Texas is to effectively utilize its total human resources, are: (1) Adults who are deficient in basic education of a sufficient level to enter occupational training; (2) Adults who do not have adequate skills to participate in the labor force and secure adequate compensation to support themselves; (3) Adults who must be retrained or upgraded to remain in the work force or to progress in the job market; (4) Adult women who must assume family support responsibilities but do not have skills or their skills are obsolete. There are additional adult target groups.

An effective adult education system is essential to the proper functioning of an overall education system, if it is expected that one education system in the state will serve the needs of all citizens in all communities.

Table V is an attempt to provide information on the aspects of providing other programs ready for the job market. It shows the problems and other attempt has been made to verify these data in the absence of an adequate data collection system that would provide such data. The data represents those persons who have completed training and are ready for employment. Not included are those who enter the military, continue education or are for other reasons not available for employment.

TABLE V

PERSONS TRAINED AND AVAILABLE FOR EMPLOYMENT, BY SOURCES, 1969 and 1971

TRAINING SOURCE	1969	1971
Public Secondary Vocational Education	16,993	28,775
Public Post Secondary Institutions	4,618	6,792
Vocational Rehabilitation Commission	10,253	16,956
Job Corps in Texas	3,432	3,428
Manpower Development Training Programs	8,231	8,270
On the Job Training (including NABS-JOBS)	17,880	10,650
State Apprenticeship Training	8,710	9,530
Private Vocational and Business Schools	10,407	11,961
State Board of Examiners	11,282	16,169
Totals.....	91,806	112,531

The above data does not include the very important contribution made by employers in training personnel, many adult programs of retraining and upgrading.

The Department of Defense has extensive technical school facilities in Texas. Even though the supply does not accrue directly to the Texas job market, the training does take place in the state. (For example - as a part of the Department of Defense activities in Texas, the Air Training Command during FY 1970, taught or was responsible for conducting 2,307 technical training courses in 39 occupational areas in course lengths up to 78 weeks. During the year there were close to 300,000 graduates from these courses. The cost of operating Lackland and Sheppard Air Force Bases and conducting this training in the State of Texas was approximately $284,000,000.)

The Texas Employment Service reports a total Texas Civilian Labor Force in December 1969 of 4,650,300 which has grown to 4,822,600 by June 1971.

The employment of professional personnel in Texas Public Schools, grades K-12, in 1969 was approximately 125,000 while in 1971 the number is estimated to be 137,851.

PART III

ADVISORY COUNCIL RECOMMENDATIONS FOR 1971

The 1970 Advisory Council Recommendations and supplemental recommendations for 1971, are found on pages 18-39, Part I of this report. The following recommendations are in response to needs obser ed by the Council not otherwise covered in Part I. Much of the rationale for these recommendations is contained in Part II of this report on pages 40-57.

RECOMMENDATION XIII

The needs of adults were emphasized repeatedly during the fourteen regional hearings of the Council. A brief discussion of these needs is on page 56 of this report. The needs go beyond comprehensive offerings readily available, but point to a need of removing as many barriers for adults as possible, at both secondary and post-secondary levels.

The Council, therefore, recommends:

1. *That the State Board of Education give high priority to legislation and appropriations for adult education in the state.*

2. That the State Board of Education support a COMMITMENT to adult education and the establishment of a viable administrative structure at the state and local levels for adequate development and coordination.

3. That the State Board of Education review policies and procedures with a view to removing every barrier to adult participation in technical-vocational education programs at the secondary and post-secondary levels in order that total resources available be fully utilized. Some specific barriers noted are:

   a. Programs should be offered on a part-time basis when adults are available to participate.

   b. Local administrators should review offerings to make certain that they are sufficiently comprehensive to serve individual needs and needs of the job market.

   c. Policies that restrict full utilization of vocational teaching personnel should be reviewed for correction.

   d. Adult basic education programs should be available to provide the necessary base for pursuing occupational training.

PART III

RECOMMENDATION XIV

The Advisory Council is impressed by the growth in technical-vocational programs at the secondary and post-secondary levels, especially since 1969. Many local districts have availed themselves of the resources at their disposal to improve the quality of programs and to expand their programs to make the offerings comprehensive. The concerns of secondary school principals are outlined on page 40 of this report. The general purposes of Public Law 90-576 quoted on page 42 point to the urgency of continually upgrading the quality of programs, accessibility of these programs and that they be realistic in light of actual or anticipated opportunities for gainful employment.

The Council, therefore, recommends:

1. That special attention be given to vocational agriculture and homemaking in smaller school districts (under 300 HS ADA), to make the programs as comprehensive as possible. Redirect the programs to combinations with cooperative and pre-employment aspects wherever possible.

2. That all vocational teachers be encouraged to cooperate with and be supportive of information, orientation, exploration and other aspects of career development in all phases of the education system.

3. That local education planners be encouraged to review local vocational programs for improvement in comprehensiveness, accessibility and quality between campuses within school districts and between neighboring school districts.

4. That state leadership work with local education leaders to further develop the "cluster concepts" in vocational education offerings and the involvement of community resources to support fully such efforts. The Environmental Technology program is an excellent example of this concept.

5. That the State Board of Education initiate a study of pre-employment vocational programs in the secondary schools to determine the feasibility of starting exploratory and/or skill training below the eleventh grade in order to reach students earlier in their school experience, and perhaps to provide more flexibility within the school curriculum.

6. That consideration be given to the initiation of bilingual programs in vocational education and other actions necessary to adjust for language and cultural differences in appropriate areas of the state.

PART III

RECOMMENDATION XV

Throughout all exposures of the Advisory Council to citizens, students, educators and counselors themselves, the message is the same - the education system must be responsive to the needs of individuals and these needs must be related realistically to the world in which the products of education must perform. A national student leader from Texas says today's youth are "intellectually lazy", because their education experiences are not relevant. Another student leader in Texas expresses a desire for further education ONLY as a means of fulfilling an identified and specific goal. Another student is frustrated because after twelve years in the public school he feels ill-equipped to enter the world of work, and a lack of direction for further preparation. Another student was angered because of a lack of resources in his school to explore his interests, aptitudes and ability in entering the world of work without going the route of "trial and error", in dead-end jobs.

The Council has spoken directly to the need for "redirecting" the education system in the state in the 1970 Report and subsequent supplemental recommendations in this report. Even though resources are no doubt a limiting factor in many instances, it is clearly evident that much can be accomplished through "A Committed Education System".

The Council has observed successful demonstration programs in Career Orientation. The techniques of group counseling have proven successful in many situations. Many faculty members recognize and accept their responsibility for much helpful counseling with the school and/or vocational counselor in the resource and/or catalyst roles.

The Council, therefore, recommends:

1. That the State Board of Education lend its encouragement and support to every effort of local education agencies to provide adequate counseling staff that is supported in their principal objective of developing a counseling program responsive to the needs of ALL students and adults.

2. That every effort be made to involve Teacher Educators, Local School personnel, Education Service Centers, Business and Industry, Texas Employment Commission, and other agencies and groups in inservice training and support of school counseling activities.

PART III

RECOMMENDATION XVI

Participants in the fourteen regional hearings conducted by the Council, identified numerous barriers to employment and especially in the transition from school to work. Many of the barriers apparently could be removed by closer working relationship between the education community and community employers through better communication and appreciation for the needs and problems of each other. Some barriers are a result of laws or regulations which should be examined in light of continuing developments. Other barriers could be overcome by objective examination of education programs and their products, and realistic employment requirements. The Second Annual Report to the Governor, Attachment No. 2, cited examples on pages 2-3 of cooperative efforts to effectively involve citizens and specialized groups in education community activities for the improvement of education.

The Council, therefore, recommends:

That the State Board of Education establish a task force at the state level, involving other agencies and groups, to examine barriers and recommend corrective action and that local education agencies be encouraged to take similar action on the local level.

PART III

RECOMMENDATION XVII

Concern is expressed by the Advisory Council that the State Plan for Vocational Education leans heavily toward the emphasis of the plan being a "compliance document" with a much lesser emphasis toward the plan being an all encompassing "planning and management document." The objectives set forth in the State Plan do not adequately establish the dimensions of the job to be done in the state in the area of technical-vocational education. The State Plan should certainly provide projections of where we will be five years hence, but should also set forth the scope of what can be determined to be the total job and resources necessary to achieve this larger objective. Substantial progress has been made by local education agencies in the planning process during the recent months, but these plans should likewise be viable planning and management documents that are continuously updated and adjusted as the needs and circumstances change.

The Council, therefore, recommends:

1. That the U. S. Commissioner of Education review carefully the present guidelines in view of the statutes with a view of changes that would render the state plan for vocational education an effective planning and management document.

2. That the State Board of Education consider the addition of state initiated sections to more accurately reflect the total planning and management of technical-vocational education in Texas.

3. That the development of the state plan involve the data from local long range plans and that every effort be made to provide technical assistance and leadership to local education agencies in developing realistic plans that culminate in a state plan representative of the needs of the state.

GLOSSARY OF TERMS

The following definitions are given to be helpful in acquiring a full understanding of the meaning of this report. Some definitions are taken from published sources and so cited, while others are based upon the understanding of the Council Staff and the manner they are used in the report.

1. Adult Programs - instruction offered day or evening to adults or out-of-school youth over 16 years of age who are engaged in or are preparing to enter an occupation. Vocational education for adults is chiefly of an upgrading and updating nature, offered on a part-time basis, or of a retraining nature for persons displaced by automation or technological changes.

2. Advisory Committee - a group of persons, usually from outside the field of education, selected because of their knowledge and expertise in certain areas to advise educators regarding vocational programs. Such committees can operate at the federal, state and local levels and often function under names other than that of advisory committee. (American Vocational Association)

   Craft Advisory Committee - a group of local craftsmen, selected from a specific trade or occupation, appointed to advise the school on matters pertaining to teaching the particular occupation. Generally, the committee should include an equal number of representatives of labor and management. (American Vocational Association)

   NOTE: Such committees are usually appointed by the governing board or chief administrator of the institution.

3. Agri-Business - (a) a blend of agriculture and business; (b) a combination of the producing operations of a farm and, in varying degrees, the services associated with them; the manufacturing and distribution of farm equipment, fertilizers and supplies; the processing, storage, marketing, and distribution of farm commodities including food and fiber; and the conservation, preservation and use of renewable natural resources. (U. S. Office of Education)

4. Ancillary Services - Those activities and functions carried out to assure quality in vocational education programs; namely, teacher training and supervision, program evaluation, special demonstration and experimental programs; development of instructional materials, state administration and leadership. (American Vocational Association)

5. Average Daily Attendance (ADA) - usually about 93% of the Average Daily Membership (ADM) or enrollment.

6. Bonus Unit - refers to an allocation to the local school district by the Texas Education Agency in accordance with policies of the State Board of

Education of a unit in addition to and without regard to "classroom teacher units" allocated on a formula of one teacher for each X number of students. Bonus units are usually for vocational education, special education, administrative and special services.

7. Community College - a two-year post secondary institution operated by the board of education of a local basic administrative unit or units (including the independent local board for one or more community colleges.) Instruction is adapted in content, level, and schedule to the needs of the local community. (American Vocational Association)

8. Comprehensive High School - a secondary school with a curriculum designed to offer a diversified program to meet the needs of pupils with varying interests and abilities. (American Vocational Association)

9. Cooperative Vocational Education Program - means a cooperative work-study program of vocational education for persons who, through a cooperative arrangement between the school and employers, received instruction, including required academic courses and related vocational instruction by the alternation of study in school with a job in any occupational field, but these two experiences must be planned and supervised by the school and employers so that each contributes to the student's education and to his employability. Work periods and school attendance may be on alternate half-days, full-days, weeks, or other periods of time in fulfilling a cooperative vocational education work-study program. (Federal Register, Vol. 35, No. 4)

10. Coordinated Vocational Academic Education (CVAE) - are programs designed for disadvantaged, those with special needs, potential dropouts, etc. Students may be in pre-employment or cooperative CVAE programs in any of the occupational areas. Programs are offered in grades 7-12.

11. Disadvantaged - means persons who have academic, socioeconomic, cultural, or handicaps that prevent them from succeeding in vocational education or consumer and homemaking programs designed for persons without such handicaps, and who for that reason require specially designed educational programs or related services. (Federal Register, Vol. 35, No. 4) In this report, this group may be referred to as "persons with special needs."

12. Exploratory Courses - school subjects designed to provide the student with a general, overall view of the knowledge and skills involved in a field of learning or an occupation; courses which provide student with exploratory and introductory experiences in a wide range of occupations and serve as an aid in choosing a vocation. (American Vocational Association)

13. Follow-up Study - a survey to determine the occupational status of students and graduates over a span of time and how effective their training has been in relation to actual needs of the job.

14. Handicapped - means mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, crippled, or other health impaired persons who by reason of their handicapped condition cannot

succeed in a vocational or consumer/homemaking education program designed for persons without such handicaps, and who for that reason require special educational assistance or a modified vocational or consumer and homemaking education program. (Federal Register, Vol. 35, No. 4)

15. Occupation - a term referring to a person's regular work, business, pursuit or means of earning a living. (American Vocational Association)

16. Occupational Program Areas -

    a. Vocational Agriculture is a comprehensive program covering the broad preparations for production agriculture activities, pre-employment and cooperative programs in agri-business. Programs are offered in grades 9-12, usually for one hour per day plus out of school activities and projects. Pre-employment programs are offered in seven areas such as Ornamental Horticulture, Agricultural Chemicals and Fertilizers, Farm Power and Machinery and others. Cooperative programs train in thirty-five areas such as Agricultural Chemical Sales, Nursery Employee, Agricultural Communications, Veterinarian's Assistant and other jobs in the broad agri-business industry.

    b. Distributive Education provides training in the broad and growing field of distribution and marketing. Some DE programs are pre-employment, but the majority are cooperative programs. Training may be for proprietors, managers, supervisors, or employees in distributive occupations found in such businesses as - retail and wholesale trade; finance, insurance and real estate; services and service trade; manufacturing, transportation and utilities; and communications. Programs in the high schools are for two years or in some cases one year, usually in the 11-12th grades.

    c. Vocational Homemaking Education is designed to prepare students to become homemakers, and/or to become employable in occupations requiring knowledge and skills in one or more home economics subjects -- Human Development and the Family, including Child Development and Family Living; Home Management; Consumer Education, including Family Economics; Clothing and Textiles; Food and Nutrition; and Housing. Programs are offered in grades 8-12, and usually for one hour during the school day. Students in comprehensive programs have supervised home experiences as supplements to school instruction. There are pre-employment and cooperative programs in the broad areas of consumer and homemaking education fields.

    d. Health Occupations programs at the secondary level are principally cooperative programs in the broad health field. A demonstration program for Licensed Vocational Nursing has been established at the secondary level. A variety of training stations are found in the offices of doctors, dentists, hospitals, nursing homes, medical laboratories and clinics. Because of licensing and other requirements, the majority of Health Occupations programs are found in post secondary institutions.

    e. Vocational Office Education provides some training in pre-employment programs but the majority is in cooperative programs in the multitude of jobs and specialties in the growing field of business and office

activities. Skills taught in academic programs are often utilized in the training in this field. Most activities of this program are in grades 11-12 for three hours a day.

f. Vocational Industrial Education provides training in pre-employment or day trade programs as well as in cooperative programs normally referred to as Industrial Cooperative Training (ICT). Approximately 20% of the enrollment in this program is in the ICT programs. Training is conducted in almost every occupation in the industrial area found in a community in which there is a cooperative training station. Training is provided in nearly thirty-five areas in pre-employment programs in fields such as aircraft maintenance, automotive, building trades, photography, electronics, radio and television, welding and other areas. Programs are offered principally in the 11-12th grades for three hours per day.

17. Post-Secondary Vocational Education - designed primarily for youth or adults who have completed or left high school and who are available for an organized program of study in preparation for entering the labor market. The term shall not be limited to vocational education at the level beyond grade 12 if the vocational education needs of the persons to be served require vocational education at a lower grade level. (American Vocational Association)

18. Pre-employment Training - instruction and practice in the skills and principles of an occupation or payroll job, given to persons before their placement on a job. The instruction may be given as a formal course or curriculum, or it may be a short intensive program of orientation and instruction immediately prior to employment. (American Vocational Association)

19. Programs - as used in the State Plan for Vocational Education refer to instructional programs. For example: In vocational agriculture, the comprehensive or production aspect would be considered one program; the cooperative and pre-employment parts would be considered as additional and separate programs; the adult activities would be considered as an adult program. Using this definition, one teacher could be operating three programs in vocational agriculture. Similar applications could be made to other vocational areas.

20. Secondary - is grades 7-12, but as used in this report usually has reference to High School or grades 9-12 with a distinction being made between Junior and Senior High School students.

21. Technical Education - the branch of education devoted to instruction and training in occupations above the craftsman or trade levels, but generally not professional in nature. Instruction may not be baccalaureate in content but is evaluated usually by credit criteria rather than by clock hours. The courses qualify persons for employment in paraprofessional positions and as technicians, engineering aides and production specialists. (American Vocational Association)

As reported elsewhere in this report - Technical Education at the secondary level in Texas means electronics programs in the Vocational Industrial Education Division and data processing in the Vocational Office Education Education Division of TEA.

22. Technical Institute - a school whose purpose is to educate and train persons for careers in vocational and technical fields at levels beyond the twelfth grade. Usually it is so designated to distinguish it from the junior college and the community college, whose purposes may be both vocational-technical and academic. (American Vocational Association)

23. Vocational Education Unit (VEU) - is a term used to identify the financial obligation of the Minimum Foundation Program as it relates to Vocational Education. Units are allocated based upon State Board of Education policies to local schools. Units are measured as 1, 1/2 or 3/4. When one unit is used, it means one teacher. When 1/2 unit is used it can mean that the Minimum Foundation Program is charged for one-half of the teacher salary and the local district pays the remaining but assigns the teacher full-time into vocational duties OR a 1/2 unit may be allocated to two different and neighboring school districts with the one teacher spending 1/2 time in each of the two districts. When 3/4 unit is used, it means that the local district must pay 1/4 of the cost of the unit, but assign the teacher full-time duties in vocational education. For this reason the total units in vocational education, for example, may be 6150, but the number of vocational teachers could be 6175.

24. Vocational Education - vocational or technical training or retraining which is given in schools or classes.....and is conducted as a part of a program designed to prepare individuals for gainful employment as semi-skilled or skilled workers or technicians or subprofessionals in recognized occupations and new and emerging occupations, or to prepare individuals for enrollment in advanced technical education programs, but excluding any program to prepare individuals for employment in occupations generally considered professional or which require a baccalaureate or higher degree. (American Vocational Association)

THE ADVISORY COUNCIL FOR TECHNICAL-VOCATIONAL EDUCATION IN TEXAS
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VT 017 625
KENTUCKY STATE ADVISORY COUNCIL FOR
VOCATIONAL EDUCATION AND MANPOWER DEVELOPMENT
TRAINING ANNUAL EVALUATION REPORT.

KENTUCKY STATE ADVISORY COUNCIL FOR
VOCATIONAL EDUCATION AND MANPOWER DEVELOPMENT
AND TRAINING, FRANKFORT.
OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C.
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EDUCATION; *STATE PROGRAMS; COOPERATIVE
PROGRAMS; PUBLIC OPINION; INTERVIEWS;
*PROGRAM EVALUATION; PROGRAM DEVELOPMENT
IDENTIFIERS - *KENTUCKY; EDUCTIONAL AWARENESS

ABSTRACT - THIS DOCUMENT EXAMINES THE
VOCATIONAL EDUCATION PROGRAM IN KENTUCKY IN
1971 AND OFFERS RECOMMENDATIONS FOR
IMPROVEMENT. TO DETERMINE BOTH THE NEEDS OF
PEOPLE AND THE NEEDS OF BUSINESS AND
INDUSTRY, THE STATE ADVISORY COUNCIL HELD
PUBLIC HEARINGS AND CONDUCTED INDIVIDUAL
INTERVIEWS WITH REGIONAL VOCATIONAL
DIRECTORS. RECOMMENDATIONS TO HELP MEET THESE
COMMON CONCERNS INCLUDE: (1) APPROPRIATION OF
SUFFICIENT FUNDS FOR EXPANSION OF EVENING
VOCATIONAL PROGRAMS USING EXISTING
FACILITIES, (2) REEVALUATION OF THE
PROCEDURES USED IN TESTING STUDENTS FOR
READINESS TO ENTER EMPLOYMENT, (3)
DEVELOPMENT OF BETTER PROGRAMS FOR THE
HANDICAPPED AND DISADVANTAGED, AND (4)
PREPARATION OF AN OPERATIONS MANUAL TO
DELINEATE RESPONSIBILITIES OF EACH VOCATIONAL
EDUCATION ADMINISTRATOR. STATISTICS AND OTHER
SUPPORTIVE DATA ARE DETAILED IN THE REPORT.
(KH)

VT 017 625

COMMONWEALTH OF KENTUCKY

STATE ADVISORY COUNCIL FOR VOCATIONAL EDUCATION
AND MANPOWER DEVELOPMENT AND TRAINING

FRANKFORT 40601

ANNUAL EVALUATION REPORT

October 1, 1971

VT017625

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ANNUAL EVALUATION REPORT

Kentucky State Advisory Council for Vocational Education
and Manpower Development and Training

October 1, 1971

COMMONWEALTH OF KENTUCKY

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AND MANPOWER DEVELOPMENT AND TRAINING

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September 15, 1971

Mr. Samuel Alexander
Secretary, Kentucky State Board of Education
Frankfort, Kentucky 40601

Dear Mr. Alexander:

Transmitted herewith is the annual report of the State Advisory Council for Vocational Education and Manpower Development and Training. The Council, at its general meeting on September 10, asked that the report be presented to the State Board of Education for review, comments, and transmittal to the U. S. Commissioner of Education and to the National Advisory Council on Vocational Education.

It has been a pleasure for the Council to have worked with the State Board of Education, the Department of Education, and the Bureau of Vocational Education during the past year. We trust our efforts and activities have been of value to all concerned with vocational education and that the comments and recommendations found in the report will serve a useful purpose.

Respectfully yours,

George Joplin

George A. Joplin III
Chairman

cc: Members of the State Advisory Council

ESTABLISHMENT AND MAJOR DUTIES OF THE COUNCIL

Provision for the creation of the State Advisory Council for Vocational Education and Manpower Development and Training was made through the 1968 Vocational Education Amendments (P. L. 90-576). The Governor of the Commonwealth of Kentucky established the Council in 1969 and appointed twenty-one persons to serve.

The major duties of the Council, as charged by law and by executive order of the Governor, are to advise the State Board of Education on the development of and policy matters arising in the administration of the State Plan for Vocational Education; to evaluate vocational education programs, services, and activities; and to prepare and submit an annual evaluation report through the State Board of Education to the U. S. Commissioner of Education and the National Advisory Council on Vocational Education.

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INTRODUCTION

During the past year, the Council has had an opportunity to become more familiar with many of the activities of vocational education and to develop a better understanding of the needs and problems that confront vocational education and vocational educators.

Members of the Council and its staff have had opportunities to visit each of the thirteen area vocational schools and several extension centers, to participate in state and regional meetings dealing with vocational education, to participate in institutes designed to upgrade staff and to observe, firsthand, the administration and conduct of vocational education programs across Kentucky.

The Council has reviewed data pertinent to the needs of people and the economy and looked, in detail, at the construction needs for vocational education across the state. We have held three public hearings in separate regions of the state and have listened to the public express views toward vocational education in terms of both the needs of people and the needs of business and industry.

Individual, in-depth interviews were held with the thirteen regional directors. In these interviews six major areas of vocational education activities and interests were discussed, and significant, common findings have been reviewed and discussed by the Council.

With these experiences serving to guide the Council, it feels it is prepared to comment and to offer suggestions and recommendations which we feel will be of help to vocational education.

We have confined our comments to two broad goals:

1. The State's goals and priorities as set forth in the State Plan for Vocational Education, and

2. The effectiveness with which people and their needs are served through vocational education programs, services, and activities.

We wish to thank the many people in the Bureau of Vocational Education for their assistance, and patience, in providing the Council with information and data used in our report. We are extremely grateful for the cooperation of regional directors and members of their staff, who, in the busiest time of the year, gave freely of their time and thus enabled the Council to conduct a very important part of its evaluation effort.

We are grateful for the cooperation and assistance of the Kentucky Chamber of Commerce in helping to publicize and coordinate the three industrial-vocational education seminars and public hearings on vocational education in the Ashland, Lexington, and Louisville regions. We also extend our appreciation to the area chambers of commerce and to the regional vocational education directors of these regions for their help in planning and working out the many details associated with the meetings.

MAJOR DEVELOPMENTS IN VOCATIONAL EDUCATION AS OBSERVED BY THE COUNCIL

The Council has observed a year of growth and progress in vocational education in Kentucky and would like to feel that it has been a part of it. We have attempted to direct our comments and recommendations to areas which we feel need attention and, if given attention, would serve to strengthen vocational education in our state.

We have observed initial steps taken in areas which, when fully implemented and operational, will have both positive and long-range effects on Kentucky's vocational education program. We applaud the leadership in its efforts to strengthen programs through the following activities and lend our encouragement and support to the efforts:

1. Planning - Vocational educators are becoming much more conscious of the need for effective planning at all levels of operation. We attribute this development to the emphasis placed on planning during the past year and feel that this needs to be given increased emphasis as an on-going activity.
2. Evaluation - Major efforts have been made to develop an understanding of and appreciation for program evaluation during the past year. A major portion of the effort has been in stressing the need for student follow-up and employer contact which we feel will give administrators and teachers a new tool in shaping future programs.
3. Student data system - The progress made in setting up a student data system is encouraging, and we hope it becomes fully operational and adequately supported during FY 1972.

4. Information system - We are extremely encouraged over the possibilities of seeing an information system implemented during this year. We see the need for such a system as being ranked high on the priority list and hope that it continues to get adequate attention and support from the Department of Education and the Bureau of Vocational Education.

5. Needs of people - We are pleased with the attitude expressed by vocational educators in terms of their responsibilities to meet the needs of people. They have expressed concerns over a need for better planning and the delivery of services which point to an awareness of the job ahead in effectively meeting the needs of people, particularly the handicapped and disadvantaged.

6. Construction - Major steps have been undertaken during the past year in taking vocational education closer to the people. This is evidenced by the opening of seven new or expanded facilities in 1970, the opening of six new facilities September 1, 1971, and the approval of eight new facilities to be constructed during the current fiscal year.

7. Lay citizen involvement - Twelve regional advisory councils were created by the State Board of Education to advise vocational education administrators and policy makers in determining what vocational education programs should be. Each council is composed of 15 individuals which will bring about a stronger involvement of business and industry and the general public in vocational education. In addition, craft committees continue to function. The Council feels that greater citizen involvement will give vocational educators a new perspective in the conduct of programs.

8. Professional development - Teachers and staff of vocational education were provided opportunities for growth and development through many workshops, institutes, and conferences during the past year. We feel it is imperative that vocational education keep abreast of the changing times and encourage a strong program in professional development especially at the local level.

9. Career education - The Council endorses the "career education concept" and is pleased that the Bureau is using exemplary and research funds in three school districts to test the concept. We hope experimentation and testing lead to a "career education model" and we encourage the Bureau to seek out other school districts who are willing to work toward developing a model for Kentucky.

10. Cooperative education - We feel there have been significant developments and growth in the area of cooperative education, particularly in the trades and industries programs. There is evidence that enthusiasm is running high among vocational educators and employers across the state in support of cooperative education. The Council hopes the growth progresses and that it continues to receive encouragement and support.

PUBLIC HEARINGS

The Council, through its public hearings on vocational education, heard the public express views and concerns in terms of how effectively the needs of people and the needs of the business and industry communities are being met. The significant findings are described below:

1. In each of the three regions those who spoke at the hearings expressed need for vocational education to expand its program offerings and offer a greater variety of programs to more adequately meet the manpower need which exists in each of the three regions. In the Louisville and Ashland regions, needs were expressed which indicated that additional facilities need to be constructed in order to more adequately serve the people who want and need vocational education. Special appeals for construction were expressed in these two regions.
2. In all three regions it was found that a feeling exists among educators and business and industry people that vocational education is not meeting the needs of high school students in terms of both programs offered and an adequate number of training stations to serve them.
3. There were also common concerns expressed over high school dropouts and the role vocational education can play in curbing the dropout rate. This particular topic received more attention in the Ashland and Lexington regions than it did, however, in the Louisville region. Reference was made to the high number of unemployed youths and adults in the Louisville region.

4. In each of the three regions there emerged common concerns over the extent and quality of vocational guidance programs available to high school students. In each region the traditional college oriented approach to counseling, which in the minds of many exists today, was compared with a need for the introduction of vocational guidance services at a stronger level than is presently being done.

5. Common concerns were evident in each of the three regions regarding the percentage of high school students who graduate from high school and who do not go to college as compared with those who graduate from high school and go on to college. Questions were asked relating to what actually happens to those who do not go to college and how adequately prepared they are to go to work. Questions also arose concerning what is being done to serve this large proportion (57% in 1970) of high school students who did not enter college following graduation from high school.

6. References were made in all three regions for a need for vocational education to be projected into the elementary grades and to become an integral part of the total education system.

7. Concerns were expressed in all three regions over the low percentage of high school students that can be accommodated in vocational education programs with particular emphasis being placed on those that can be accommodated in area schools and extension centers.

8. In the Lexington and Ashland regions concerns were expressed over the eligibility requirements of high school students to enter vocational education programs. Particular reference was made to the age requirement (must be 16 years of age

to enter), and in some instances achievement level requirements are rigid and prevent high school students from entering because of academic requirements.

9. Concern was expressed in all three regions that vocational education is not engaged in, or emphasizing enough, training in the world of technology. Particular emphasis was placed on the health occupations.

10. Community colleges in Lexington and Ashland expressed concern over the lack of finances to participate in vocational training programs to the degree which they felt was needed.

INTERVIEWS WITH REGIONAL VOCATIONAL DIRECTORS

The Council attempted to examine the major concerns of vocational educators across the state. In personal interviews with the directors of the twelve vocational education regions, several common concerns were expressed. They are as follows:

1. Approximately 75% expressed some measure of concern over program objectives for the handicapped and disadvantaged and made specific references for a need to give more attention to programs and objectives designed to reach this segment of the population.
2. All expressed concern that they were not reaching the people they were supposed to serve and were concerned, in addition, that they were not serving more than they presently are.
3. Seventy-five percent expressed concern that program offerings were not diversified enough and implied that something must be done to offer a greater variety in program offerings.
4. Each expressed concern over planning and evaluation. The majority felt planning and evaluation must be down to earth and realistic and brought to the regional and local levels.
5. Nine directors expressed some degree of concern relating to their public relations programs but general satisfaction with their public relations programs was expressed in the same breath. There appeared to be greater concern over relations with the public schools than with the business and industry community.

6. Twelve of the thirteen expressed concerns over constraints associated with the administration of programs. The greatest needs expressed were: (1) a need to streamline operational procedures; and (2) a need to identify the role of state and regional staffs in terms of the duties and responsibilities of each.

PROBLEMS RELATING TO GROWTH IN VOCATIONAL EDUCATION AS OBSERVED BY THE COUNCIL

As stated earlier, the Council has observed many good developments and significant growth in vocational education during the past year. It has observed and has worked with a conscientious and dedicated group of people struggling with, seemingly, an endless list of problems.

All of the achievements and progress made in the last five years, and particularly in the last year, show that steps are being taken for vocational education to serve more people more effectively. Growth has been strong and consequently problems associated with accelerated growth emerge. It is to the "growth problems" that the Council wishes to direct comment. We feel there is evidence across the state for vocational education to give the following items top priority for FY 1972:

1. Growth and progress in vocational education create a continuous need for data, reliable and valid data, from such sources as the Bureau of Rehabilitation Services, Department of Economic Security and its divisions associated with human resources development, Departments of Labor, Child Welfare, Health, Corrections--and data from any other source which reflect the needs of people and would serve a useful purpose in human resources development. Vocational education, particularly at the regional level, must have immediate access to data of this nature to effectively carry out its mission. We urge that the Research Coordinating Unit of the Bureau be actively engaged in making such data available for planning purposes.

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2. Planning needs to be taken to the grass roots level--the ground work appears to have been well laid with state and regional staff; the problem lies in that too often state level staff and regional level staff training sessions are that and nothing more. Regional directors are concerned that planning does not receive proper attention at the local level and that teachers are not more involved in the process.

3. There should be a greater concentration of effort immediately to help teachers work more effectively with the handicapped and disadvantaged. Literally thousands of handicapped and disadvantaged persons have been identified across the state, and vocational education has reached significant numbers of them. The Council asks: How well are teachers prepared to offer handicapped and disadvantaged students training and help which are above and beyond that offered to regular students? How adequate are equipment and materials necessary for the conduct of programs designed for the handicapped and disadvantaged? How much help are teachers receiving from state and regional staff and teacher educators in preparing them to effectively work with the handicapped and disadvantaged? Teachers and administrators at the grass roots level are struggling with a problem--a new problem--and need help. Teachers need more inservice and preservice training to effectively meet the needs of the less fortunate.

4. Evaluation efforts must be strengthened, especially follow-up activities, if effective planning is to be achieved. It seems unrealistic to the Council that vocational education administrators and teachers can effectively evaluate the success or failure of the programs they offer if they don't know where the former students are and what they are doing. If a lack of staff is the reason for this weakness,

or if a lack of funds prevents the hiring of staff for this purpose, then the Council strongly urges the Bureau to reassess the responsibilities and duties of its present staff and make new assignments for them which will properly correct this weakness. If it is a lack of proper attitude, then it needs correcting. The Council hopes that any plans for implementation and operation of a follow-up system presently underway in the Bureau of Vocational Education will receive a high priority rating for FY 1972.

CONCERNS AND RECOMMENDATIONS

CONCERNS AND RECOMMENDATIONS

Through this study and other Council activities during the year, we have developed some concerns regarding vocational education and wish to express our recommendations for improvement:

1. We are concerned with the resources available to vocational education in light of the demands for services which have been placed on it. The demands placed on vocational education are great as evidenced in our public hearings across the state. Public educators have expressed that vocational education is not meeting the needs of students and that there is an urgent need for the construction of additional vocational schools. Employers are asking for greater numbers of trained people to satisfy the constant demand for more skilled manpower, and vocational educators complain they cannot accommodate the great numbers of requests for vocational training coming from the general public. Yet, vocational education must operate on funds totally inadequate to meet the demands placed on it.

   We are concerned that a greater utilization is not being made of existing facilities. In September 1971, there are expected to be 65 vocational schools operating across the state. Evidence shows, during the past year, that far too many buildings were not used after the end of the school day. Of those facilities in use during the evening hours, far too many were used on a limited basis and, in the main, were used only during daylight hours. The Council feels the Commonwealth and its citizens have too much invested in vocational school buildings

and equipment to let them lie idle to the extent that they presently are. The demands of people and employers show this to be true.

RECOMMENDATION:

That the legislature reassess the value of vocational education in its role of supplying manpower for Kentucky's immediate and future needs and that the budget for the coming biennium reflect an awareness of this role. Vocational education cannot do the job it has been charged to do with the resources presently available to it. The legislature should appropriate sufficient funds to allow for the expansion of both upgrading and preparatory programs especially at the postsecondary and adult levels on a broad, statewide basis which would be offered in the evening hours. Not only would more people be served, but, in addition, they could be served in existing vocational and industrial facilities and in an economical fashion without additional construction. We further recommend that vocational education explore the use of all community resources and work toward cooperative arrangements with local businesses and industries and individuals to assist in the financing of the total cost.

2. We are concerned that the 2,640 hour requirement for graduation applies to the majority of the preparatory programs. We feel that a student's proficiency and readiness for employment, as determined by reliable tests and teacher judgment, should be the deciding factors and not on specified hours of instruction. The present practice creates hardships on teachers, administrators, and students. It stifles initiative on the part of students and creates awkward situations for teachers. It also prevents vocational schools from reaching more people by students waiting to reach the 2,640 hour mark before entering employment. It is common practice for students to make decisions themselves regarding when they enter employment and leave school accordingly. Students progress at different rates and the 2,640 hour requirement is unrealistic when individual differences are weighed.

RECOMMENDATION:

That vocational education reevaluate its requirements for graduation and study the possibility of instituting a reliable testing procedure which will help determine the readiness of students to enter employment. It is recognized that some students may require more hours of instruction before adequately trained, some less.

3. We are concerned with the general feeling of regional directors in that the majority of them feel their present program offerings and efforts are not adequate to satisfy the special needs of the handicapped and disadvantaged. The Council feels that services rendered to both the handicapped and disadvantaged must be of a nature that is above and beyond those offered to others. Whether in special programs or in regular programs, working with the less fortunate requires special skill and dedication. We are not concerned that programs for the handicapped and disadvantaged have grown so rapidly but are concerned that so many were instituted without, apparently, adequate preparation on the part of staff.

RECOMMENDATION:

That vocational education continue in its efforts to orient teachers to effectively work with handicapped and disadvantaged students. We encourage frequent visits by central office staff with local teachers and administrators and feel that the greatest help could come through supportive services and actual classroom visitations to discuss materials, equipment, and technique as they would apply to given situations. We also urge the creation of evaluation systems that will measure how well programs in these categories are removing the deficiencies of the disadvantaged and in helping handicapped persons overcome any handicap they may have which has prevented them from finding employment or advancing in their field of work.

4. The Council is concerned over a lack of prepared guidelines to guide regional and state staff in the administration of programs. There is no manual, of which the Council is aware, defining the roles of supervisory, administrative, and supportive staff and the relationship and functions of each in the administrative scheme of things. This must now be interpreted by referring to position descriptions and applied to given situations. As a result, there appears to have developed considerable confusion over "who has responsibility for what" and this needs to be corrected.

RECOMMENDATION:

That the Bureau of Vocational Education, with assistance from the regional directors, prepare an operations manual which will clarify in the minds of all vocational education administrators the duties and responsibilities of each and his proper role and relationship to the present concept of vocational education. Such a manual should serve a purpose in eliminating any duplication and overlapping of duties and responsibilities which exist and help bring the regional concept of vocational education in proper perspective.

FINDINGS AND SUPPORTIVE DATA

035

Vocational education has made tremendous growth in Kentucky over the past five years. Growth can be observed in all areas of vocational education endeavor: enrollment, staff, construction, and financial support are some of many. In the same period vocational education has experienced much change and has had to make significant adjustments in terms of the people it serves and the manner in which it administers its programs. It has experienced and implemented a new organizational structure to administer its programs and has attempted to instill its leadership with a new concept to guide its activities. It has been confronted with the old vs the new; the "proven" way vs the "new" way.

Between 1964 and 1968, vocational education programs, services, and activities had been guided by a State Plan under the mandate of the 1963 Vocational Education Act which did not adhere to the Federal tradition of providing funds for vocational programs by instructional category as in the previous Acts. The 1968 Vocational Education Amendments strengthened the 1963 Act and established a new basis for funding based on categories associated with the needs of people; categories specifically dealing with high school youth, postsecondary young people and adults, and handicapped and disadvantaged individuals. The 1968 Vocational Education Amendments clearly mandated that vocational education programs be designed to meet the needs, interests, and abilities of these groups and that they be realistic in the light of actual or anticipated opportunities for gainful employment.

A three-year span of time has elapsed since this "new concept" of vocational education was introduced in Kentucky. Three years is a rather brief period of time when one considers that each new approach to an operation must undergo a preparation period and gear itself, administratively and philosophically, to carry out its mission.

The major change that has occurred in the mission of vocational education in the past three years has been in the identification of the people it will serve and the establishment of appropriate programs to serve them. References to meeting the "needs, abilities, and interests of all persons of all age groups" are still common in the sayings and writings of vocational educators today, but one hears more about meeting the individual needs of the handicapped, the disadvantaged, the unemployed, the underemployed, school dropouts, and other groups identified by category. Phrases such as "career education," "comprehensive education," and the "world of work" are frequently mentioned by vocational educators.

The principle which guided vocational education at the state level in 1971 was "to develop the competencies needed to enter or advance in a vocation." The primary objectives, though written in broad terms, were:

(a) developing a comprehensive program in vocational education
(b) developing an understanding of and appreciation for the world of work
(c) developing vocational competencies in terms of both upgrading and preparation
(d) developing the ability to secure satisfactory placement and advancement through continuing education
(e) developing those abilities in human relationships which are essential for success in an occupational endeavor
(f) developing the abilities needed to exercise and follow effective leadership
(g) developing communication and cooperation among individuals, agencies, and organizations
(h) developing a comprehensive program of preservice and inservice training for vocational educators.

The major differences in the goals, objectives, and philosophies that have developed over the past five years can be found in an effort to broaden the purposes of vocational education and bring its activities into the mainstream of the education system. The present plan does not concern itself so much with the details associated with a specific area of training as found in the 1967 State Plan, for example, but deals primarily in ways and means to serve the needs of people associated with economically depressed and high unemployment areas, areas of high youth unemployment and school dropouts, and focusing attention on the special needs of the handicapped and disadvantaged.

In examining the philosophies and objectives of regional programs, several common findings were discovered. In practically each instance reference was made, in some fashion or other, to meeting the needs of people in terms of "preparing students for useful employment," "to provide experiences which are relevant to occupations in business and industry," "providing each student with the opportunity for fullest self-realization," "discovering the abilities and needs of each student...and furnishing him with experiences to meet his needs," "...help each individual develop to his maximum potential," and to provide "for students to develop their abilities and become responsible and productive citizens."

FINDINGS:

--- The present goals of vocational education are reflected in specific references being made to serve groups of people, particularly the handicapped, the disadvantaged and the economically depressed, and secondary, postsecondary and adults who are in need of vocational education.

--- Objectives have been identified, primarily, through showing the number of people reached (enrollment) in various vocational programs and comparing these figures with projected enrollment figures.

--- Objectives for regional programs are, in the main, written as goals and would be difficult to measure.

In terms of priorities which were set to guide vocational education programs, services, and activities during fiscal year 1971, the State Plan emphasized the "continuation of existing programs which have been proved successful and for which there is a continuing demand on the part of students and on the part of potential employers." Provision was made for the adjustment of existing programs or "supplemental services shall be provided" which would give "preference in enrollment to students who are handicapped and disadvantaged." A special emphasis was given on program development and expansion to target areas identified as economically depressed and to areas with high unemployment.

Program priorities were listed and, in the main, reflected that emphasis would be given to off-farm agricultural occupations; secretarial and data processing occupations in business and office; all of the occupations in distribution and marketing; paraprofessional health occupations; consumer education in homemaking programs and training for wage-earning occupations in home economics; public service occupations; trade and industrial programs; and technical programs in all employment areas. The development of cooperative and exemplary programs, postsecondary programs, and programs for new and expanding industrial training were given special attention in the ranking of program priorities.

Data are not yet available which will permit the Council to compare objectives in programs, services, and activities projected in the 1971 State Plan with actual achievements.

Data, however, are available which show the actual enrollment will exceed the projected enrollment by approximately 10%.

FINDINGS:

--- There has been very little change in phraseology in terms of how vocational education has ranked its priorities in the past two years. It has stressed the continuation of existing programs which prove successful; and stressed a special effort to serve the handicapped, the disadvantaged, and areas identified as economically depressed which have high unemployment.

--- There have been significant achievements in the growth of programs to serve the disadvantaged and handicapped and in the numbers which have been served.

--- Priorities are in line with data indicating the needs of people.

--- Funds must be available on a regular basis at the state, regional, and local levels for projections to be meaningful.

--- There has been a significant growth in the implementation of cooperative education programs.

--- A slight growth in technical programs was found. Growth in public service occupations, though small in number, was somewhat stronger.

Vocational education is serving people through cooperative arrangements and agreements with several state agencies and community colleges across the state. Particular emphasis has been placed on serving the disadvantaged through the funding of

projects with local school districts, area schools, community colleges, and with the Departments of Corrections, Economic Security, Child Welfare, and Mental Health. Contracts were in effect with state universities for the support of associate of arts programs in technical programs, principally in nursing. Vocational education is represented on CAMPS and is involved in manpower training activities.

The present Kentucky State Plan for Vocational Education has data relating to the needs of people and the economy. There are tables relating to: (1) an analysis of manpower needs and job opportunities in the state; (2) a summary of the state's labor demand and supply; (3) economically depressed areas; (4) the handicapped; (5) areas of high rates of general unemployment and unemployment of youth; (6) areas of high rate of school dropouts; and (7) areas of greatest population concentration.

In addition, there is information relating to the unemployment rate and the per capita income of the state's 120 counties; public and nonpublic school enrollment data; the 1970 census; and general population characteristics. The data are dated 1970 and reflect the most current available.

FINDING:

The Council is satisfied that vocational educators know where vocational education programs and services are needed and that it has identified the categories of people who are in greatest need of these services.

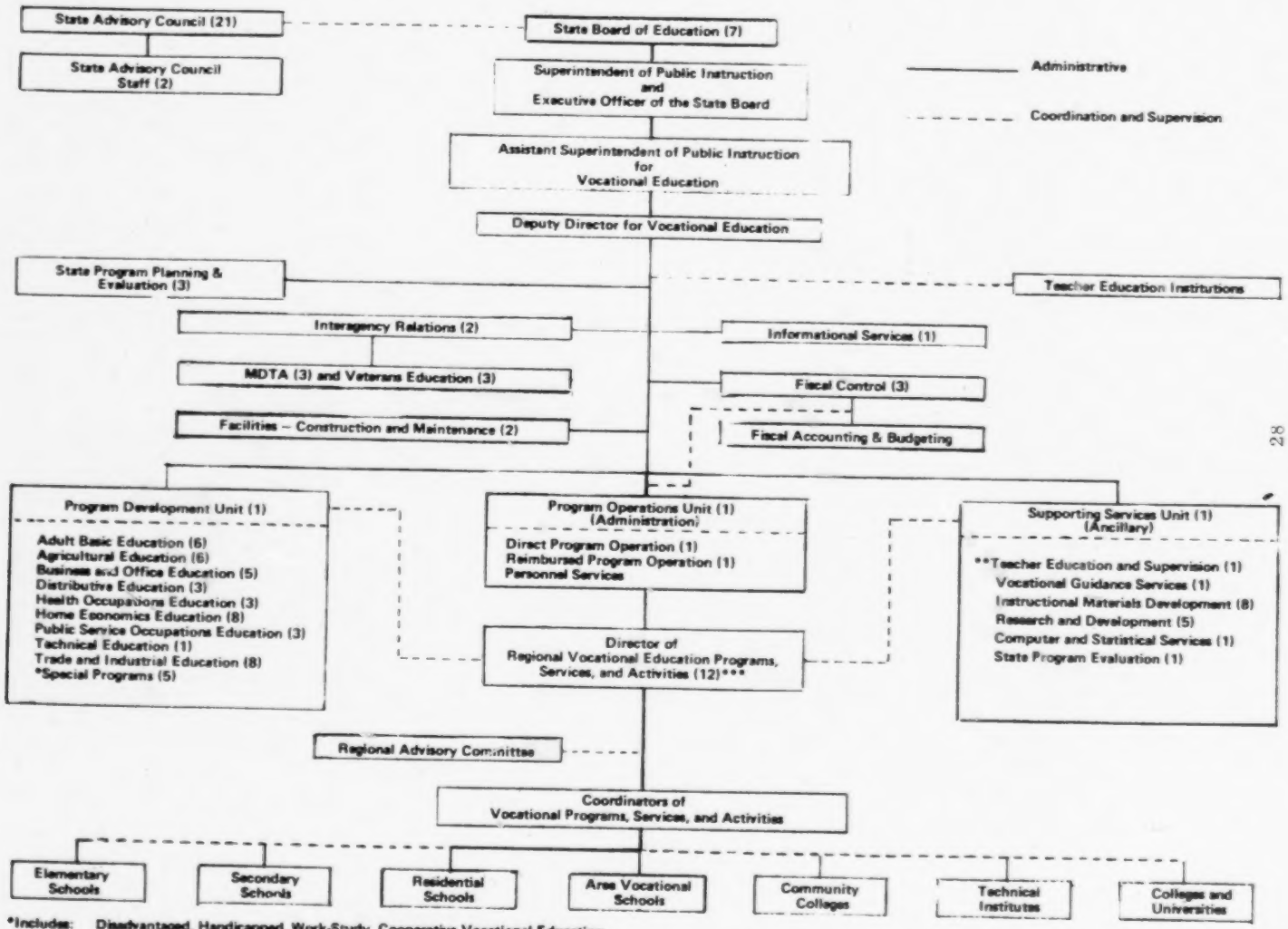
A complete reorganization of the administration of vocational education was effected in 1968 as the result of an executive order issued by the Governor and approved by the State Board of Education upon the recommendation of the Superintendent of Public Instruction. This represented an effort to bring the administration of programs in line with the provisions of the new State Plan. At the present time, all of the major functions of vocational education are found within three major units (program development, program operations, and supporting services) and five auxiliary divisions (fiscal control and financial accounting, information services, facilities construction and maintenance, state program planning and evaluation, and interagency relations).

It is obvious that many new staff positions have been created since the advent of the 1968 Vocational Education Amendments. The influence of the Amendments can be traced to the title of the positions established and can be found in all levels of vocational education administration. For example, the organizational chart makes provisions for the planning and implementation of programs for the handicapped, disadvantaged, and persons with special needs; planning and implementation of the Education Professions Development Act; supervision for research and development; and a place for the State Advisory Council on Vocational Education with its line of communication directly to the State Board of Education.

FINDING:

The changes developing in the administration of vocational education during the past five years have been significant. The very simple organizational chart of 1967 has

ORGANIZATIONAL CHART – BUREAU OF VOCATIONAL EDUCATION



*Includes: Disadvantaged, Handicapped, Work-Study, Cooperative Vocational Education

**Includes: Education Professions Development, Exchange Program for Professional Development, Vocational Cooperative Program for Teacher Education

***Includes: Vocational Education Region which includes one or more Economic Development Districts

been replaced with a much more sophisticated one which indicates that the administration of vocational education has become a much more involved process and, naturally, more sophisticated. The present program of vocational education has been designed to function within the framework of 15 area development districts in the state and is intended to facilitate vocational education cooperation with state and local agencies who have mutual interests and activities. Lines of communication run to all local education agencies within a region, and regional staffs are encouraged to plan and coordinate activities and programs with them.

In the distribution of funds for vocational education purposes the following procedure is used:

Vocational education funds are allocated throughout the state according to a mathematical formula which determines the amount each school district or local education agency is entitled to receive. The formula takes into consideration the following factors: (1) manpower needs and job opportunities; (2) vocational education needs; (3) relative ability to provide resources; (4) relative costs of programs, services, and activities; and (5) the rate of school dropouts. Funds are allocated to local school districts which receive support through local taxes, to local education agencies who receive no local tax support but who are supported through the state, and for supporting services at the state and regional levels.

In order to receive funds, each local school district or local education agency must have submitted a plan for vocational education and the plan must be approved at the state level for the school district to become eligible. The formula is then applied and the apportionment factor and amount of funds are determined. Part B funds which

must be used to serve specific categories are set aside and used for these purposes. (A minimum of 10% for the handicapped, 15% for the disadvantaged, and 15% for post-secondary is required.) Part B funds must also be matched with state or local funds for regular programs and Part B funds shall not exceed 50% of state and local funds except in programs for the disadvantaged in areas of high concentration of youth unemployment and school dropouts.

During FY 1971, Federal funds accounted for 21% of the total vocational education expenditures, and state and local funds made up the remaining 79%.

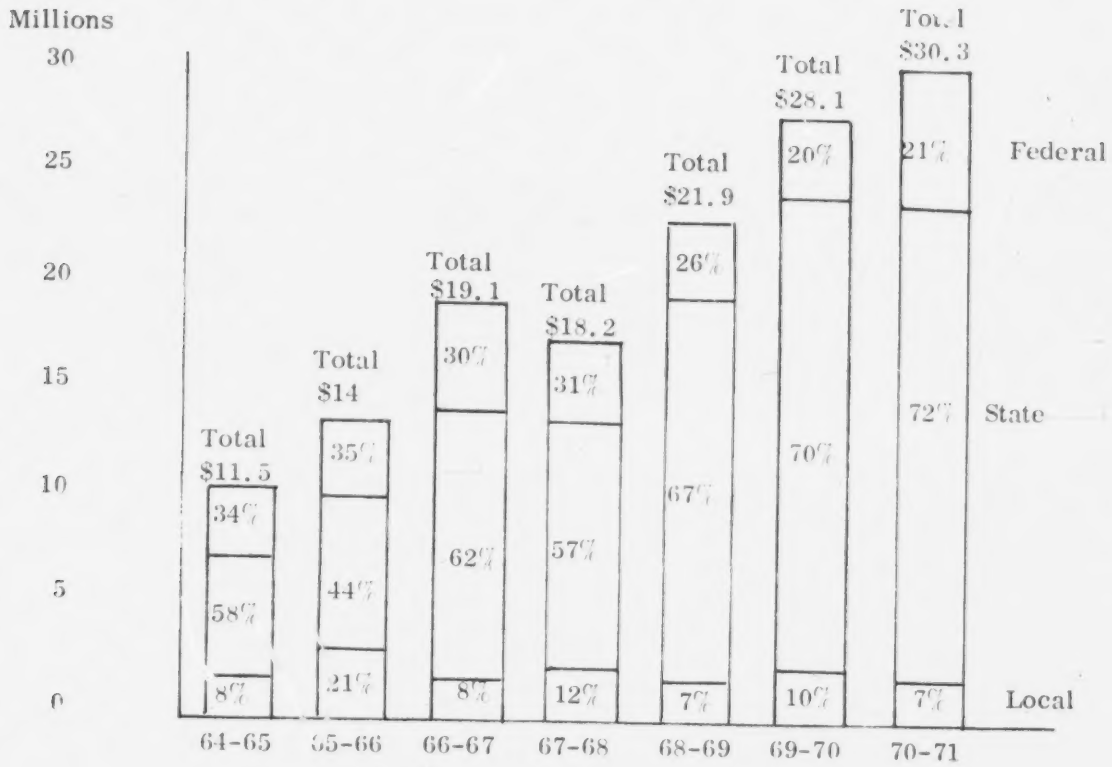
FINDINGS:

Monies available for vocational education purposes have increased significantly over the past five years. $30.3 million was budgeted for FY 1971 compared with $19.1 million in 1966-67.

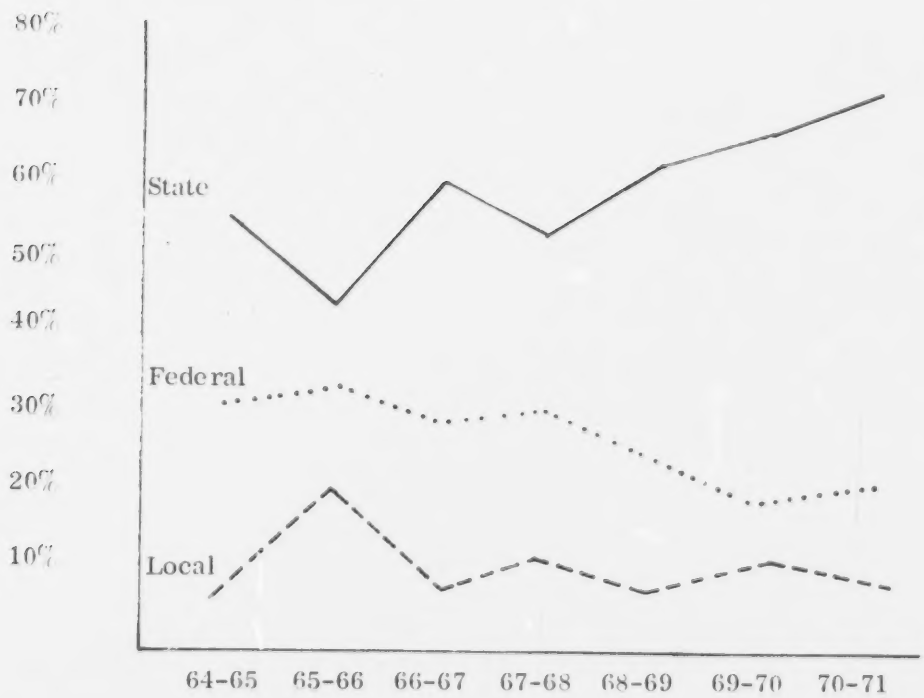
State and local funds have been the strongest supporter of vocational education during this period: 79% in FY 1971 compared with 70% in FY 1967.

Federal funds, while increasing in terms of the amount of funds allotted for vocational education purposes, are playing a lesser role in financing the state's total vocational education effort. Federal funds supported 30% of the total cost in 1967 compared with 21% in 1971.

Total funds for vocational education programs, services, and activities have increased 58% over the last five years. State and local support have increased 78% during the same time period.



Sources of Funding



Changes in Percentages of Funding

Source: Bureau of Vocational Education

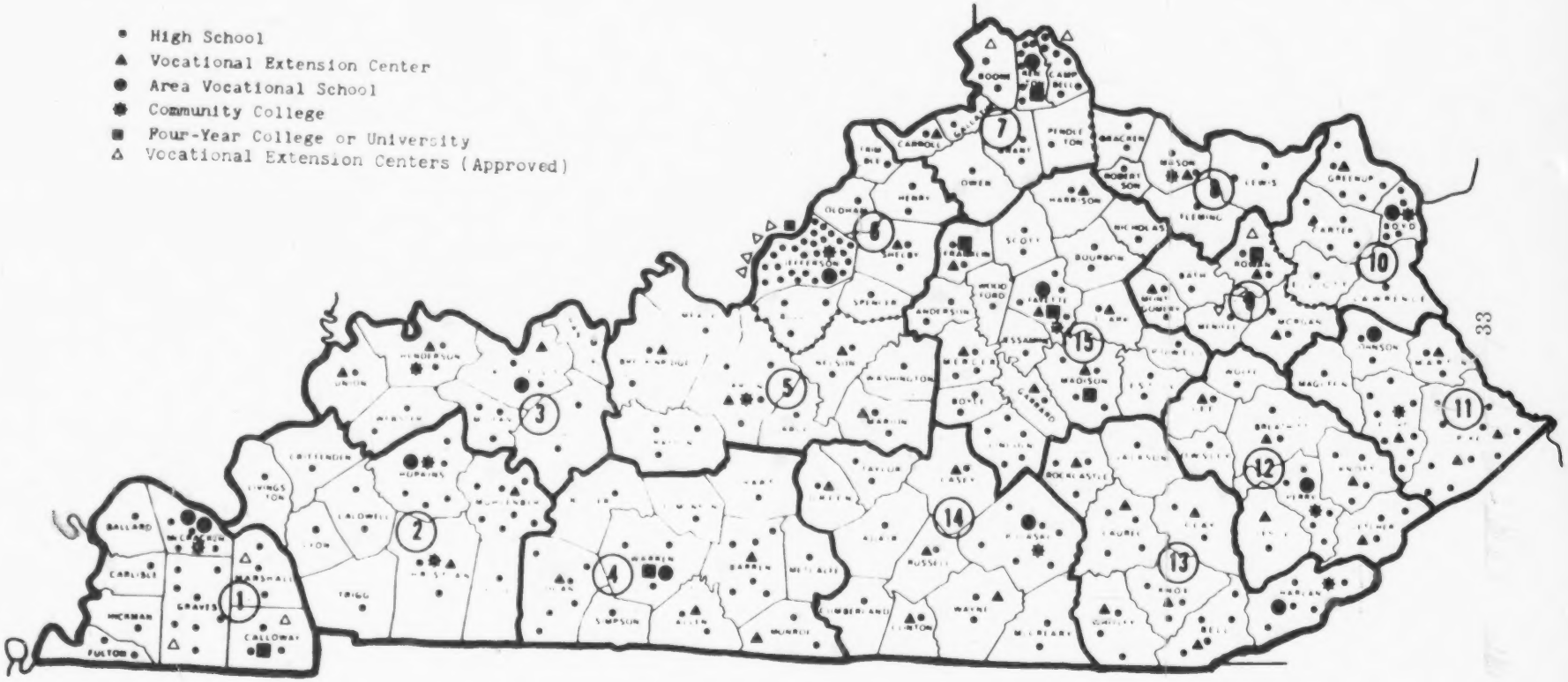
There has been a significant growth over the past five years in the construction of vocational education facilities. There was a total of 13 area schools and 12 extension centers in operation at the end of the 1966-67 school year. Since that time extensions of area schools have increased by 32 and totaled 44 at the end of the 1970-71 school year. Vocational education was offered in 350 high schools across the state. Eight new extension centers will be opened in September 1971 bringing the total to 65 vocational school facilities across the state. Thus, in the past five years area schools and extension centers have increased from 25 to 65. Training stations numbered 11,763 at the end of FY 1971 and have increased approximately 250% over the past five years. The State Board of Education has approved, in addition, the construction of seven new facilities and the expansion of one facility and by the end of 1972, Kentucky should have 72 vocational schools available to serve the needs of its people. Staff and teachers have grown in numbers to accommodate the increased enrollment. The Council feels this is a significant move in that it reflects an effort by vocational educators to take services to the people. The goal set some time ago to have a vocational school within 25 miles of each Kentuckian is fast becoming a reality.

Kentuckians are to be commended for the support they have given to the rapid growth of vocational education. Unfortunately, however, in spite of the growth, the problem still remains: the problem of serving all those who want and need vocational education. When the universe of need is applied to the present manpower and vocational effort, it isn't difficult to deduct that only the surface is being scratched and that the present resources of vocational education are wholly inadequate to serve all those who need vocational education. This must be the primary concern of the Council.

July, 1971

LOCATION OF AREA VOCATIONAL SCHOOLS AND EXTENSION CENTERS, HIGH SCHOOLS, COMMUNITY COLLEGES, AND FOUR-YEAR COLLEGES OR UNIVERSITIES

- High School
- Vocational Extension Center
- Area Vocational School
- Community College
- Four-Year College or University
- Vocational Extension Centers (Approved)



NOTE: The above vocational education regions conform to the state's economic district boundary lines with the exception of three regions each of which includes two of the economic districts

Vocational Education Training Stations in Area Schools and Extension Centers
December 31, 1970

ASHLAND AREA SCHOOL	576
Extension Centers	638
	1214
BOWLING GREEN AREA SCHOOL	460
Extension Centers	372
	832
CENTRAL KENTUCKY AREA SCHOOL	490
Extension Centers	982
	1472
DAVIESS COUNTY AREA SCHOOL	490
Extension Centers	270
	760
HARLAN AREA SCHOOL	278
Extension Centers	758
	1036
HAZARD AREA SCHOOL	382
Extension Centers	706
	1088
JEFFERSON COUNTY AREA SCHOOL	414
Extension Centers	958
	1372
MADISONVILLE AREA SCHOOL	200
Extension Centers	238
	438
MAYO AREA SCHOOL	730
Extension Centers	454
	1184
NORTHERN KENTUCKY AREA SCHOOL	720
Extension Centers	270
	990
SOMERSET AREA SCHOOL	216
Extension Centers	602
	818
PADUCAH TILGHMAN AREA SCHOOL	373
WEST KENTUCKY AREA SCHOOL	306

TOTALS	
AREA SCHOOLS	5545
Extension Centers	6248
	11,793

Although the number of students served has increased markedly over the past five years, it does not approach the apparent need for manpower training and employment which exists today. Vocational educators and employers across the state have expressed concern over these matters: vocational educators complain of having to turn people away who want training, and employers complain that jobs go begging for the lack of skilled manpower.

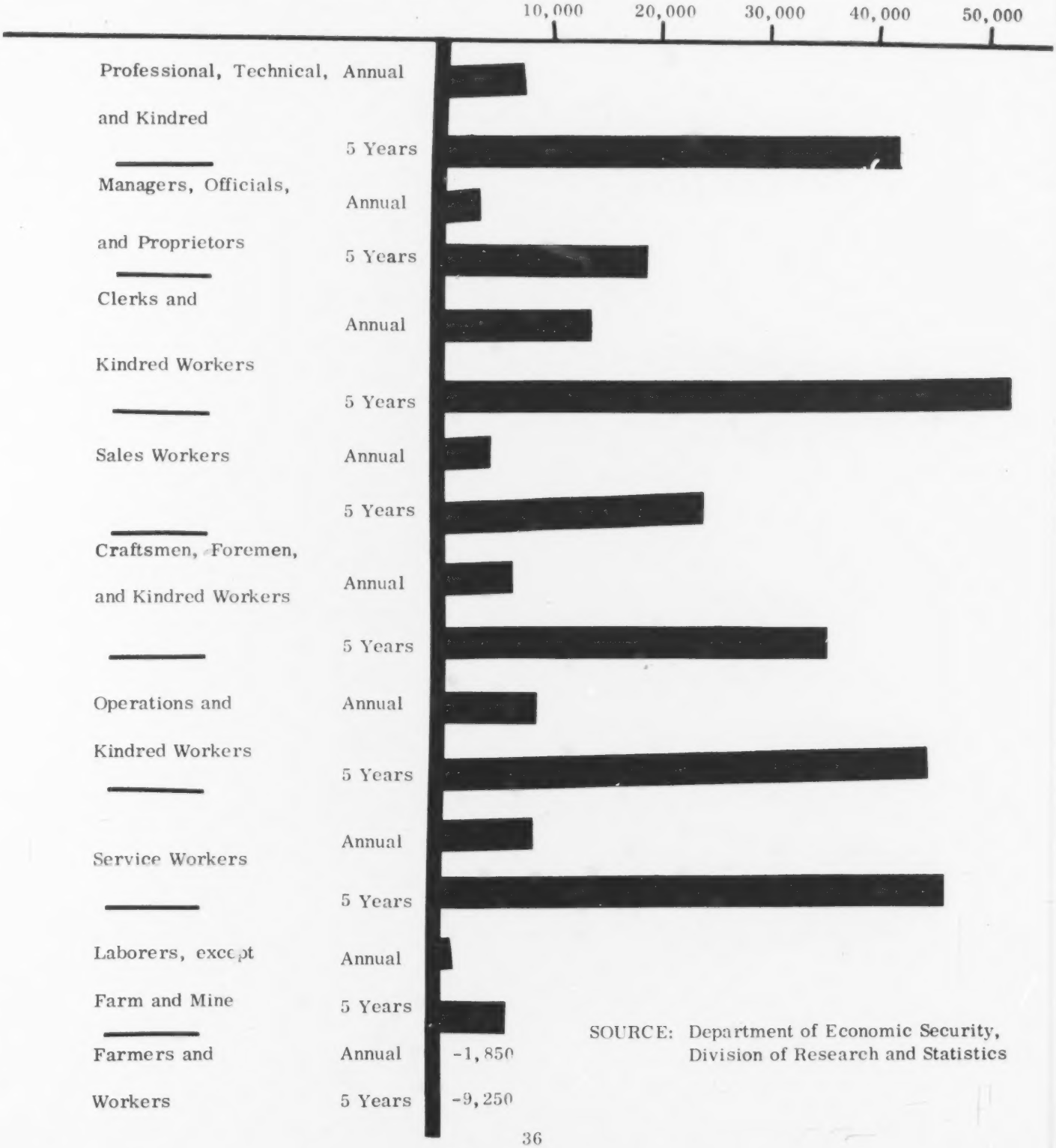
Basic manpower requirements for Kentucky, as determined in a 1971 statistical report of the Department of Economic Security, Division of Research and Statistics, show an annual need for 53,468 jobs yet to be created and to replace those who retire or leave employment. The five year need is 267,340. Upgrade training is not considered in these projections. Thus, the need for vocational training is even greater.

In examining the needs of people and the manpower needs of the State of Kentucky, it is logical to assume that the demand and need for manpower services far exceed the present capabilities and resources of vocational education to supply them.

A summary, for example, of the Kentucky Manpower Planning data used for FY 1972 purposes shows the universe of need for manpower services to be 417,632. 185,574 have been identified as poor (174,684 disadvantaged and 10,890 other poor); 232,058 have been identified as non-poor (105,729 near poverty and 126,329 all other non-poor).

The major target populations of manpower planners for this year are: (1) those employed full time (114,476) but with family income at or below the poverty level; (2) employed members not of poor families (105,650) but employed below occupational potential;

Basic Manpower Requirements for Kentucky
in Nine Major Occupational Clusters



SOURCE: Department of Economic Security, Division of Research and Statistics

MANPOWER PLANNING DATA SUMMARY FOR FY 1972

Source: The Kentucky Comprehensive Manpower Plan

	Number of Individuals			
	State Area Total	Male	Female	Outlook 1973
1. Total Civilian Population (as of 1970)	3,218,706	1,578,095	1,640,611	3,300,818
a. Age Distribution:				
16 through 21 years	366,239	189,098	177,141	376,134
22 through 44 years	886,603	434,538	452,065	909,998
45 years and over	973,607	446,662	526,945	997,917
b. Members of Minority--Total	241,243	116,215	125,028	248,623
16 years and over	161,925	77,021	84,904	167,131
2. Total Civilian Work Force (12 month average for year 70)	1,155,207			1,176,920
a. Employed, Total (12 month average)	1,093,494			1,117,658
(1) Nonfarm Wage and Salary Workers	860,899			869,737
b. Unemployed (12 month average)	61,713			60,262
(1) Unemployment Rate	5.3			5.1
3. Universe of Need for Manpower Services for Fiscal Year Ending 1970 (Number of different individuals in year)	417,632			417,632
a. Poor	185,574			185,574
(1) Disadvantaged	174,684			174,684
(2) Other Poor	10,890			10,890
b. Non-Poor	232,058			232,058
(1) Near poverty	105,729			105,729
(2) All other Nonpoor	126,329			126,329
4. Target Populations By Category (12 month average)	401,870			383,544
a. Unemployed	15,819			15,819
b. Underutilized	158,865			158,865
(1) Employed part-time for economic reasons	8,438			8,438
(2) Employed full-time, but with family income at or below poverty level	114,476			114,476
(3) Not in labor force but should be	35,951			39,951
c. Other Groups	227,186	150,963	76,223	208,860
(1) Employed members not of poor families employed below occupational potential	105,650	59,050	46,600	91,100
(2) Employed who will need new skills	10,450	6,900	3,550	7,625
(3) In-School Youth requiring part-time work	23,550	12,710	10,840	23,550
(4) In-School Youth requiring summer work	31,985	16,752	15,233	31,985
(5) Veterans	55,551	55,551	0	54,600
5. Estimated number of Welfare Recipients needing Manpower Services (Forecast Period)	15,593	0	15,593	15,800
6. Estimated School Dropouts (Forecast Period)	15,768	12,715	3,053	16,125
7. Estimated Number of Minorities Needing Manpower Services (Forecast Period)	64,277	30,974	33,303	62,850

(p. 37)

(3) veterans (55,551); (4) and those not in the labor force (35,957) but should be. Other target groups such as the unemployed, those employed part-time for economic reasons, those employed who will need new skills and in-school youth requiring part-time work and summer work bring the target population to 401,870.

The planning data estimate that 15,593 welfare recipients need manpower services; that 15,760 young people will become school dropouts; and that there are 64,277 belonging to minority groups which will need manpower services.

The Council regrets that adequate data are not available which clearly depict the total manpower training effort in Kentucky. Projected manpower needs are available, but the total numbers of people trained through public and private sources and in businesses and industries are unknown. We feel that specific data are needed in this area and would be valuable in giving vocational educators direction in terms of meeting changes and keeping training programs relevant to the needs of people and the economy.

The Council is thus prompted to ask the following questions:

1. What is the total, annual manpower training output in Kentucky?
2. Who is doing the training? How much is being done through public, private, and business and industry efforts?
3. How many are being trained in the various occupational areas? What is the annual output in each of the occupational areas?
4. How can the number of "completions" in vocational education programs, especially at the secondary and adult supplementary levels be realistically applied to the basic manpower requirements?

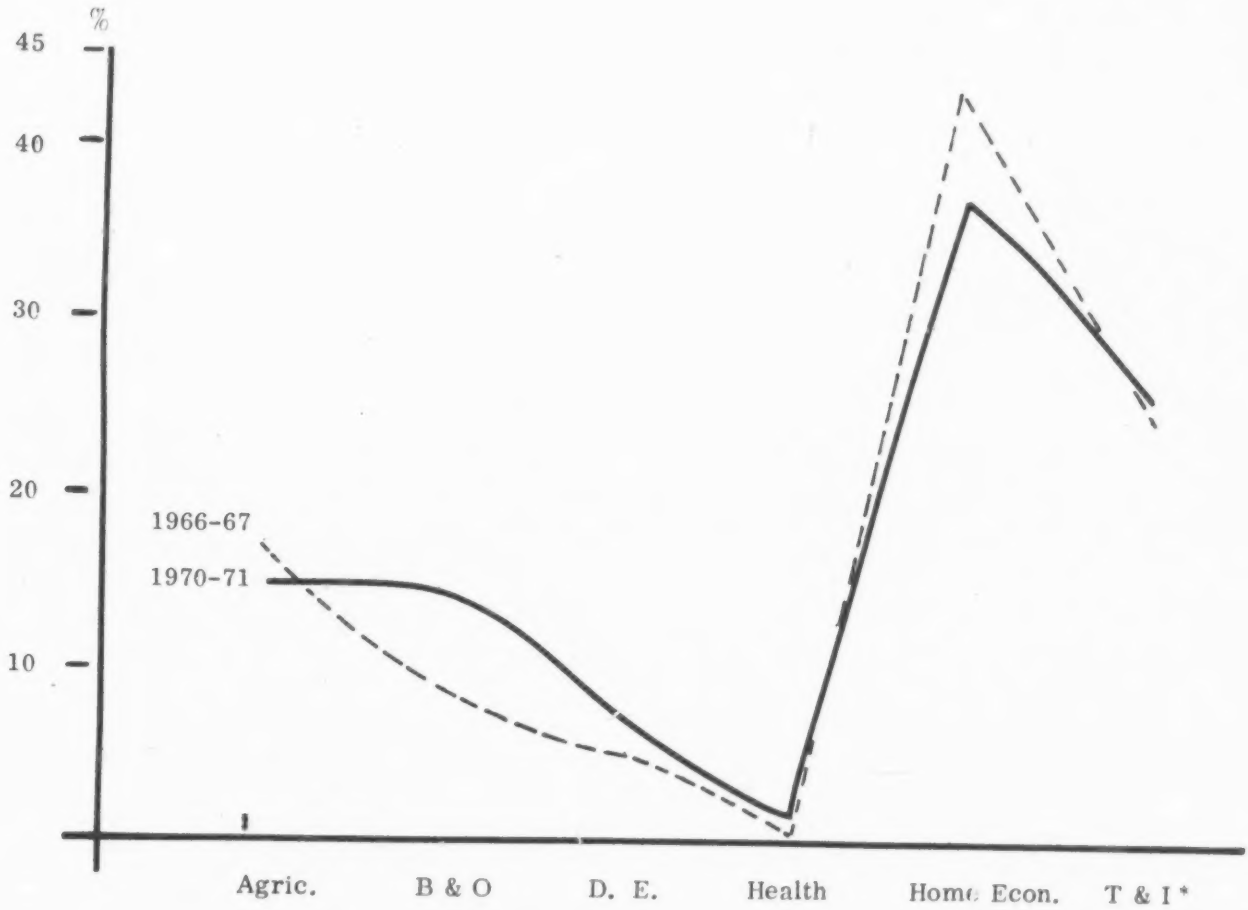
The Council feels that until these questions are satisfactorily answered and applied to the basic manpower requirements an accurate picture cannot be drawn which reflects the future direction vocational education must take in order to provide vocational training relative to the needs of people and the needs of business and industry.

We are encouraged to learn that an information system may be developed and implemented this year which will help answer these and other questions. We lend our support to the effort and encourage its implementation.

There has been a steady rise in enrollment during each of the past five years. 1971 enrollment has shown a rise of 12% over the previous year.

Some change has occurred during the past five years in terms of the percentage of the total enrollment the various programs are serving. For example, business and office programs are now serving 14% of the total enrollment compared with 9% in 1967, and home economics is now serving 35% compared to 42% in 1967.

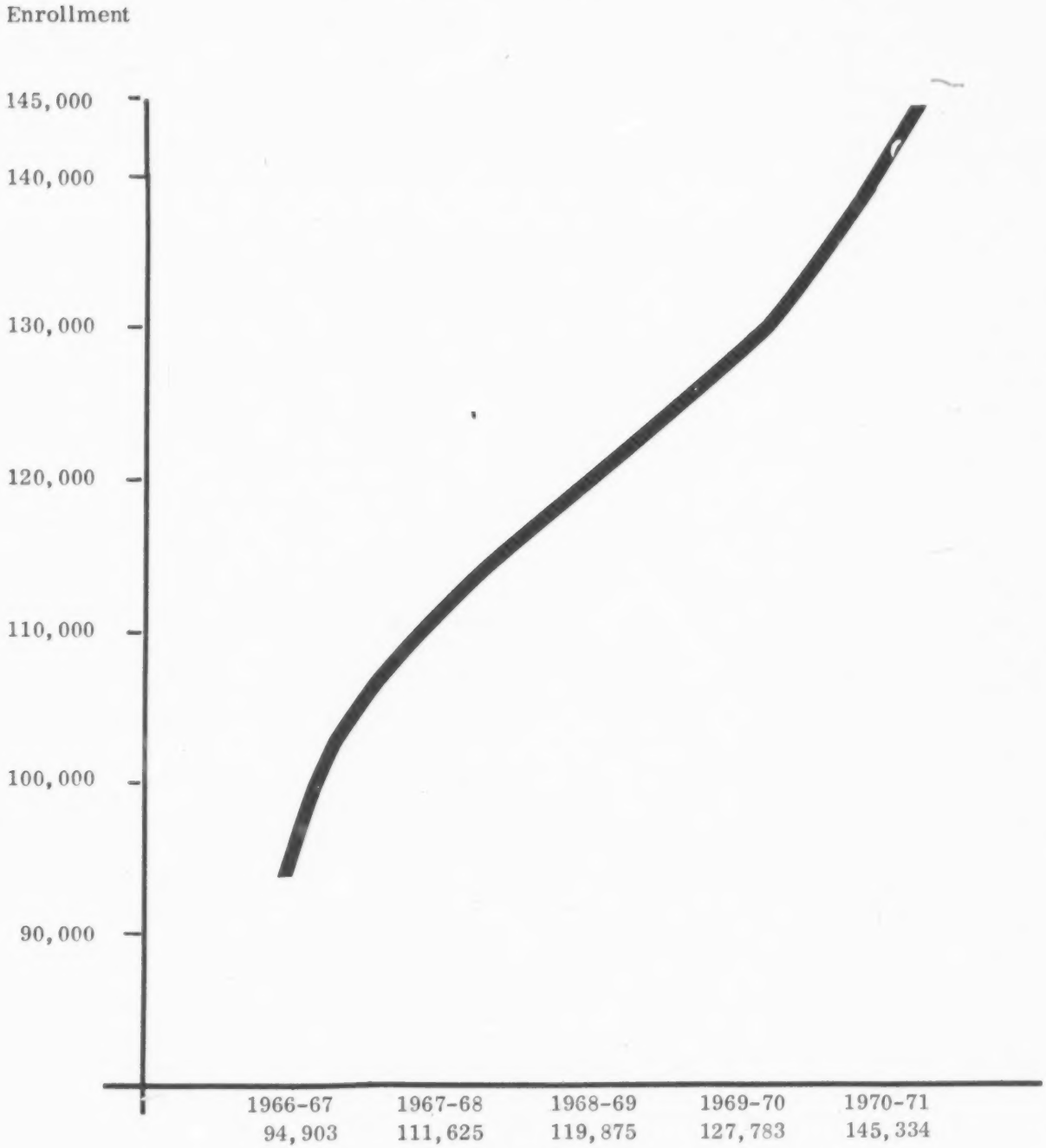
The chart below illustrates the changes which have occurred during the past five years.



*Includes Technical

ENROLLMENT IN VOCATIONAL EDUCATION IN KENTUCKY

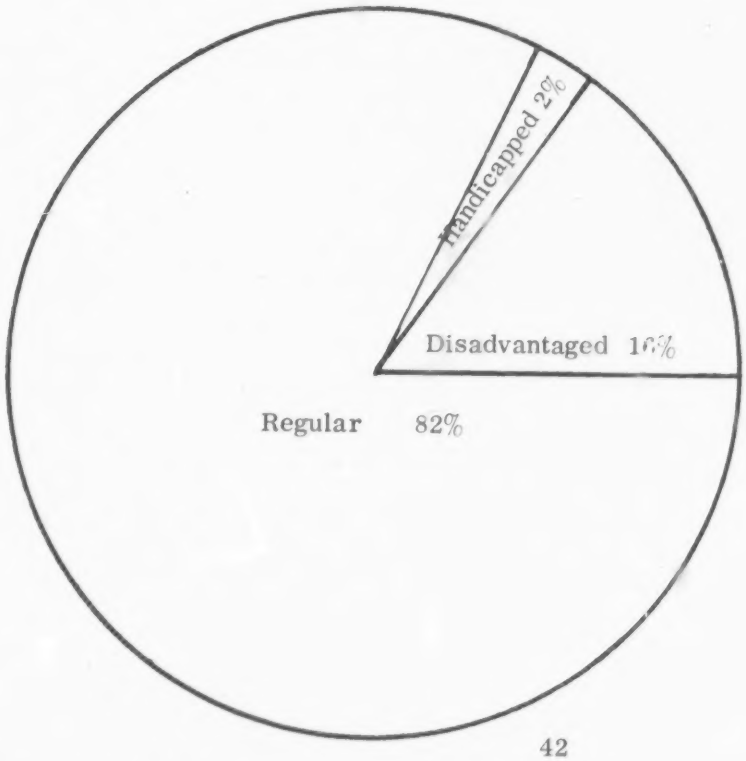
1966-67 through 1970-71



Source: Bureau of Vocational Education

VOCATIONAL EDUCATION ENROLLMENT
By Programs for the Disadvantaged and Handicapped FY 1971

Program	Regular	Disadvantaged	Handicapped	Total
Agriculture	16,686	2,571	59	19,316
B & O	18,254	1,389	70	19,713
D. E.	9,023	641	49	9,713
Health	2,301	181	26	2,508
Home Economics				
Cons. & H'making	34,869	13,363	1,307	49,539
Gainful	1,427	215	24	1,666
T & I	34,936	892	149	35,977
Technical	1,143	0	0	1,143
Special V. E.	0	4,524	1,235	5,759
Total	118,639	23,776	2,919	145,334

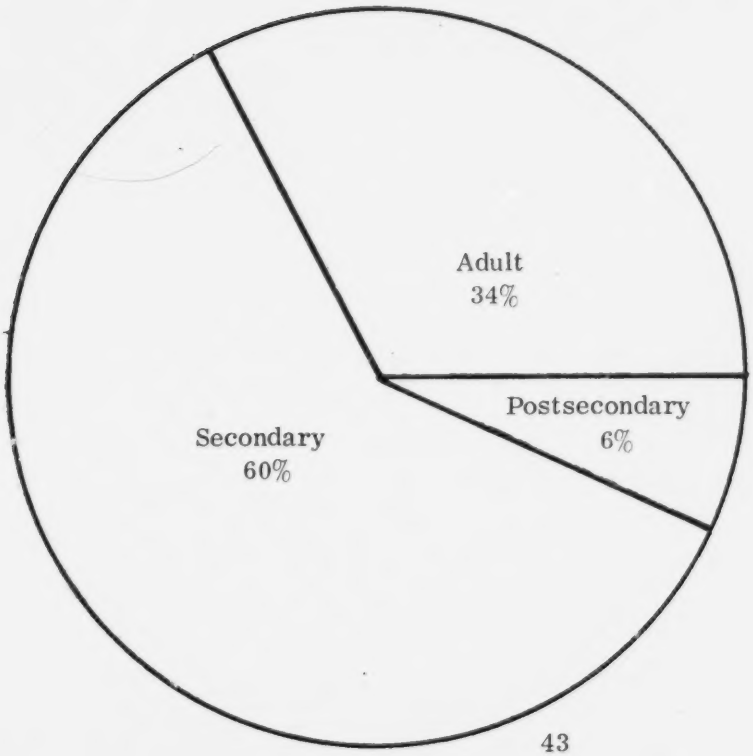


Total Enrollment

Regular	118,639
Disadvantaged	23,776
Handicapped	2,919
Total	145,334

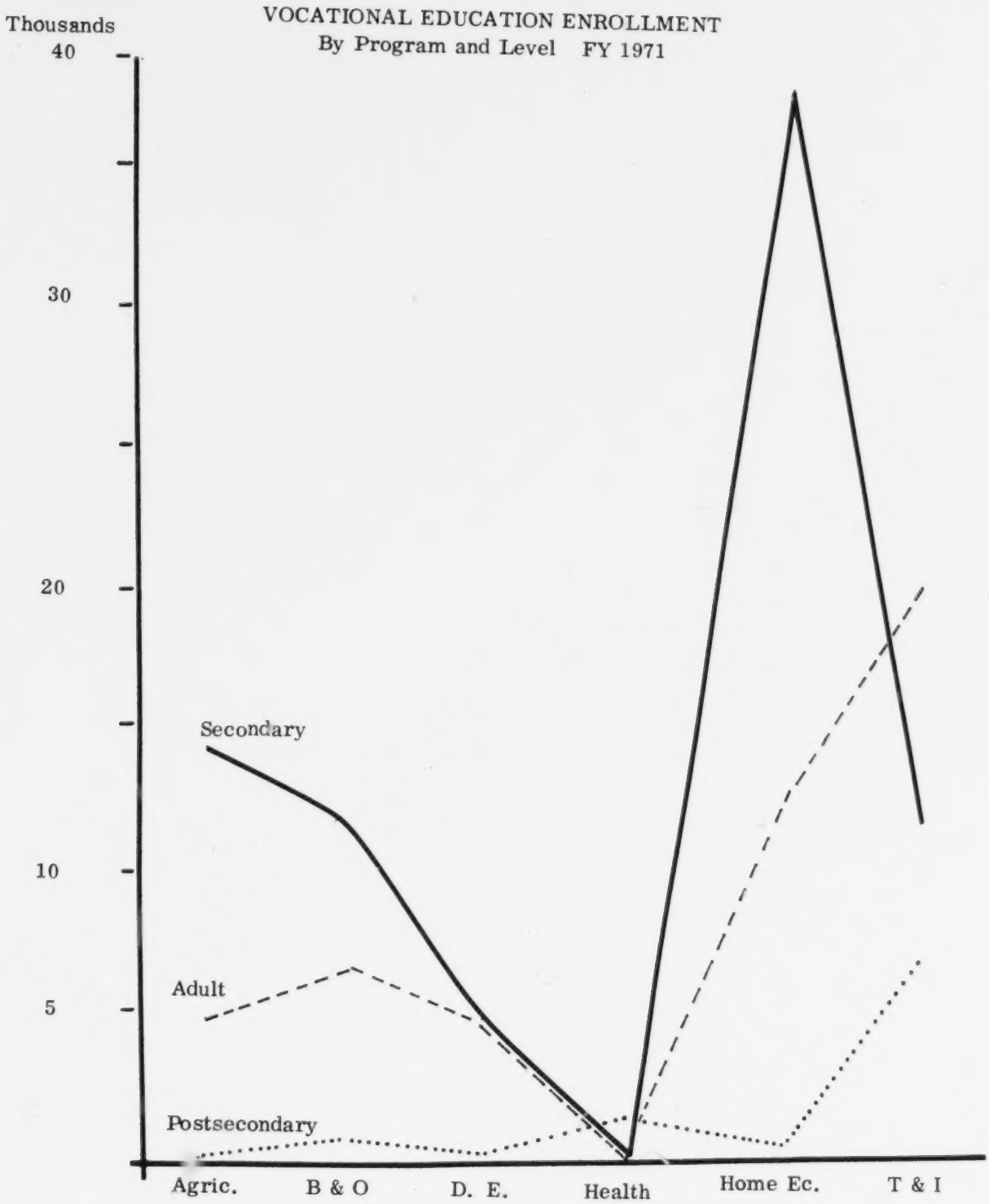
1970-71
VOCATIONAL EDUCATION ENROLLMENT
Source: Bureau of Vocational Education

Program	Secondary	Postsecondary	Adult	Total
Agriculture				
Off-farm	2,879	49	348	3,276
Farming	11,667	0	4,373	16,040
B & O	12,816	741	6,156	19,713
D. E.	4,858	146	4,709	9,713
Health	394	1,739	375	2,508
Home Economics				
Cons. & H'making	39,004	162	10,373	49,539
Gainful	429	36	1,201	1,666
T & I	10,830	5,200	19,947	35,977
Technical	163	653	327	1,143
Special V. E.				
Handicapped	1,087	138	10	1,235
Disadvantaged	3,745	444	335	4,524
Total	87,872	9,308	48,154	145,334



Total Enrollment

Secondary	87,872
Postsecondary	9,308
Adult	48,154
Total	145,334

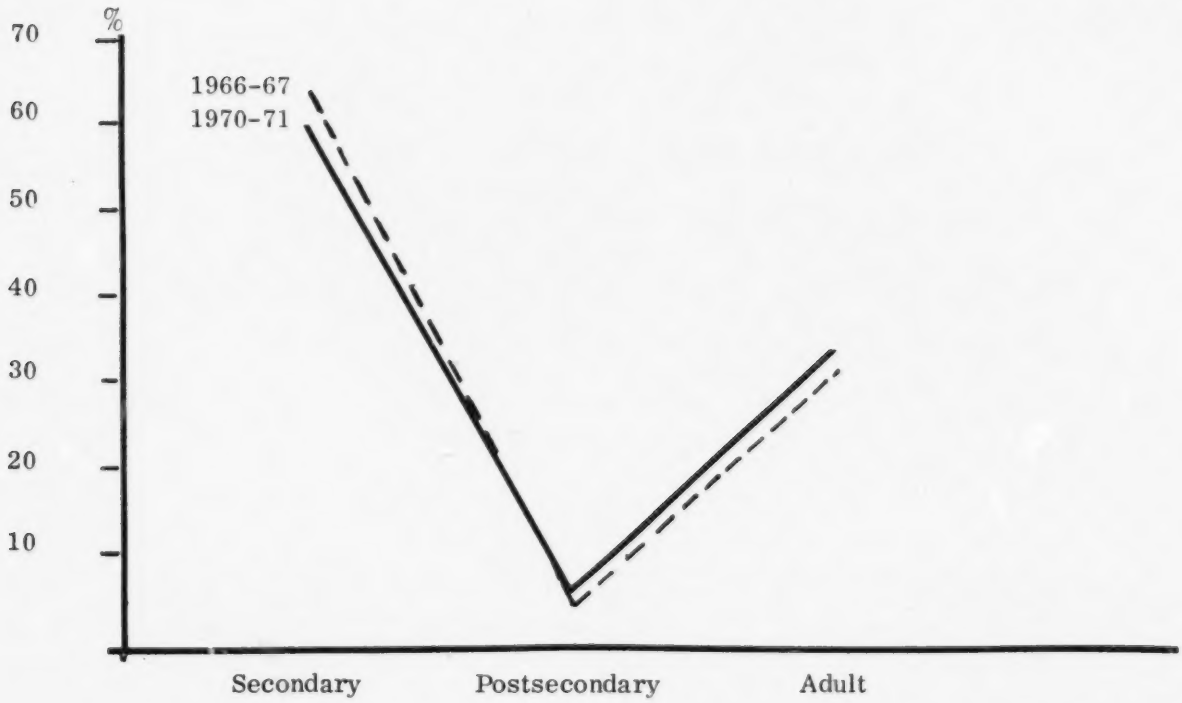

VOCATIONAL EDUCATION ENROLLMENT
By Program and Level FY 1971
Thousands
40
30
20
10
5
Secondary
Adult
Postsecondary
Agric.
B & O
D. E.
Health
Home Ec.
T & I

The major emphasis in vocational education in Kentucky continues to be at the secondary level. Sixty percent of the total enrollment was found in this level during the past year. This compares with 62% during FY 1967.

The postsecondary level accounted for 6% of the vocational education enrollment in FY 1971, a rise of 1% over 1967.

The adult level constituted 32% of the enrollment in FY 1967 compared with 34% in FY 1971.

The graph below shows the slight change that has occurred during the past five years.



FINDINGS:

1. There has been an increase of 53% in vocational education enrollment during the past five years. Increased enrollment is found in each area of instruction except in technical programs. 1971 data show an increase of 12% in enrollment over 1970.

2. Each level of instruction receives about the same degree of emphasis today as it received five years ago. The secondary level has received the major emphasis and accounts for approximately 60% of all vocational education enrollment.

3. Postsecondary enrollment shows an increase of 94% over the past five years but still serves only 6% of the total enrollment.

4. It is difficult to interpret and apply findings associated with adult enrollment to the total vocational education enrollment. Students who complete an adult supplementary training program of 20 hours, for example, are counted equally with full time students in secondary or postsecondary programs in arriving at the total enrollment figure. We feel this method of accounting distorts the real vocational education effort and leads to, possibly, false assumptions and conclusions when interpreting the total vocational effort. Adult supplementary enrollment accounted for approximately 34% of the FY 1971 total enrollment.

5. The most observable changes to develop over the past five years are:

   a. Home economics, although showing an increase of over 12,000 in enrollment since 1967, is actually serving 7% less of the total enrollment today;
   b. Agriculture shows a five-year increase of 1,800 but is now serving 5% less of the total; and
   c. Business and office programs show increases in enrollment of over 11,000 and a 5% increase in the percentage of the total enrollment served.

6. Handicapped and disadvantaged students were not identified five years ago. Today, the handicapped represent 2% of the enrollment and the disadvantaged represent 15%.

VT 017 626
VOCATIONAL EDUCATION IN SOUTH CAROLINA: AN EVALUATION REPORT FOR THE FISCAL YEAR 1970.

SOUTH CAROLINA STATE ADVISORY COUNCIL ON VOCATIONAL EDUCATION, COLUMBIA.
OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C.
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IDENTIFIERS - *SOUTH CAROLINA

ABSTRACT - THIS REPORT PROVIDES A GENERAL STATEMENT OF THE GOALS DEEMED OF HIGH PRIORITY IN THE EVALUATION OF VOCATIONAL EDUCATION IN SOUTH CAROLINA. EACH OF THE GOALS IS DELINEATED BY QUESTIONS TO HELP THE STATE ADVISORY COUNCIL MAKE A SUBJECTIVE EVALUATION ON THAT AREA. FOLLOWING THE DISCUSSION OF MOST QUESTIONS ARE RECOMMENDATIONS FOR IMPROVEMENT. ACCORDING TO THE GOALS SET FORTH, THE EVALUATION PROCESS SHOULD FOCUS ON: (1) STATE GOALS AND PRIORITIES AS PRESENTED IN THE STATE PLAN, (2) THE EFFECT THE VOCATIONAL EDUCATION AMENDMENTS OF 1969 HAD ON THE STATE IN THE FISCAL YEAR 1970, AND (3) PEOPLE AND THEIR NEEDS. RECOMMENDATIONS CALL FOR: (1) INCREASED FEDERAL AND STATE FINANCIAL SUPPORT FOR VOCATIONAL AND TECHNICAL EDUCATION, (2) A BETTER SYSTEM OF GATHERING ACCURATE DATA ON STATE PROGRAMS, (3) SUPPORT FOR LOCAL ADVISORY GROUPS, (4) MORE COMPREHENSIVE STATE AND LOCAL PLANNING, (5) COOPERATION AMONG ALL VOCATIONAL AGENCIES, AND (6) FORMULATION OF SPECIFIC OBJECTIVES FOR STAFF EDUCATION. (KH)

VT 017 626

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VOCATIONAL EDUCATION . . .

in South Carolina

An Evaluation Report for
Fiscal Year 1970

South Carolina
Advisory Council
on
Vocational Education

September, 1970

VT017625

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INTRODUCTION

This report, prepared by the South Carolina Advisory Council on Vocational Education, is the result of an evaluative study made in compliance with Public Law 90-576 (Paragraphs 104 b (1) C and D).

With the time and resources available to the Advisory Council, it was not possible to conduct a comprehensive study of the total state program of vocational and technical education. It was therefore decided that the efforts of the Council should be concentrated on appraising those aspects of the program which could make the greatest contribution to program improvement.

The state program of vocational and technical education has many strong points; it provides thousands of youth and adults with the opportunity to equip themselves with employment skills and attitudes which will benefit both themselves and the state of South Carolina as a whole. This evaluation does not assess the quality of educational programs as determined by the students who have completed occupation training. Neither does it look at the individual occupational programs conducted by the hundreds of teachers who make up the total state program of vocational and technical education. Only selected aspects of the state administration have been investigated, but further study of this area may be made in the future. Also, the degree of coordination between technical and vocational education as well as selected aspects of the technical education program may receive additional attention from the Advisory Council in the months ahead.

The initial study of questions relating to financial matters and the allocation of federal and state funds to local educational agencies is still incomplete. Additional study may continue in this area. Briefly, there has been an increase in the funds available for local district vocational and technical education, but apparently no significant increase in occupational programs has occurred. Most of the financial increases seem to have been utilized for such things as salary increases for teachers and funding new area vocational schools.

The Advisory Council notes that the key to providing an adequate number of high quality vocational and technical programs is the availability of competent personnel. The Council realizes that it is more productive

to work with personnel who have demonstrated teaching competence and an ability to lead and inspire youth and adults than it is to start building from the "ground level."

At present the Advisory Council is composed of thirteen members with varied backgrounds and interests who represent the citizens of South Carolina. Appointed by Governor McNair in the spring of 1969, the Council has been active in fulfilling its responsibilities. It forsees making additional studies and engaging in a continuing dialogue with the State Board of Education and other citizens in South Carolina

This report provides a general statement of the goals deemed to be of high priority in the evaluatory process. Each of the goals is delineated by questions to help the Council make a subjective evaluation on that area. Following the discussion of most questions are recommendations for improvement.

The Advisory Council respectfully submits this report to the Governor of the State of South Carolina, to the State Board of Education, and through the Board to the U. S. Commissioner of Education. The Board of Education is urged to consider this report and, in consultation with the Advisory Council, to consider its recommendations in an appropriate perspective. It is hoped that these recommendations will result in more efficient and more effective vocational and technical education for South Carolina.

Much of what has been observed by the Council is good. It is important to work toward total accomplishment of the purposes of vocational and technical education as defined by the Vocational Education Acts of 1963 as amended in 1968: "to maintain, extend and improve existing programs of vocational education, to develop new programs of vocational education, and to provide part-time employment for youth."

Mr. Robert A. Harley,
Chairman

Dr. Robert H. White,
Executive Director
P. O. Box 762
Clemson, S. C. 29631

Goal I. EVALUATION SHOULD FOCUS ON THE STATE GOALS AND PRIORITIES SET FORTH IN THE STATE PLAN.

Question 1: To what extent are the objectives explicitly set forth in the annual and long-range program plans?

If the State Plan is indeed a policy statement reflecting the official position of the State Board for Vocational Education, then the objectives of the Board should be explicitly stated. Careful examination of the State Plan for Vocational Education in South Carolina reveals, however, that it is primarily a compilation of raw data with relatively little guidance to offer administrators in fulfilling their program planning responsibilities. For example, the State Plan contains very little in the form of information and policy guidelines which would be useful for determining where local program emphasis should be placed. In general, evidence that all currently operated programs are considered effective is found in the plans for increases in instructional programs (Part 3, Paragraph 2, 12-1). Increases are projected for virtually all types of programs and services, but no statement of priorities indicates where greatest effort should be made.

The absence of clearly stated objectives and priorities is especially noticeable in regard to regular vocational education programs operated under Part B of the Vocational Amendments of 1968. Objectives are more clearly stated for such services and activities as curriculum development, administration and supervision, teacher training, and grants and contracts, none of which are under Part B.

In the annual and long-range plans sections of the State Plan, careful attention has been given to the delineation of certain areas of the state identified as being economically depressed, as being densely populated or as having a high percentage of school dropouts. Maps and lists clearly call attention to counties with these problems, and the implications for program emphasis seem clear though they be explicitly stated.

Much of the data in the State Plan is difficult to interpret. It is impossible to determine whether projected increases in the number of programs, teachers, and students represent a real expansion of services to a larger proportion of the state's population or whether the predicted increases merely reflect population growth. Also, there are gross inconsistencies among data from various tables both within the State Plan and between the State Plan data and that available from other sources. Improved data reporting procedures must be established in order that future programs may be based on accurate facts.

Recommendations:

1. Objectives for vocational and technical education programs should be explicitly stated in the State Plan. Such objectives and any related policy statements should be made available to local educators responsible for planning local programs. The 1968 Act clearly shifts much of the responsibility for program planning to local school districts. A concise statement of objectives and a realistic list of priorities would help increase the likelihood that local programs contribute to the achievement of state goals for vocational education.

2. A simple, straight-forward data-reporting system permitting the accumulation of accurate information necessary to the evaluation of state programs and for the realistic revision of program objectives and priorities should be established. This system should require teachers and students to be reported as full-time equivalents on an unduplicating basis. Definitions for "continuing," "expanding," and "new" programs need to be developed to facilitate the meaningful interpretation of annual changes.

Question 2: Do the objectives and priorities given in the State Plan either explicitly or implicitly reflect the intent of the Vocational Amendments of 1968?

As has been indicated, the objectives and priorities of the State Board for Vocational Education are difficult to deduce from the State Plan. It appears from an examination of "expanding" and "new" programs that such priorities as were established were in accord with the intent of the Vocational Education Act of 1968. Substantial expansion was indicated in programs for disadvantaged, handicapped and prevocational students.

To assess priorities or program emphases, it was necessary to look at data covering all activities conducted during the year under review. The preparation of the 1970-71 State Plan, conducted during this period, was perceived as an activity of the year under review. Comparison of the two State Plans (1969-70 and 1970-71) provided some indication of trends. In general, it appeared that state operations were in keeping with the intent of the 1968 Act (as stated in the "Declaration and Purpose" and "Part A" of the Vocational Education Amendments of 1968) with the notable exception that there was no increased emphasis on providing "ready access to vocational training or retraining" for people who have "already entered the labor market but need to upgrade their skills or learn new ones." There appears to be a trend, based on comparisons between state plans for the two years, to de-emphasize vocational education programs for adults.

One difficulty in assessing priorities for the two years was caused by the lack of information about post-secondary vocational and technical education programs. Although substantial amounts of federal money from the 1968 Act were committed to the Technical Education Committee, there was no indication of the means by which it was insured that each dollar would go where it was most urgently needed to meet realistic objectives for the state's total program of vocational education. Information in

the State Plan was not adequate as a basis for drawing sound conclusions regarding relative priorities of secondary, post-secondary and adult vocational education.

Recommendations:

1. Objectives for the state should be stated concisely and made available for use by local school districts.

2. State-wide priorities should be specified in the State Plan and made available to local school districts in time to influence local planning.

3. A system should be developed for coordinating the activities of the State Board for Vocational Education and those of the Technical Education Committee.

Question 3: Does the data in the 1971 State Plan reflect the program objectives given in the 1970 State Plan?

In surveying the state's plans for vocational and technical education, one might expect a high degree of consistency in the number of programs from one year to the next unless the reporting system were changed or an abrupt shift of emphasis took place. In other words, the number of programs of a given type continuing in any one year should be close to the total number reported for the year before.

Basically, the emphasis given various programs in the 1971 State Plan is similar to the 1970 Plan and consistent with the intent of the Vocational Education Amendments of 1968. Obvious stress has been placed on providing programs for the disadvantaged and handicapped as well as for prevocational instruction, termed "group guidance." All of the 35 new prevocational programs planned for 1971 are intended for disadvantaged or handicapped students; there is no indication that financial resources have been allocated to make additional guidance services available to other students.

Comparisons of Table 4, Part 3 for the year under review (1969-70) and Table 4 for 1970-1971 indicates that ambitious goals were set forth in the earlier Plan. Of 781 new or continued adult programs anticipated for the year ending June 30, 1970, only 743 were reported as continuing in the subsequent Plan. Even with six programs expanded and 27 new programs added, the total for the year ending June 30, 1971 is projected to be only 776, a figure below that given for 1970. The 1970 Plan also listed 15 new programs for the disadvantaged and handicapped, but only ten are listed in the continuing column of the 1971 Plan.

A significant discrepancy was noted in the data for regular secondary vocational programs. A total of only 907 secondary programs were planned for 1970, whereas the State Plan for the following year listed 1393 to be continued. For post-secondary technical education the data showed only 37 programs planned in 1970 while the subsequent State Plan showed 242 being continued. Obvious errors of this nature indicate unreliable data which fails to portray programs accurately. It is believed that the data in the 1971 State Plan is considerably more accurate than that for the year under review. If so, it should be possible in subsequent years to determine more accurately the extent to which programs reach the stated objectives. Considering these inconsistencies, serious questions concerning objectives and the extent to which they are being achieved arise.

Recommendations:

1. A systematic method of reporting programs should be established so that data from year to year will be comparable.

2. Circumstances merit an increase in adult programs; such a goal, with a system of priorities to govern its implementation, should be established.

Question 4: Are there additional goals or priorities that could be included in the State Plan in order that it reflect more adequately the intent of the Vocational Education Amendments of 1968?

The State Plan format, provided by the U. S. Office of Education, is not suitable as a basis for statewide planning. Though it is comprehensive enough to meet federal requirements, the exclusion of carefully stated goals and priorities occurred because the format did not call for them. Responsible people within the state might have included such guidelines had the need been established; such was not the case.

Had the State Plan indicated goals and priorities for programs operated by the Technical Education Committee, less duplication of effort might have been accomplished. Furthermore, the State Plan contains neither information as to the geographic location of programs nor any indication that financial resources will be made available to stimulate needed programs and services other than those receiving special funding by the Act (e.g., disadvantaged, handicapped, exemplary).

Specific goals and priorities could be established to reflect more adequately the intent of the Vocational Education Amendments of 1968. In May, 1970 the State Board for Vocational Education adopted the objective of providing, by 1975, "an adequate occupational training program for 100 percent of the secondary high school students who choose it." In view of this underlying objective, it would have been desirable for the next State Plan prepared (that for 1970-1971) to have contained specific encouragement for vocational programs in geographic areas where programs had not previously been available. It might also have supported such services as teacher education for those occupational areas lacking trained personnel. According to the State Plan (Part 2, Table I), areas in greatest need of teachers were Office and Business Education, Trade and Industries, Gainful Home Economics, and Distribution and Marketing. For Office and Business, Trade and Industries, Gainful Home Economics, Distribution and Marketing, and Health-related Occupations, it is

projected that the number of students completing training in fiscal year 1971 will equal less than 50 percent of the labor demand for that year. Specific statements of goals and priorities would have been especially valuable for these areas.

Recommendations:

1. A list of priorities provide direction for local school districts in planning programs to meet state-wide, community, and individual needs should be prepared.

2. Specific objectives in the areas of teacher training, in-service education, and supervision should be included in the list to encourage the preparation of adequate personnel for the priority areas. These objectives should be made clear to those responsible for teacher education programs across the state.

Question 5: In what areas do goals and accomplishments reflect a "catching up" of the situation in the state?

Data from the State Plan were compiled to compare the number of students completing secondary programs in Fiscal Year 1970 with the number of jobs projected for 1971. Data on student completions in various types of programs came from Table II, Part 3 of the Plan. Similar data for 1971 are found in Table I, Part 2 of that Plan. Comparison of figures for Gainful Home Economics, Office Occupations and other programs reveals a variance of up to 1300 percent with discrepancies of 200 to 400 percent in all of the different program areas (See Table I below). Under these circumstances, determining whether the state is indeed "catching up" with the anticipated labor demand is impossible.

Table I[1]

Reported Number of
Vocational-Technical Graduates

	Table I, Part 2 Vocational Education Output	Table II, Part 3 Estimated No. To Complete (Secondary Students except for Technical)
Agricultural	1595	
Ag Production		2000
Other Agriculture		1665
Office Occupations	1425	3596
Trade and Industrial	1895	5077
Health (Practical Nursing)	40	200
Distribution and Marketing	600	1515
Home Making	Not Given	9500
Home Making Gainful	251	610
Technical	250	3416

[1]All data derived from the South Carolina State Plan for Vocational Education, Fiscal Year 1971.

The most reliable information in the Plan was in the area of student enrollments. Comparing the anticipated 1970 and 1971 enrollments provided the percentages given in Table II of this report. Office Occupations showed an increase of 15.5 percent followed in descending order by Distributive Education, Technical Education, Gainful Home Economics, and Trade and Industrial Education which showed a net gain in enrollment of .7 percent. Agricultural occupations are shown to have a net loss of 8.6 percent. Assuming the accuracy of the projected labor demand, derived from the South Carolina Employment Security Commission and given in Table I, Part 2 of the State Plan, the number of anticipated completions for 1971 (Table II, Part 3) shows that Office Occupations, Gainful Home Economics, Distributive Education, Trade and Industrial Education, and Health Occupations lag far behind the number of jobs projected. Even at the anticipated growth rates of 15.5 percent, it

would be many years before vocational education could meet the labor demands of the state. Gainful Home Economics and Trade and Industrial Education could not approach the projected labor demand for 1971, though the 3416 projected completions in technical education far exceeds the reported number of jobs available. The reader should be cautioned that there are gross inconsistencies in these reported data and that few conclusions can be drawn from them.

Table II

Total Estimated Enrollment[1]

	From 1969-70 State Plan	From 1970-71 State Plan	Percent Change
Agricultural	15598	14359	-8.6%
Office Occupations	9325	10775	+15.6
Home Economics	28112	(29434)	+4.7
Consumer		28500	
Gainful		934	
Distributive	2960	3341	+12.9
Trade and Industrial	11956	12045	+.7
Pre-Vocational	2198		
Secondary Only		1685	-22.8
Secondary Plus Disadvantaged and Handicapped		2785	+26.7
Technical	5891[2]	6238	+5.9

[1] Obtained from the two State Plans.

[2] Obtained by re-adding data given. The total given in the State Plan was 1704.

Recommendations:

1. Recommendations relating to the accomplishments of vocational education in relation to the projected labor needs of the state are not possible due to gross inaccuracies in the available data.

2. Regardless of the projected labor demand figures, if data given in Table II, Part 3 of the Plan have any validity, more emphasis should be placed in the areas of Health, Trade and Industries, Distributive Education, Gainful Home Economics, and Office Occupations.

3. A study should be conducted to determine whether the apparent oversupply in technical occupations is a result of inaccurate data in the Plan, inaccurate data given in the projected labor demand, or an actual fact.

Question 6: What specific actions have been taken by the State Board and its staff to improve the efficiency, effectiveness, or scope of Vocational education in keeping with the intent of the Vocational Education Amendments of 1968?

The Office of Vocational Education was reorganized as a means of better reflecting the emphases of the 1968 Vocational Education Amendments, and the entire organization is illustrated in Part 1 of the 1969-1970 State Plan. The office is now composed of three major sections: Program Planning and Development, Ancillary Services, and Project Processing and Review. New staff positions include supervisors for these three sections and for such state positions as Supervisor of Health Occupations (previously a part of the Trades and Industrial Service area) and Supervisor of Home Economics-Gainful Occupations (previously a part of Home Economics Education). Also, the Home Economics Education program area was renamed "Consumer and Homemaking Education" to reflect the 1968 Amendments' emphasis on consumer education. A Supervisor of Special Programs and a Consultant for Youth Organizations were also named. A Consultant for Teacher-Education Programs was

appointed and two members were added to the Project Processing and Review staff. The personnel for these positions were generally drawn from previously employed staff, specifically from such areas as Agriculture, Home Economics, Youth Education, and Research, but some new people were brought in.

Also in keeping with the 1968 Amendments, the districts supervised by the Office of Vocational Education were reorganized into homogeneous, geographical areas, and plans were made to staff each district office with consultants in Consumer and Homemaking Education, Agricultural Education, Trades and Industries, Distributive Education, and Office Occupations. The duties of people in these district offices were revised to emphasize services provided to local programs.

Work shops and conferences were conducted to implement the 1968 Amendments:

1. A conference was held to familiarize school superintendents with the 1968 Amendments.
2. The state vocational education staff attended a workshop explaining the 1968 Amendments and the role of the Office of Vocational Education. Another workshop was conducted to clarify the roles of vocational consultants at the state level.
3. A public Information Workshop was conducted for vocational center directors.
4. Two other workshops were held with vocational center directors to explain the 1968 Amendments and its implications.
5. A vocational guidance workshop, in conjunction with the Office of General Education, emphasized vocational guidance.
6. The Research Coordinating Unit conducted a series of workshops to secure the participation of vocational educators in the development and utilization of the Educational Resources Information Center (ERIC) and Selective Dissemination of Information (SDI) systems.

Teacher guides were developed in Consumer Education, in Pre-Vocational Education, and in Vocational Information.

Eight new vocational education centers opened in 1969; three additional ones are under construction, and three were funded during the year. All told, 22 centers are now in operation. Through the combined efforts of the Offices of Adult and Vocational Education, adult learning laboratories are being established in centers. The Office of Vocational Education, with other agencies, is also assisting in developing the Williamsburg Comprehensive Manpower Center.

A new reporting system is being developed by the Office of Vocatioanl Education in an effort to secure homogeneous and accurate data on enrollments and on placement of vocational students. A planning grant funded by the Education Professions Development Act assisted in the development of a vocational teacher education program.

Cooperative agreements were developed with Vocational Rehabilitation and the Employment Security Commission for inclusion in the State Plan.

Question 7: To what extent was the Advisory Council on Vocational Education involved in preparation of the FY70 State Plan?

The Vocational Amendments of 1968 specified that the State Advisory Council should "advise the State Board on the development of and policy matters arising in the administration of the State Plan submitted pursuant to Part B of this title, including the preparation of long-range and annual programs plans pursuant to paragraphs 4 and 5 of Section 123(a)." The 1970-1971 State Plan was prepared during the year under review, and the Advisory Council was involved in the process.

The first State Plan (1969-1970), which was prepared to comply with PL 90-576, was approved by the Advisory Council after minimal review, primarily because of the urgency of the deadline and the late date of the Council's organization. During the 1969-1970 Fiscal Year considerable

improvement was made in providing for Council participation in the revision and development of the State Plan. A committee of the Advisory Council carefully reviewed the plan in its various stages of development. From the work of this committee and of the Advisory Council staff, suggestions were made to representatives of the Office of Vocational Education. The director of the Advisory Council met on several occasions with staff of the Office of Vocational Education to point out discrepancies in the plan and to make suggestions concerning improvements. The suggestions were received in a spirit of cooperation, and, to a large extent the thoughts of the Council were incorporated into the 1971 Plan.

It must be noted, however, that insufficient time was alloted for the preparation of an accurate and comprehensive State Plan. Even now the 1970-1971 State Plan is not without error. This fact was noted and affixed to the endorsement of the Advisory Council. Part of the plan's weakness may be attributed to the format prescribed by the U. S. Office of Education, but many of the errors are attributable to inadequacies in the data available for inclusion. Other flaws can only be attributed to human error.

Both the Director and Assistant Director of Vocational Education met with the Advisory Council and agreed that the State Plan could best serve the need of the State if the format were changed. As a result, efforts are being made so that the format of the plan will not require data unavailable as of the submission deadline. During the meeting the Council expressed concern that information relating to priorities and objectives should be available early in the calendar year to provide direction for local educational agencies. The arrangement would then involve a three-part State Plan including (1) a general policy section which would not necessarily change every year, (2) a section, to be prepared early in the calendar year, which would establish goals and priorities and include projections on both a one-year and a

five-year basis, and (3) a final report on the accomplishments of the previous year to be prepared in the late fall.

The involvement of the Advisory Council was much greater and more satisfactory during the 1969-1970 year than it had previously been. With more time available for preparation of the State Plan and with more accurate data available to the Office of Vocational Education, subsequent state plans should improve in clarity, accuracy, and consistency. The State Advisory Council is now in a position to cooperate fully with and provide assistance to the State Board and its staff.

Recommendations:

1. There should be a change in the format of the State Plan to make it a more easily interpreted and comprehensive document.

2. Public hearings should be conducted well before the State Plan is to be submitted to the Advisory Council in order for desirable recommendations to be considered and incorporated.

3. The Advisory Council and the Office of Vocational Education should continue to work in the atmosphere of cooperation exhibited during the spring of 1970.

Goal II. EVALUATION SHOULD FOCUS ON THE EFFECT THE VOCATIONAL EDUCATION AMENDMENTS OF 1968 HAD ON THE STATE IN THE YEAR UNDER REVIEW.

Question 1: What programs, services and activities were initiated and/or terminated during the year?

According to the available data, vocational programs, services and activities of the fiscal year 1970 were similar to those of 1969 with a few important exceptions. A limited number of experimental and exemplary programs were conducted with disadvantaged and handicapped youth, and there were pilot programs in pre-vocational education. Even before the State Board of Education took action to encourage pre-vocational programs in public secondary schools throughout the state, the Office of Vocational Education distributed a suggested outline for such programs in small high schools. A number of these programs will probably be initiated during the 1971 fiscal year as a result of encouragemert from the Office of Vocational Education.

The Office of Vocational Education is to be complimented for promoting this different approach to vocational education in small high schools. This type of program should be successful inasmuch as it is nearly identical to one used very effectively in Utah. Had the announcement of this program cited its original source, however, much additional assistance could have been acquired by people willing to write Utah for it.

Several programs to reduce dropouts by giving high-interest learning activities or basic remedial education to selected youth were funded. One program, operated at McDuffie High School in Anderson, was surprisingly effective in upgrading the basic skills of students who had been classed as underachievers.

The Office of Vocational Education entered into a contract with one of the state universities to provide a summer retraining program for vocational teachers to prepare them to teach pre-vocational education. The program, initiated during the last quarter of fiscal year 1970, had not been terminated at the writing of this report. To attract vocational

teachers, graduate or undergraduate credit was offered according to the personal needs of the individuals involved. These programs were conducted in several locations throughout the state. Certifying teachers without college degrees may have a long-range effect on the supply of professionally prepared (baccalaureate degree) teachers. The effect is not yet known. It seems clear that there will be little financial incentive for teachers to pursue professional degree programs if they can achieve equal certification through work experience, a few in-service courses or an institute.

Recommendation:

Each exemplary and research project funded should be followed by a written evaluation and description to be made available to any interested individuals in the state.

Question 2: What major trends in programs, services and activities were discernable from comparison of the State Plans?

One of the most reliable indicators of trends in educational programs, services, and activities is the relative number of dollars allocated to various types of programs. Comparison of the State Plan for the 1969-1970 fiscal year and that prepared during that time for the subsequent year reveals definite trends in the allocation of state and federal funds.

The most obvious trend, in the area of Work-Study, was decreed in the Declaration of Purpose, Public Law 90-576. Due to the fact that no funding took place during the year 1969-1970, no financial commitment was shown for Work-Study programs. Examination of the 1970-197- Plan, however, reveals a definite commitment to Work-Study programs. Another trend can be seen in the strong de-emphasis in Adult vocational education and Research and Demonstration projects revealed by comparing the funding patterns for the two years. Adult vocational education is shown to decrease from 2.0 million to 1.7 million dollars while Research and Demonstration projects decreased from 120,000 to approximately 42,000 dollars. A slight decrease is also projected in post-secondary vocational programs.

Increases in allocations may also be seen in several areas. The area with the highest percent of increase is Administration and Supervision where the total funds allocated increase from 900,000 to approximately 1.2 million dollars. Increases are also planned for disadvantaged and handicapped programs at the secondary level, and under Ancillary Services for teacher training and curriculum development.

It is possible to discern some major trends by scrutinizing the enrollment for secondary and adult programs and by comparing the number of programs for the two years. Trade and Industry is the only occupational area in which the enrollment in secondary school programs is reported as remaining constant (with less than a 1% increase), though another part of the plan shows the number of Trade and Industrial programs increasing from 200 to 389. The reported number of programs for the 1969-1970 year is apparently inaccurate. Vocational Agriculture is shown to have a significant decrease (exceeding 8-1/2%) in enrollment; on the other hand, Distributive Education and Office Occupations both reported an anticipated growth in student enrollment of over 12%. There is, however, a discrepancy between the two years; for, of the 166 Distributive Education programs reported in 1969-1970, only 100 continue in 1970-1971. It appears that a discrepancy resulted from the reporting or compilation of these data. Though the data for technical programs had to be re-added to provide accurate totals, the corrected totals indicate a relatively stable number of programs and a modest increase in student enrollment.

While the financial support for Adult vocational education is shown to have decreased, the enrollment data indicate that a definite trend toward increasing the number of adult vocational programs exists. This inconsistency is unexplained. The enrollment figures also indicate an increase in the number of pre-vocational group guidance programs and one in secondary programs for the disadvantaged and handicapped. With the ambiguous data in the two state plans one can compute either a 23% decrease or a 27% increase in pre-vocational student enrollment. As a result of a recent action of the State Board of Education, a

definite trend toward expanding pre-vocational programs is forthcoming. Such expansion is in keeping with the implications of recent research.

Recommendations:

1. Increases in pre-vocational programs are desirable and should be encouraged to assist students in choosing vocational fields.

2. Careful delineation of the 273,000 dollar increase in services provided under Administration and Supervision, an increase of over 30 percent in one year, should be made. The amount accounted for by adjustments in salary and organizational structure and the amount actually spent on increased services should be reported.

Question 3: What major changes in state funding were caused by the Vocational Education Amendments of 1968?

Before the 1968 Amendments, state appropriations had been designated for use by such service areas as Agriculture, Home Economics and Trade and Industries. As of Fiscal Year 1970-1971, state appropriations are no longer categorized in this way but are included in the total funds for vocational education under such heading as Salaries, Travel, and Equipment. The Amendments of 1968 eliminated categorical federal funding and set the precedent for this change.

Question 4: Were there any particular problems in administering the reimbursement of funds as provided for by the formula in the 1970 State Plan?

According to information provided by the Office of Vocational Education, no particular problems, beyond those normally expected when operational changes are made, were encountered. Securing thorough understanding of reimbursement procedures on the part of school superintendents and business managers was the major problem. A series of meetings was held for this purpose and will be repeated this fall. In addition, securing understanding of reimbursement procedures by Office of Vocational

Education staff members became a time-consuming process.

Recommendation:

The financial reimbursement procedure should be clearly stated in a guide for local school districts.

Question 5: What are the relative costs of various types of vocational and technical programs as determined by the indicator of teacher-student ratio?

In an attempt to derive indicators of the relative cost of different programs, the numbers of students served and teachers employed by various vocational and technical programs were compiled from the State Plan. It became apparent, however, that the resulting teacher-student ratios were useless because of inconsistencies in the Plan. Nevertheless, the average numbers of students per teacher permits some interesting comparisons (See Table III).

According to the available data, the average number of students served by each vocational teacher was 51, while 16 students were served by the average technical teacher. These two figures are not entirely comparable, however, just as data for various vocational services are not, because class time varies from one to three hours. While the figures given in Table III show one teacher for 16 students to be the average for technical education, the initial data (obtained from the State Plan) indicated one teacher for every three students. Regardless of the amount of student contact per teacher, three students per teacher would indicate an exorbitantly high teacher cost per pupil. Even with the revised figures obtained from the Technical Education Office, programs in Health Services, Industrial and Craft Training, Industrial Metal Working, Laboratory Training, and Transportation and Equipment Science all show 13 or fewer students per teacher.

A wide range also appeared in the teacher-student ratios calculated for the various service areas of vocational education. Home Economics Education showed the highest average number of students served by teachers,

Table III

Average Teacher-Student Ratios

Vocational Education[1] — Secondary School Programs

Program	#Teachers	#Students Served	Teacher-Student Ratio
Pre Vocational	6	71	1:12
Trade & Industrial	401	10,336	1:26
Home Economics	296	27,403	1:93
Distributive Education	71	2,595	1:37
Office Occupations	227	9,285	1:41
Agriculture	280	15,418	1:55
Totals	1281	65,108	1:51

Technical Education[2]

Program	#Teachers	#Students Served	Teacher-Student Ratio
Agricultural Technology	8	160	1:20
Business & Commercial	47	860	1:18
Engineering Technology	103	1,958	1:19
Fiber Science	6	105	1:18
Health Services	33	427	1:13
Industrial and Craft Training	59	788	1:13
Industrial Metal Working	45	500	1:11
Laboratory Training	10	106	1:11
Secretarial & Clerical Science	23	420	1:18
Transportation and Equipment Science	29	357	1:12
Totals	363	5,681	1:16

[1]Data for Vocational Education derived from compilation of information in Table II, Part III of the South Carolina State Plan for Vocational Education, Fiscal Year 1970.

[2]Data for Number of Students derived from the same source as above with a reported 467 teachers. A letter from Jake Salley, dated July 30, 1970, provided the revised breakdown of 363 teachers used above.

approximately 93. Pre-vocational courses appear in the table with a 1:12 ratio, but the data are probably inaccurate. The 1:26 ratio shown for Trade and Industries is the lowest among vocational programs, although trade and industrial classes generally meet for three hours per class.

Recommendations:

1. The number of teachers employed should be reported in full-time equivalents to insure accurate interpretation. This reporting has not been done consistently in the State Plans.

2. While the total number of secondary students served is of interest, more useful management information would be obtained by having the raw data converted to an average class size adjusted to the full teaching day. The teacher who has 20 students in a three-hour morning class and another 20 in a three-hour afternoon class has a greater teaching load than the teacher with 15 students in each of four classes thereby showing a load of 60. Such data should be made comparable.

3. The data in the State Plan should accurately reflect conditions. The total of 363 teachers obtained from the state Office of Technical Education is markedly different from the 467 reported in the State Plan.

4. Low teacher-student ratios for technical education programs indicate exorbitant instructional costs per pupil. The extent to which extenuating circumstances help justify this should be determined. State officials have the legal and moral responsibility of seeing that each tax dollar spent for vocational and technical education is placed where it will make the greatest contribution. Relevant information should be obrained and carefully analyzed so this responsibility can be fulfilled.

5. As already indicated, an improved data-reporting system needs to be established and installed immediately, and data should be reported early enough to be used in planning and evaluating programs.

Question 6: What was the amount of money available for Part B-type vocational programs, and how did this compare with the previous year?

The 1970 Fiscal Year budget represented a marked change from that of the previous year: from data supplied by the Office of Vocational Education it was determined that the federal and state reimbursements to school districts during 1968-1969 was $5,408,095 as compared to $7,470,360 for 1969-1970. These figures represent an increase of approximately 40 percent.

Question 7: How did the reimbursements for a few randomly selected school districts compare with the allocation of funds for those school districts under the formula for the 1969-1970 Fiscal Year?

Data were obtained from the Office of Vocational Education for a study of this question. At the time of this report, the results are inconclusive.

Question 8: In what section of the State Plan is provision made for the manner of support to area vocational centers?

According to the Office of Vocational Education, "Section 3.27 of the Plan provides this information. The base year for area centers is the first year of operation whereas with local school districts this was 1968-1969."

This information is not given in any interpretable manner in the copy of the 1970 State Plan provided to the Advisory Council. No way of ascertaining the base year nor to what figure the percentage factor should be applied could be ascertained. Under these conditions, the formula is meaningless except to those who devised the system.

Recommendations:

1. The formula for allocation of support to area vocational centers should be explained completely and explicitly in the State Plan.

2. The methods of allocating support for area vocational centers and other school districts are alike except for the base year; this fact should be stated.

Question 9: What funds were available for use in a discretionary manner? How are these funds provided for in the State Plan?

According to information supplied by the Office of Vocational Education, approximately $35,000 was used for such programs in FY 1970. The authority for such provisions are fund in the State Plan, Section 1, Item 3.1(a). All told, thirteen centers developed programs:

Aiken	Kershaw
R. D. Anderson	Lancaster
Cherokee	Marion-Mullins
Chester	McDuffie
Columbia	Murray
Crescent Cities	Pickens
Fairfield	

At the Sixth Annual Administrators' Conference, Myrtle Beach, South Carolina, July 15, 1970, the Director of Vocational Education reported that $308,362 had been budgeted for "Special Needs" in Fiscal Year 1970. The exact purpose and use of these funds remains obscure.

The policy of appropriating some funds for crash programs (instant manpower) at the discretion of the State Director and the State Staff is commended by the Advisory Council, and should be continued.

Recommendations:

1. More funds should be set aside for discretionary use by area centers and at other locations where the need may quickly arise for new or special vocational programs.

2. The policy statement of the State Plan, by which funds are distributed needs clarification.

3. An annual report on the use of all discretionary funds should be provided to the State Board of Education. The report should include

a) program location
b) program description
c) program results
d) program costs.

Question 10: What changes in local school district policies and procedures reflect the new State Plan and the Amendments of 1968?

Although no attempt has been made to conduct a survey of state school districts to answer this question, discussions with a number of vocational educators and other school administrators support the contention that the Amendments of 1968 and the concomitant State Plan have caused significant changes in local educational districts including such diverse factors as an increase in the number of local supervisors and administrators, a shift in accountability for programs, and more involvement of lay people.

Due to the complexity of preparing a local plan and to the difficulty of keeping up with constantly changing requirements, many school districts have already designated a local supervisor of vocational education. This development should be beneficial to vocational education programs, but the need for training these people has not been met within the state. People generally appointed to these positions are either outstanding vocational educators or school administrators. Depending on which source they come from, the new leaders have tended to lack training either in a philosophy and understanding of vocational education or in principles of administration.

The local plan for vocational education, now a prerequisite for receiving state-allocated funds, has brought about a shift in accountability from the district and state to the local level. Teachers of vocational programs are now forced to justify their programs to local administrators and are not therefore as closely allied with their district supervisors as they were in the past. One result has been that they have become more closely identified with their school administrators than they formerly were.

Another outcome of the 1968 Amendments is that more people have

become involved in vocational education at the local level. Because of the need for lay involvement in local plans, many programs have established advisory councils for the first time. One result has been a general strengthening of programs, especially where they had not been closely related to the needs of an area. Much constructive and useful criticism has come from these advisory councils. Also, because of the involvement of local people, interest in vocational education is increasing, and a new awareness of programs is creating a healthier atmosphere for vocational students.

Recommendations:

1. An aggressive in-service program should be established and maintained for supervisors of local vocational programs.

2. The present pattern of federal and state reimbursement for vocational education and for the preparation of a local plan should be continued although such matters as the format of the plan need improvement.

Question 11: What particular problems have been identified by local school district personnel in regard to the distribution of Part-B funds?

The changeover to a new pattern of reimbursement for vocational education has not been without difficulty. Several school administrators have remarked that at no time in their experience with vocational education has there been so much confusion. The change in the pattern of reimbursement was abrupt and severe.

School district personnel complain that although programs are supposed to allow a greater degree of local control and flexibility than before, the new procedures for alloting funds have defeated much of the flexibility which the system was intended to encourage. Funds for Fiscal Year 1969-1970 were barely sufficient for continuation of those vocational teachers already employed in many schools. Accordingly, it was very difficult to budget enough money for necessary supplies and equipment. During this school year the State Board of Education took action causing many school districts to implement a program of prevocational

education. While this action was desirable, the only funds available were federal and state vocational monies from the local district allocation, and many schools that had maintained a corps of qualified, successful vocational teachers were in a difficult situation.

The new reimbursement pattern apparently provides for quarterly reimbursement of vocational funds to local schools. Local school administrators have reacted very favorably to this change since needed funds are more quickly available in the day-to-day operation of schools. This aspect is particularly appreciated by people directly responsible for financial arrangements at the local district level.

Recommendations:

1. A reserve of state and federal funds should be maintained for justified expansion of vocational programs in local districts.

2. A system of priorities for the allocation of supply and equipment funds, for those cases when purchase of the needed items creates a hardship on districts attempting to maintain a vocational program, should be set up.

3. The amount of money available to local school districts is not known early enough to permit good planning and the securing of competent teachers. Funding in retrospect negates much of the intent of the 1968 act.

Question 12: What constraints have had an inhibiting effect on the implementation of the 1968 Amendments?

According to the Office of Vocational Education, (1) the lack of adequate funds and (2) the lateness of federal funding have been the only two factors imposing limits on state achievement; however, the Advisory Council recognizes several other constraints:

(3) the scarcity of qualified personnel,

(4) the vested interests of certain individuals involved in vocational education,

(5) the difficulty involved in getting personnel to accept new ways of thinking, and

(6) the tendency not to overcome a momentum, once it is established.

Recommendations:

1. An effort should be made to attract and to train qualified personnel for the schools of the state.

2. Continuous in-service education of teachers and staff must be provided for within the state.

3. Additional funds for vocational programs are urgently needed.

4. Appropriations must be made sufficiently early to permit realistic planning for each fiscal year.

Question 13: What impact has the availability or non-availability of qualified staff had on the implementation of the 1968 Act and the new State Plan?

Though the office of Vocational Education expresses confidence that its staff is now "qualified to fully implement the State Plan" and that "vacancies on the staff . . . are due to staff changes to more fully utilize the abilities and skills of staff members," the Council believes that there is a shortage of qualified personnel in local school District Supervisory and Coordinating positions as well as in some teaching areas.

Goal III: EVALUATION SHOULD FOCUS UPON THE PEOPLE AND THEIR NEEDS.

Question 1: Is the present data pertaining to the current and projected vocational education needs of youth valid and reliable?

The lack of information on employment opportunities in the state has been noted previously in this report. The only accurate information available for educational planning are those data which reflect the number of youth who will not enter and complete post-secondary educational programs. Information of this nature is available to school districts from the Superintendents Annual Report.

Recommendation:

Recommendations on improvement of the employment opportunities are found elsewhere in this report.

Question 2: Were any specific actions taken by the State Board and its staff to improve the validity and reliability of data pertaining to the current and projected vocational education needs of youth and adults in the state?

A contract has been given to the Employment Security Commission for the provision of reliable data on employment opportunities in a large number of occupational categories (excluding agriculture and household employment).

Recommendation:

Results of the Employment Security Commission investigations should be made immediately available to local school districts as they become available.

Question 3: Have any specific actions been taken toward providing high-quality programs for dropouts and potential dropouts?

The Office of Vocational Education is to be commended for increasing programs for disadvantaged and handicapped students by 500 percent and

for efforts to decrease the number of school dropouts. The percentage of students graduating from high school has increased ten percent. In addition, implementation of a prevocational program, now available to all school districts, should help reduce the dropout rate in future years. According to the Office of Vocational Education, programs are available "in each of the area vocational centers in the afternoon and evening in addition to regular adult vocational programs." This statement is qualified, however, in the immediately following sentence: "programs for out-of-school youth and adults are offered in all area vocational centers and high schools where there is a need for training and funds are available."

In ten pilot programs, vocational education is cooperating with adjunct education. The following schools are involved:

Barr Street High School	Lancaster County
Burke High School	Charleston County
Hartsville Junior High School	Darlington County
Butler High School	Darlington County
Chapin High School	Lexington County
Wren High School	Anderson County
Seneca High School	Oconee County
Jefferson High School	Aiken County
Leavelle-McCampbell High School	Aiken County
Socastee High School	Horry County

Recommendation:

Consideration should be given to increased financial support of the afternoon and evening programs. Appropriations should reflect any increase in efforts by local districts since 1968-1969 rather than that year being used as a static "base year" for the allocation formula.

Question 4: What specific actions have been taken toward providing high-quality programs, beyond those provided as of 1968, for unemployed and under-employed adults?

Unfortunately, it was impossible for the Council to compare the year 1968-1969 with previous years to determine whether an increase or decrease occurred.

Question 5: What specific actions have been taken toward providing high-quality programs for disadvantaged and handicapped youth and adults, above those provided as of 1968.

According to the Office of Vocational Education, 25 percent of Part-B federal funds "were used for disadvantaged and handicapped programs since 1968." This percent complies with the specifications of the Vocational Education Act of 1968. The allocations were as follows:

School	Disadvantaged	Handicapped
R. D. Anderson AVC	x	
Woodruff, Jr.	x	
S. C. Dept. of Corrections	x	
C. A. Johnson	x	
East Side, Etc.	x	
Palmetto-Mullins	x	
Crescent	x	
W. E. Parker	x	
Loris	x	
Union	x	
Williamsburg	x	
Marion-Mullins AVC	x	x
Fairforest	x	
Swansea	x	
Florence AVC	x	
Chapin	x	
Daniel Morgan	x	
Irmo	x	
McDuffie	x	
McCormick AVC	x	x
Walhalla, Etc.	x	x
South Jr. (Lancaster)	x	
Horry County, All Jr. & Sr. Highs	x	
Myrtle Beach-Finklea		
Conway, Etc.		x
Spaulding	x	x

School	Disadvantaged	Handicapped
Dennis	x	
McCorory-Liston	x	
Union AVC	x	
Kershaw AVC	x	x
Seneca, Etc.	x	
Pelion	x	
Gilbert	x	
Howard	x	
Clover	x	
Saluda	x	
Cheraw, McB. & L.	x	
Monroe-Pinckney	x	
Chesterfield & Pageland	x	
Summerville	x	
N. Charleston	x	
Chicora	x	
Tri-County		x
Williamsburg County		x
Landrum-Chapman		x
Murray		x
Fairfield AVC		x
Habilitation Center, Dorchester		x
D. R. Hill & Byrnes (Spartanburg)		x
Lancaster & South H. S.		x
A. L. Corbitt & Ridge Hill (Aiken)		x
Carver (Spartanburg #7)		x
Columbia, Etc.		x
Butler, Etc.		x
Rosemary		x
Spearman		x
Byrd (Allendale)		x
Murray Voc. Center & MDT Skill Tr.		x
Emerald Jr. H.		x
Dentsville		x

On the assumption that most or all of these programs reach substantial numbers of people, the Advisory Council commends the Office of Vocational Education on the number of programs now available to the disadvantaged and handicapped people of the state.

Question 6: Does South Carolina presently have the capacity to provide high-quality programs for dropouts and potential dropouts, unemployed and under-employed youth and adults, and disadvantaged youth and adults. If not, what other than additional funds is needed to get the job done?

The Office of Vocational Education states:

> Vocational education in South Carolina has the capacity to assist the 93 school districts to provide adequate high-quality programs for dropouts, potential dropouts, unemployed and under-employed youth and adults along with disadvantaged and handicapped youth and adults; however, approximately 2 million dollars additional would be necessary to fully implement vocational programs requested by local school districts. In addition, approximately 19 million dollars will be needed for school districts to construct area vocational facilities from 1971-1975.
>
> We have a great need for additional trade and industrial education teachers and funds for upgrading present teachers over the next four to five years.

While it is recognized that more money would assist in providing needed programs, the Council believes that other measures might also help. 19 million dollars is a significant amount of tax money. Are there other alternatives to the problem of physical facilities? Has every possible measure been taken to prevent duplication of facilities and programs? If funds become available, is there an adequate supply of highly qualified instructional personnel for all teaching areas?

Recommendations:

1. State-wide planning should be effected to determine the number of qualified teachers required to provide programs for all youth and adults who need them.

2. A thorough study of the nature and problems of guidance should be made to determine needs in this critical area.

3. Long-range forecasting of the needs in administrative and supervisory areas should be accomplished, and where indicated, programs to prepare or upgrade personnel should be initiated.

Question 7: What is the process through which individuals throughout the state can influence the provision of new programs, services and activities as they become needed in the state?

The Vocational Education Amendments of 1968 greatly changed the process by which individuals could influence local programs. The local citizenry now have great potential for influencing programs offered in their communities.

Before the enactment of the Vocational Education Act of 1968, programs could be implemented or discontinued with little regard for preferences of local citizens. The local administrator could refer a citizen of the community to the State Office of Vocational Education with the comment that "the state supervisor said this was the way we have to do it." Under the present Act, decisions about all regular programs, services, and activities for regular vocational programs are locally made, restricted only by the standards of the State Board and the yearly allocation of funds to that school district.

Exceptions to the pattern of allocation by school districts exist in research, in exemplary programs and in some of the other services made possible by the Act. Another exception is the case of area vocational schools where the reimbursement of teacher salaries determines the programs to be offered during the first year.

The local demand for a particular vocational program can result in the shifting funds from an existing program to the new one for which support is evidenced. There is unfortunately no present way for a school district to continue present vocational programs while establishing a new, high-priority program without "robbing Peter to pay Paul."

Recommendations:

1. The state administration should publicize the fact that advisory groups should exist for each of the agencies providing vocational education and should encourage individual citizens to make themselves heard. Such influence on a group member can magnify his concern for a given field and result in desirable program improvements.

2. A limited amount of money should be reserved for establishing high-priority programs in each school district. Such money would encourage the creation of needed vocational programs but would be

feasible only if the school districts would be willing to accept the cost of these programs by the end of the second year. A portion of the cost could then be adjusted into that district's allocation.

3. More money should be made available to stimulate needed programs and services. Official State Board action may be needed to alter the pattern of using vocational funds as additional sources of money for the continuation of existing programs.

Question 8: What articulation and coordination exists between vocational education programs and post-secondary technical education programs in common geographic areas?

A common, often well-founded criticism of recent vocational and technical education in South Carolina has been the lack of articulation and coordination between the two. Each of these agencies has apparently been zealously guarding its own domain, and consequently there has been little cooperation and some duplication.

There is, however, some evidence that the situation is improving. In the past, many local vocational teachers seem not to have been aware of the programs being offered in nearby technical education centers; conversely, many of the technical education instructional personnel have shown little or no awareness of the vocational programs in their areas. The vocational education programs should take secondary students to a certain level of competence, and technical education should pick up these students at that level and build from there. In this way the programs could complement one another to achieve lower costs and increased training efficiency.

Several good examples of the type of coordination that can prevail at the state level include a regional manpower training center at Kingstree, and to a lesser degree, several other situations throughout the state.

In Columbia, the Technical Education Office and the Office of Vocational Education have entered into a cooperative agreement to underwrite the cost of a county-oriented manpower data-reporting system to be conducted by the Employment Security Commission. Initial results of this program should become available within the next year. Similarly, the two agencies have agreed to share in the financial support and use of a computer facility at the capitol complex. Each organization will supply similar types of data for use in the computerized system, and greater comparability should be the result.

In Kingstree, a number of state agencies including vocational and technical education are cooperating in a program to provide a comprehensive area manpower training center. Work on this project is continuing, and the center is expected to open in the fall of 1970.

Less dramatic but equally necessary is the development of coordination between technical centers and vocational education programs within geographic areas. For example, considerable rivalry often resulted when a technical education center established a machine shop technology program near a vocational machine shop program or an electronics program started in an area where electronics was already being offered. Extreme care should be taken to ascertain that such duplication of programs is actually needed before new ones are established. Technical education programs should be technical in nature. Auto mechanics is another area where the content of the programs, and therefore the facilities and equipment needed, frequently overlap.

It would appear to be in the interest of taxpayers that for new programs to be conducted under the aegis of Technical Education, arrangements should be made to use any available facilities of nearby vocational schools before approval is granted for construction of duplicate facilities. Such facilities constitute a substantial public investment and they are not always used efficiently. Conversely, technical education facilities not being maximally utilized should be made available for vocational programs.

In deference to the problem of coordination, several approaches are being tried. Local administrators have been placed on the boards of area Technical Centers, and in several cases vocational center directors or their instructors have met with TEC Center personnel to seek solutions to common problems. Such cooperative efforts can facilitate the change-over from vocational education to corresponding technical programs and generally improve relationships between the two agencies.

Recommendations:

1. Vocational personnel should acknowledge the existence of technical programs by including the results of an investigation of technical programs in local plans.

2. Local vocational and technical instructors should meet jointly several times a year to review curriculum content and discuss student problems or other appropriate topics.

3. Requests for additional space to house vocational or technical education programs should include a detailed analysis of any existing facilities which might serve both.

4. A coordinating committee to review and approve new vocational and technical education programs should be established. Regional committees representing both agencies might accomplish this task, or the responsibility might be delegated to a state organization outside vocational and technical education. Evaluating the need for new programs, determining the appropriate instructional levels, assessing available or required facilities, and judging the relative efficiency of new programs should be the chief functions of these committees.

5. The trend to include representatives from one agency on advisory committees of the other should be encouraged and expanded.

Question 9: What actions have been taken to improve student and parent attitudes toward work and post-secondary education?

The State Board of Education seems well aware that for many years the public secondary schools have oriented their programs to college

preparation. The plain fact, however, is that most students do not go to college. Last spring the Board took action to cause many schools to establish "pre-vocational" programs. Optimistically, these ninth grade courses will aid the students in their occupational choices, and should create new awareness toward the world of work.

Recommendations:

1. Careful attention should be given to expanding and improving prevocational programs.

2. Attention should be given to a plan for re-orienting the present secondary school guidance personnel in the state to the opportunities available to people without baccalaureate degrees.

3. Schools should legitimize occupational objectives by performing an employment placement function.

Question 10: What percentage of the 1964-65 ninth-grade class had completed some vocational education before dropping out or graduating in 1968? What percent of the 1966-67 ninth grade of the state had completed some vocational education before dropping out or graduating in Fiscal Year 1970? Is there a trend? Is this a significant trend?

According to information furnished by the Office of Vocational Education, about "twenty-five percent of the high school enrollment" is currently being exposed to vocational programs of one kind or another. When the "new computer analyzing system gets in full operation, we [the Office of Vocational Education] will have the [exact] percentage of vocational students in relation to other students.

Recommendations:

1. The Advisory Council is convinced that the presently available data are uninterpretable; consequently, implementation of the computer system would be most helpful.

2. An efficient method of collecting, handling and disseminating management information should be put into effect as soon as possible.

Question 11: To what extent are vocational and/or technical programs available to all those students who should be afforded this orientation to the world of work?

The Advisory Council found the available data insufficient for answering this question. Until the output of vocational programs equals the number of students who enter high school but do not go on to college, the only assumption that can be made is that a need exists.

Recommendation:

Dramatic increases in state and federal support for Vocational Education are needed for programs to be available to all in the public secondary school system.

DIGEST OF RECOMMENDATIONS

I. Federal and state financial support for vocational and technical education should be increased beyond the present level, with some changes needed in the method of distribution (Goal 2, Question 10).

A. The amount of federal and state funds available to local school districts must be known sufficiently early to permit planning and securing competent personnel. The present pattern of funding in retrospect negates much of the intent of the 1968 Act (Goal 2, Question 11; Goal 2, Question 12).

B. Additional funds for vocational programs are urgently needed (Goal 2, Question 12; Goal 3, Question 11).

C. The State Board of Education should use funds to a greater degree to stimulate needed vocational programs and services (Goal 3, Question 7).

D. Appropriations to local districts should be adjusted annually to reflect any increased efforts of local districts rather than being calculated on the static base of FY 1969 (Goal 3, Question 3).

E. State officials must assume the responsibility of seeing that each tax dollar is placed where it will make its greatest contribution. For example, low teacher-student ratios for technical education programs indicate unusually high instructional costs per pupil. The extent to which extenuating circumstances justify this should be determined. Comparative information should be obtained and carefully analyzed so that this responsibility of the State Board can be fulfilled (Goal 2, Question 5).

F. A reserve of state and/or federal funds should be utilized each year for justified expansion of vocational programs by local districts (Goal 2, Question 9).

G. More funds should be set aside for discretionary use for new or special vocational programs (Goal 2, Question 9).

H. A limited amount of funds should be reserved for establishing new, high-priority vocational programs in local districts. Such money would encourage the creation of needed vocational programs but would be available only to school districts willing to accept full financial responsibility for the programs at the end of the second year. This increased cost should be adjusted into the district's total allocation (Goal 3, Question 7).

I. Consideration should be given to increasing support to afternoon and evening programs (Goal 3, Question 3).

J. A system of priorities for the allocation of funds for equipment and supplies should be established for those instances where purchase of needed items creates a hardship on districts attempting to maintain a vocational program (Goal 2, Question 11).

II. The data in the State Plan should accurately represent conditions in the state (Goal 2, Question 5).

A. The Advisory Council is convinced that the presently available data on which the State Plan is based are uninterpretable. Consequently, an efficient method of collecting, handling, and disseminating management information should be effected at once, and the proposed computerized system should be rapidly installed. Through such changes the quality, scope, and comparability of data must be improved (Goal 1, Question 3; Goal 3, Question 10 and 11; Goal 2, Question 5).

B. Only when accurate information has been gathered and evaluation of state programs made, can realistic revision of program objectives and priorities be begun (Goal 1, Question 1).

C. The system should require that teachers and students be reported as full-time equivalents (on an unduplicated basis) (Goal 2, Question 5).

D. While the total number of secondary students served is of interest, other necessary management information would be obtained by conversion to an average class size adjusted to the full teaching day (Goal 2, Question 5).

E. Operative definitions for "continuing," "expanding," and "new" programs should be explicitly stated in the Plan to facilitate interpretation of yearly changes (Goal 1, Question 1).

F. Neither conclusions nor recommendations relating to the accomplishments of vocational education as related to projected labor needs within the state are possible due to gross inaccuracies in the available data. Regardless of projected labor demand figures, if the data of Table II, Part 3 of the State Plan have any validity, greater emphasis should be placed on health, trade and industrial, gainful home economics, office occupations, and distributive education (Goal 1, Question 5).

G. A study should be conducted to determine whether the apparent oversupply in technical occupations is a result of inaccurate data in the Plan, a result of inaccurate data in the projected labor demand, or an actual fact (Goal 1, Question 5).

H. Results of the Employment Security Commission project of manpower needs by counties should be made available to local school districts as rapidly as possible (Goal 3, Question 2).

III. The state administration should encourage and support advisory groups for each of the local agencies providing vocational education and encourage individual citizens to make their influence felt (Goal 3, Question 7).

IV. More comprehensive planning is needed at both state and local levels.

A. The format and content of the state plan needs to be thoroughly revised to make it a comprehensive and comprehensible document (Goal 1, Question 7).

B. State-wide objectives for Vocational and Technical Education should

be explicitly and concisely stated in the Plan (Goal 1, Question2).

C. A list of priorities needs to be included in the plan to provide direction for local school districts in planning vocational programs to meet state-wide as well as community and individual needs (Goal 1, Question 4).

D. As the 1968 Act clearly shifts much of the responsibility for program planning to local school districts, the list of objectives and priorities and any other pertinent information should be made available to local districts in time for local plans to be made accordingly. Such a schedule would increase the likelihood that local programs contribute to the achievement of state goals (Goal 1, Questions 1 and 2).

E. Increases in pre-vocational programs should be encouraged to assist more students in making wise vocational choices (Goal 2, Question 2; Goal 3, Question 9).

F. Circumstances apparently merit an increase in adult vocational programs, and a system of priorities should be established to govern the implementation of this goal (Goal 1, Question 3).

G. The state policy by which funds are distributed should be explicitly stated in the State Plan. Specifically, the formula for allocation of support to area vocational centers needs clarification. If support for these centers is calculated differently from that for other districts, this fact should be made clear. If not calculated differently, the method of allocation sould provide for protecting the state's investment in the area centers (Goal 2, Questions 4, 8 and 9).

H. Annual reports on the use of all discretionary funds should be provided to the State Board of Education. The reports should include program locations, descriptions, results and cost of programs. In addition, each exemplary or research project funded should be followed by an annual written description and evaluation. The public should have access to such reports (Goal 2, Questions 1 and 9).

I. Schools should legitimize occupational objectives by performing an employment placement function (Goal 3, Question 9).

J. Attention should be given to a plan for re-orienting the secondary school guidance personnel in the state to the relevancy and opportunities available to people without baccalaureate degrees (Goal 3, Question 9).

K. Public hearings on the State Plan should be conducted sufficiently in advance of the time the State Plan is submitted for approval for suggestions to be considered (Goal 1, Question 7).

L. There should be state-wide planning to determine the number of qualified teachers that will be needed at various times in the future (Goal 3, Question 6).

M. Long-range forecasting of the needs for administrative and supervisory personnel should indicate necessary programs to prepare or upgrade personnel (Goal 3, Question 6).

V. Cooperation, rather than competition, between all agencies within the state must be achieved.

A. The Advisory Council and the Office of Vocational Education should continue to work in the spirit of cooperation exhibited during the spring of 1970 (Goal 1, Question 7).

B. Specifically, a system for coordinating the activities of the State Board for Vocational Education and those of the Technical Education Committee must be developed (Goal 1, Question 2).

C. Local vocational and technical education instructors should hold combined meetings several times annually to review curriculum content and to discuss student problems or other appropriate topics (Goal 3, Question 8).

D. Vocational personnel should acknowledge the existence of technical programs by including the results of an investigation of technical programs in the local plans (Goal 3, Question 8).

E. Requests for additional space to house vocational or technical education programs should include a detailed analysis of any existing facilities which might serve both vocational and technical education (Goal 3, Question 8).

F. A coordinating committee to review and approve new vocational and technical education programs should be established. Regional committees representing both agencies might accomplish this task, or this responsibility might be delegated to a state organization outside vocational and technical education. Evaluating the urgency of need for new programs, determining the appropriate instructional levels, assessing available or required facilities, and judging the relative efficiency of new programs should be the chief functions of these committees (Goal 3, Question 8).

G. The trend to include representatives from one agency on advisory committees of the other should be encouraged and expanded (Goal 3, Question 8).

VI. Specific objectives for pre-service teacher education, and in-service education of teachers and supervisory personnel should be included in the State Plan to provide adequate preparation of supporting personnel and these programs should be implemented by the appropriate teacher education institutions in the state (Goal 1, Question 4).

A. A relevant in-service program should be established for supervisors of local vocational programs (Goal 2, Question 10).

B. An effort must be made to attract and to train and upgrade qualified teaching personnel and administrators for the vocational programs in the state (Goal 2, Question 12).

C. Opportunities for re-training and advanced training must be provided within the state (Goal 2, Question 12).

VT 017 628
VOCATIONAL AND TECHNICAL EDUCATION IN SOUTH CAROLINA: AN EVALUATION REPORT FOR THE FISCAL YEAR 1971.

SOUTH CAROLINA STATE ADVISORY COUNCIL ON VOCATIONAL EDUCATION, COLUMBIA.
OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C.
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DESCRIPTORS - ANNUAL REPORTS; *VOCATIONAL EDUCATION; *STATE PROGRAMS; *PROGRAM EVALUATION; *TECHNICAL EDUCATION; FINANCIAL NEEDS; PHYSICAL FACILITIES
IDENTIFIERS - *SOUTH CAROLINA; EDUCATIONAL AWARENESS
ABSTRACT - THIS EVALUATION REPORT CONSISTS OF A BRIEF LIST OF RECOMMENDATIONS FOLLOWED BY A DISCOURSE ON QUESTIONS WHICH RELATE TO MAJOR EVALUATION TOPICS. THE RECOMMENDATIONS CALL FOR: (1) MORE LOCAL, STATE, AND FEDERAL FINANCIAL SUPPORT FOR VOCATIONAL AND TECHNICAL EDUCATION, (2) MORE COOPERATION AND COORDINATION BETWEEN VOCATIONAL AND TECHNICAL EDUCATION, (3) GREATER UTILIZATION OF FACILITIES, AND (4) BETTER PROGRAMS FOR ADMINISTRATIVE PREPARATION. THE BODY OF THE REPORT ASSESSES THE STATE'S GOALS AND PRIORITIES, THE EFFECTIVENESS WITH WHICH PEOPLE AND THEIR NEEDS WERE SERVED, AND ACTIONS TAKEN ON THE 1970 RECOMMENDATIONS. TABLES ARE INCLUDED CONCERNING THE NUMBER OF VOCATIONAL AND TECHNICAL EDUCATION PROGRAMS AVAILABLE IN THE STATE. (KH)

VT 017 628

vocational and technical education in south carolina 1971

south carolina
advisory
council
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vocational
education

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vocational and technical education in south carolina

an evaluation report for the fiscal year 1971

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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south carolina advisory council
on vocational education

chairman: Mr. T. C. Kistler

executive director: Dr. Robert H. White

October 1971

INTRODUCTION

The first report of an evaluation of the State's programs of Vocational and Technical Education was prepared and presented to the State Board for Vocational Education one year ago. The Federal Act which established the Advisory Council, and in which certain functions of the Council are specified, prescribed an annual evaluation and evaluation report to be prepared by the Council.

In accordance with PL 90-576 this report on the evaluation of Vocational Education is respectrully submitted to the State Board of Education, which is the State Board for Vocational Education. This is the second evaluation report of the Advisory Council and is for the 1970-71 fiscal year. The first report encompassed the 1969-70 school year.

The report is also submitted to the State Committee for Technical Education. Due to the existence of the Technical Education System, South Carolina has a dual organizational approach to providing Vocational and Technical Education. There are commonalities between the two organizations, including common sources for operating funds and in some cases for students. The nature of the education provided in many instances is very similar. Because of the Advisory Council's responsibility to the people of the State, the intention of the Council is to focus on programs of both organizations. Consequently, some of the recommendations are directed to the State Committee for Technical Education.

This report consists of a brief list of recommendations followed by a discourse on questions which relate to three major evaluation topics. The recommendations reflect the consensus of the entire membership, but not necessarily the unanimous opinion of all members.

In preparation for the study from which this report emanated, the Ancillary Services Committee of the State Advisory Council engaged in a concentrated study of selected Ancillary Services in Vocational Education during the Spring of 1971. A brief report of that study is being produced and should be available from the office of the Advisory Council. The major points from the study of Ancillary Services are imbeded in this evaluation report.

Acknowledgements

The report which follows is the second annual evaluation report of the South Carolina Advisory Council on Vocational Education. Credit is due, however, to persons in the Office of Vocational Education and the Committee for Technical Education who assisted with the preparation of this report. In particular, the Advisory Council wishes to acknowledge the assistance provided by Dr. Cecil H. Johnson, Jr., Director of the Office of Vocational Education; Mr. O. Stanley Smith, Executive Director of Technical Education; and Dr. Jack

Mullins of the Technical Education staff.

For More Information

The Advisory Council is interested in assisting in any way possible to improve and expand the total state program of vocational and technical education. Individual concerns and viewpoints are solicited by the Advisory Council, and may be given by contacting the Executive Director or any Council member. The Council also provides opportunity at an annual open hearing type meeting for any individual or organization to express views, attitudes or concerns on any aspect of vocational and/or technical education. For more information on this report or any relevant matter, contact the Executive Director, Dr. Robert White, at P. O. Box 762, Clemson 29631, or by telephone at 654-1336.

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RECOMMENDATIONS

The State has made considerable strides in reaching for an adequate state program of vocational and technical education, but there still remains much to be done. In the year already underway, as in previous years, a real deterrent to "getting the job done" lies rooted in the age-old problem of inadequate fiscal resources. A real and pressing need remains to accomplish as much as possible within the framework of the existing funds, personnel and facilities. In this report of the evaluation, the Advisory Council is limiting its recommendations to a minimal few that are believed to be feasible and advisable.

The following recommendations will hopefully contribute to further improvement of the vocational and technical education programs within the State. The existing programs are good, but there is much need for expansion and always room for improvement. South Carolina is getting remarkable results from the money it has spent for vocational education. Primarily because of the level of support, however, not more than one-half of the quantitative needs are being served although recent trends are cause for confidence.

1. Vocational Education remains inadequately supported to provide the maximum potential benefits inherent in these programs.

a. An additional commitment by the State is needed in addition to the reordering of priorities at the State and local level which has taken place. (Recommendation I, B, 1970 report.)

b. Federal financial support for vocational and technical education should be increased beyond the present level. (Recommendation I, 1970 report.)

2. Additional direction and leadership must be provided to school districts regarding the goals and objectives of the State. A simplified, clearly given statement of goals, objectives and identified manpower needs should be provided to each school district.

3. There must be greater coordination and articulation of programs between vocational education and technical education.

a. Where there is duplication of programs between the technical education centers and vocational education, the local plan for vocational and/or technical education should contain a statement of justification for such courses.

b. Policy should be established by each State agency which would bring together, on a district or regional basis, Directors of Vocational Centers, Technical Education Directors, and other Directors of Vocational Education to discuss matters of mutual concern. There should also be policies and procedures which would bring together vocational and technical instructors of the same or related subjects in common geographic areas to

discuss matters of curriculum, student characteristics, need for programs, enrollments and other related matters. (Recommendation V, C, 1970 report.)

c. The Office of Vocational Education should annually furnish to the Central TEC Office a listing of local programs, student enrollments and other pertinent data with particular emphasis on the number of students in the terminal year of each program. The Technical Education Committee office would then be responsible for forwarding these to the TEC Centers.

4. There must be greater sharing of facilities, equipment, and instructional personnel between local institutions offering vocational education and the Technical Education institutions.

a. Action to this effect should be taken by each local school district, Area Vocational Center and each Technical Education facility. Specific local action taken toward this goal should be available upon inquiry by the appropriate State administrative unit, or upon inquiry by the State Advisory Council.

b. Before any additional construction for vocational or technical education facilities is done, the parties involved should consider the space available in present facilities. (Recommendation V, E, 1970 report.)

5. A joint study should be initiated during fiscal year 1972 to assess the need for upgrading or preparation of vocational and technical administrative leadership. This cooperative study should include vocational and technical education and any other related agencies to assess the need for, and feasible approaches to providing programs to prepare or upgrade administrative leadership.

6. The Office of Vocational Education should continue to report the results of each exemplary or research project or activity funded. A written evaluation and description should be required, and these reports desseminated or made available to all school districts. (Recommendation IV, H, 1970 report.)

7. The formula for calculating allocations to local districts should be revised to recognize and encourage any significant increase in local effort. (Recommendation I, D, 1970 report.) As a means of re-allocating priorities for some of the available funds, increased local effort and higher priority on vocational programs should be rewarded with a much greater proportional share of any State or Federal funds for Vocational Education made available in the future over the present funding level.

8. A minimum of two projects to explore greater utilization of vocational shops and facilities should be carried out by the end of 1971-1972 school year. Vocational facilities need to be utilized more than 6 hours a day, 180 days per year if additional students are to be accomodated without tre-

mendous additional capital outlay for construction. One project should explore the feasibility and costs of summer vocational programs, while one should concentrate on extending the school day through afternoon and/or evening hours. Careful evaluation of these programs will be needed with particular attention to comparative costs, procedures and methods that were successful or not successful, and any other pertinent detail. (Recommendation I, i, 1970 report.)

9. The required citizen advisory committees must be encouraged and utilized at all levels. The State administration for Vocational Education should vigorously support the use of advisory committees and provide moral support and supervisory assistance in this regard to local AVCs and school districts. Greater use should be made of the talent available through local citizen advisory committees, to the extent of requesting the committees to accomplish annual review of plans and programs. (Recommendation III, 1970 report.)

Some of the recommendations given above are general in nature or pertain to both Vocational Education and to Technical Education. Others are more specific in nature and therefore apply only to one or the other of these agencies. For simplicity, those items applying in whole or in part to each of the organizations are as follows:

Vocational Education: 2; 3a, b, and c; 4a and b; 5; 6; 7; 8; 9.

Technical Education: 3b and c; 4a and b; 5.

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EVALUATION

Topic I: An assessment of the State's goals and priorities as set forth in the State Plan.

How appropriate were the State's goals and priorities?

Of necessity, the data and statements concerning goals for vocational education in the State Plan were provided in the format specified in the guide provided to the States by the U. S. Office of Education. This format does not lend itself to accurate, precise expression of goals for vocational education in a manner which gives direction to local school districts.

The goals given in the State Plan for 1971 reflected an overall movement in a desirable direction when compared to goals for previous years. The State has, and still lacks considerably in offering sufficient vocational education to all of the secondary students who should be profiting from this learning experience. Lack of finances is frequently stated as a limiting factor and this usually is a reflection of the attitude of the general public. The goals expressed in the State Plan are apparently those which are deemed possible within the framework of existing resources.

Perhaps because of a paucity of accurate state-wide data on target population groups and partly because of the specified format, the goals given tend toward overgeneralization. For example, in all references to the need for or programs planned for handicapped persons, there is no distinction as to whether the term "handicapped" refers to physically or mentally handicapped. Also, the efforts of other agencies in serving the handicapped and disadvantaged persons are not adequately reflected. While the expressed goals are more closely keyed to state-wide manpower needs than before, no reference to under-employed adults is found.

An obvious weakness is the lack of data and goals for the post-secondary occupational education programs. While post-secondary is nominally administered by the State Committee for Technical Education, there are commonalities of problems and solutions, and an inevitable flow of students from vocational education into the TEC programs. There should be more explicit information on the TEC programs in the State Plan.

In the 1971 State Plan, it was difficult to discern the procedures which would be followed in achieving the objectives that were given. The objectives then, were concluded to be an expression of what was expected to happen, rather than statements of desirable goals.

During the course of the 1971 academic year noteworthy progress was made by the Office of Vocational Education in

setting forth more precise objectives for each of the subsequent five years. This project, which terminated with official State Board action late in fiscal year 1971, should give the State considerably more direction in the future. This is the first known instance of objectives being stated in quantifiable terms. The positive effect of this action is expected to be seen in the State Plan for 1972 and later years.

Topic II: An assessment of the effectiveness with which people and their needs were served.

A. *Were there valid data available on job opportunities and manpower needs for realistic planning purposes?*

Realistic projections and valid data on job opportunities and manpower needs have long been recognized as a weakness in planning vocational and manpower training programs. With the notable exception of the special programs established by Technical Education, it has been very difficult to accurately project sufficiently far into the future to enable accurate planning for recruitment, training, and placement of students to precisely meet the job needs. Prior to June of 1971, Technical Education had often obtained more exact data primarily because of close liaison with relocating industry and the new industry start-up programs. Until recently, Vocational Education had relied essentially on more general sources of data, such as that available from the Employment Security Commission (ESC) and on estimates provided by CAMPS plans.

During fiscal year 1971, the ESC Research Division undertook a cooperative project in which Vocational Education and Technical Education cooperated along with other agencies. This project resulted in a publication which provides projections of employment needs, state-wide, for a large number of occupations. The data given by this publication should assist considerably in assessing the need for various types of training programs. The task is far from complete, however. Some of the deficiencies inherent in this approach include that (1) the data is not localized for specific areas of the state, (2) certain occupations are not encompassed by the ESC data system and therefore could easily be overlooked and (3) there will be a very definite need to refine the system and update the data on a biennial or periodic basis. All of the officials responsible for this special project and the resulting publication are complimented for providing data which places this state among the leaders in obtaining accurate information on job opportunities and manpower needs.

B. *To what extent is there coordination and articulation of training programs among secondary, post-secondary, and adult education agencies?*

During the past few years coordination and articulation of training programs between post-secondary and secondary educational programs has been the topic of much discussion. Generally, however, it was found that more coordination and articulation was done at the discussion level and by state agencies rather than among educational personnel at the local district level. Admittedly, there were some encouraging

exceptions to this. Given as a highlight of the type of coordination which can be carried out was the dedication of the Williamsburg Manpower Training Center located at Kingstree. In this project one finds a model of state agency cooperation in a manpower training center which involves Vocational Education, Technical Education, Employment Security Commission, Vocational Rehabilitation and some other agencies. This, however, was an exception and may not be the pattern to be followed to meet the specific needs in more than a few communities.

In last year's evaluation the Advisory Council recommended that specific steps should be taken to at least assure that vocational education personnel would attempt to coordinate programs with post-secondary education centers. Two specific major recommendations were given by the Advisory Council by which it was thought that local coordination and articulation would be improved. To the time of this writing, there was no knowledge that either of these recommendations were followed in any of the school districts.

C. To what extent are employer needs being considered in program planning?

The procedures established within the State for program planning place primary responsibility for considering employer needs with the local school district. There are several ways of considering employer needs; one being to consider the number of personnel needed in various occupations, another being to consider the specific skills and abilities needed within an occupation.

The available evidence is that in most cases the needs of employers are being considered. The rapid growth in Trade and Industrial type programs bears strong evidence that the types of programs needed by larger firms are being incorporated into the planning process and reflects the priority on these types of programs. Each of the Area Vocational Centers or school districts with vocational programs have some type of advisory committee at least for planning purposes, which should provide an avenue for providing an input of employer needs. The lack of rapid growth in new types of vocational programs, in distributive and service occupations, and an unclear course of direction in health occupations raises the question of whether the needs of smaller employers are being properly considered. Too, there has not been a significant increase in the number of diversified or cooperative type occupational programs which may reflect that the needs of the entire community are not yet truly being filled.

No precise data are available on the extent to which the current skills and abilities needed are being reflected in specific vocational courses. This again is a matter of

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local procedure and local responsibility. The consensus is that in all probability this is being adequately accomplished. The perspective and contacts of the Advisory Council, reinforced by comments from the Council's open meeting tend to support this view. With the primary responsibility thrust on local vocational education personnel, it appears highly likely that the available programs sufficiently meet the needs of employers, otherwise there would not be such strong evidence of employer support as has been demonstrated to the Council.

D. To what extent are institutions providing assistance to graduates in job placement?

This is a question of prime importance, since assistance to graduates is expected to provide benefits in several ways. Primarily, there is the assurance that graduates are able to fit into the labor market and immediately put to use the skills and abilities learned in the vocational program. The institutions and the students should also profit from the additional first-hand knowledge of occupations and the business community that the guidance person(s) will necessarily obtain. Another benefit should be a means of immediate feedback to vocational instructors concerning the skills, abilities and knowledges needed by students as occupations gradually change. Greater rapport between the school and the business community should develop as the schools carry out this function of providing assistance in job placement.

As institutions accept and turn to performing this function, it probably will be found that extended employment contracts will be necessary for the person(s) assigned this responsibility. It will also be necessary for the institutions to inform employers, students and the public that this service will be provided for them.

Wide variation apparently exists in the manner and extent to which institutions provide assistance in job placement to vocational program graduates. Some individual vocational teachers have long recognized the importance of this function, have and still work deliberately at this task. Others have considered this to be an additional responsibility not adequately backed by compensation and so have provided either minimal or no placement services to graduates.

For any of several reasons or a combination of them, the Technical Education Institutions (post-secondary) have apparently been more forceful in providing job placement assistance than has Vocational Education. Indications are that Vocational Education is slowly moving in this direction, but that due to the urgency and need for full-time job placement assistance to students, greater impetus should be provided from the State level. Unless there is additional

stimulus such as additional reimbursement to the school districts for year-round work to carry this out, school districts may well give this function low priority and thus be slow in moving toward an entirely satisfactory program of job placement, student follow-up, and feedback to vocational programs.

E. To what extent are vocational education opportunities available to (1) secondary students, (2) post-secondary students, and (3) adults?

Secondary

Despite the considerable progress in program expansion that has been made in recent years, vocational education still is far from being accessible to all secondary school students. Near the close of the 1970-1971 school year, the State Board adopted a five-year paln "To Provide adequate Occupational Training Opportunities for Students Enrolled in the South Carolina Public Schools." In this plan it was stated that the present (1971 school year) participation level is approximately 30%. This presumably is the percentage of students who enter the ninth grade who complete some form of pre-vocational or vocational education before leaving school. The goal for five years hence was set at 60%, a level that still will not reach all who could benefit, and especially so since this figure includes pre-vocational enrollments.

Due to individual differences and the strong implications for one's life style inherent in vocational education, a critical factor in making vocational education available goes beyond simply matching the number of vocational training programs with the manpower needs in the State. If the State is to achieve anywhere near a realistic participation rate in vocational education, each student must have available the choice of a number of different types of programs.

The historical pattern in vocational education has been that students have often had not a choice of vocational fields to study, but only the choice of whether or not to enroll. The typical precedent has been for a school to offer vocational agriculture and home economics. Each of these programs is very typically oriented by gender, so that each student has been compelled to enter (or reject) the vocational program relating to his (or her) sex.

Five years ago the State embarked on a construction program to establish a system of Area Vocational Centers (AVC). According to the Office of Vocational Education

> Presently there are 24 centers in operation with five additional centers either under construction or on the drawing board. An additional 18 centers are needed to complete the network that was originally planned.

With the AVCs in operation to this extent, it was deemed advisable to assess the effect these centers have had on making more options available to students.

Preliminary data for the Superintendent's Report for the 1970-1971 school year provides a 10 day enrollment of 250,416 students in high school. During this same period there were 31 AVCs or comprehensive high schools which served 99 high schools containing a total reported enrollment of 80,700. (See Table I.) Comprehensive high schools meet similar criteria as the AVCs in that they provide five or more vocational programs. Based on these data only one out of three high school students really have a choice of vocational programs available, and in practice the limited enrollment capabilities of the existing AVCs further depress this figure.

The remaining two-thirds of all the students have four or less vocational programs from which to choose, which is usually considerably less than four. Although all school districts receive some Federal and State funds for vocational education, too many of the programs are very minimal in nature, offering a large part of the students a choice of one or no vocational program.

TABLE I

Number of Vocational Programs Available
to Secondary Public School Students

	Number	Percent
Students who have access to five or more programs	80,700	32.2
Students who have access to four or less programs	169,716	67.8
Total	250,416	100.

Post-Secondary

The availability of post-secondary vocational education opportunities was studied by reviewing the programs conducted under the aegis of Technical Education. According to the criteria for establishment of the Technical Education Centers, a reasonable commuting radius was given as 30 miles. Less than ten percent of the population now reside more than 30 miles from an existing TEC Center.

TABLE II

Programs Offered in Technical Education Facilities

	Number		
	Minimum	Maximum	Mean
Associate Degree of Two-Year Programs			
13 TEC Centers	3	20	9.1
4 Regional Schools*	2	3	2.5
Combined	2	20	7.5
Diploma or Nine to 18 Month Programs			
13 TEC Centers	4	17	9.3
4 Regional Schools*	11	16	14.2
Combined	4	17	10.5
BOTH			
13 TEC Centers	8	29	14.1
4 Regional Schools*	14	18	16.8
Combined	8	29	18.0

* Includes Williamsburg Manpower Training Center

The main programs offered by TEC are the Associate Degree and the Diploma programs, although there are numerous other courses and services. There are thirteen operational centers, with three additional Regional Centers, and other operations such as the new facility at Kingstree and others. For the purpose of answering the question here, the reported available Associate degree programs and the two year programs at the Regional centers were assumed to be comparable. Similarly, the Diploma programs and nine month or longer programs at the Regional centers were grouped together.

According to the data in Table II there is an average of 18 programs available to students in the 17 Technical Education Centers and Regional Schools. The smallest number of programs given is eight, with a range of up to 29 programs available at one Center. There is an average of 7.5 Associate Degree programs offered and an average of 10.5 programs of less duration in each of the seventeen Centers. This large number of programs should make an appropriate post-secondary vocational education program readily available to most persons.

Adult

No data were obtained on the adult education opportunities. Many different programs are offered to adults under the umbrella of vocational education and the public school system. These vary widely as to course content, objectives and length of program. Presumably many of the younger adults have the availability of most of the programs offered by Technical Education, and in addition most TEC Centers offer short term adult education evening courses for adults on almost any topic where there is sufficient interest.

F. What is the extent and adequacy of pre-service and in-service training programs for vocational and technical education professional teaching and administrative personnel?

A recent study conducted by the Advisory Council probed the adequacy of services and needs in this area. Generally, the study found that those services which are supported at least partially with resources derived from Federal and State funds are providing reasonable services for vocational teaching personnel. In this study, it was pointed out that there were a few areas in which teacher education services are insufficient or non-existent. In addition, it was noted that there is presently very little effort toward preparation or upgrading of post-secondary instructional personnel. Another area of deficiency that may become apparent within the immediate future is caused by the absence of any graduate programs at the terminal degree level for study in vocational or technical program administration.

To this date, the only significant services in vocational or technical teacher preparation have been in those service areas supported at least partly by vocational education. There is, however, reason to conclude that much value could be derived if the existing vocational teacher education departments would coordinate their areas of responsibility to include preservice and inservice training for technical personnel. While additional financial commitment would be required, the possible resulting efficiencies indicate this route to providing increased services should be the most desirable approach.

The lack of terminal degree preparation programs for administrators of vocational and technical education programs is obvious. The conclusion of need is derived from the available data which depicts 37 Area Vocational Centers in operation, under construction or funded as of July 1, 1971; thirteen additional proposed AVCs; 12 Technical Education Centers in operation, and supportive State staffs in Technical Education and Vocational Education.

In addition, directors of vocational programs have been or are being designated for virtually all of the State's local school districts as a result of the relatively new planning and reimbursement procedures. For all of these personnel, and there often are several administrative persons in a given Center, there should be available additional opportunities for graduate study in the complex business of sagely administering vocational or technical education programs. It is indeed unfortunate that for a promising young educational leader to study this critical topic, the only recourse presently available is to leave the state for an extended period of time. The taxpayers, parents and youth of South Carolina deserve the best "shake" they can get. Strengthening leadership is one of the most effective and economical means of achieving this that can possibly exist.

As was found in the study of Ancillary Services conducted by the Advisory Council, teacher preparation and inservice opportunities should be strengthened in some areas. The most noticeable areas which should be strengthened are: trade and industrial inservice, distributive and service occupations, business and office occupations, and health occupations.

G. To what extent does the allocation formula for Vocational Education contribute to increased local effort and thus to program expansion?

According to the Declaration of Purpose of the Vocational Education Amendments of 1968, the purpose of the Act was "to authorize Federal grants to States to assist them to maintain, extend, and improve existing programs of vocational education...." The present method of allocation of Federal and State funds was developed within the framework of the existing Act and the appropriate U.S.O.E. regulations, and meets the provisions of the Act. The formula takes into account the prescribed criteria of the vocational needs of the people, the school districts' relative ability to pay for vocational programs, and the excess cost of programs. These are the basic criteria given in Sec. 123 (a) (6) (A,B,C, and D) of the Act.

While this is inadvertent, the net effect of the formula being used appears to be one of discouraging additional local effort rather than encouraging program expansion through local effort. The base year for computing the amount of funds available to a local school district is given as 1969. This is a fixed variable. The other variables involved are not directly influenced by the local district vocational or other educational planners, and thus the district has no opportunity to positively influence the proportion of State and Federal funds for which the school district is eligible. The other variables, given in Tables I through V, and paragraph 3.27-1 of the State plan, have a minimal effect on a district's allocation. Also according to 3.24, Part I of the State plan, "Any reduction exceeding five percent in combined State and local effort by a local educational agency for any fiscal year will disqualify that agency for Federal funding support." The only exceptions are "unusually large expenditures for long-range purposes such as acquisition of equipment of the construction or expansion of area vocational school facilities." (para. 3.24)

School administrators are quick to sense that if they may be penalized in subsequent years for providing additional local funds for vocational programs, and that they cannot positively increase their district's proportion of the available Federal and State funds, then the proper managerial logic is to not allocate any more local funds than in previous years. The net effect is one of discouragement to program expansion rather than encouragement as stated in the law.

There is one alternative available, and an alternative followed by sage administrators who are ever mindful of the need for additional funds to carry out vocational programs. This is via the route of construction of an Area Vocational

Center. Under the State Plan and the policies of the State Board, funds are allocated for a portion of the construction costs and for equipping area vocational centers. The operating costs during the first year of operation are supported at a pre-determined percentage rate. These costs include salaries, travel, and supplies for the vocational center instructional programs as well as the administrative costs. Under this arrangement the Division of Vocational Education becomes a co-equal partner with the school district in determining the programs to be offered. Following the first year of operation, the 1969 base year local effort is increased by the amount expended in the first complete year of area vocational center operation, so that thereafter the school district is again on a maintenance level of Federal and State support, and again subject to penalty if the local effort for vocational education declines more than five percent. On a one-time basis, however, the school district will have enlarged the district's total vocational program.

Some type of compensating factor is needed that will reward a school district for providing additional local effort. Otherwise, conceivably, in 1980 a school district's programs will still be keyed to what was done in the base year, augmented only to the extent of additional area vocational center programs. Some formula or procedure must be developed so that if a school district makes a greater effort there will be a resulting increase in the Federal and State contribution.

H. What efforts are being made toward increasing occupational awareness and orientation at (1) the early secondary school level, and (2) at the middle or elementary school level?

Fiscal year 1970 marked progress in several areas dealing with increasing occupational awareness of secondary school youth. The action of the State Board in establishing a minimal requirement for an industrial arts or a pre-vocational education program for each school is an encouraging note. The Office of Vocational Education in cooperation with the State Supervisor for Guidance conducted several activities designed to confront this problem. Considerable progress was made in developing an effective state-wide, locally oriented program of occupational information under the VIEW program. Each of these activities were steps in the right direction.

During the year under review, the State Board modified a previous requirement of industrial arts so that in the future each secondary school would be required to offer at least one program of industrial arts or pre-vocational education. Accordingly there is expected to be a rapid increase in the number of pre-vocational programs and students

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in these programs. In action taken to support this requirement and in expectation of strong demand from local school districts, the Office of Vocational Education fostered development of a curriculum guide for pre-vocational education which will be available to all school districts by the fall term of academic year 1971-1972. In addition, a series of five workshops were scheduled to acquaint vocational teachers with the curriculum guide and with the needs of students enrolled in these programs.

An approach to providing up-dated localized, relevant occupational information to school districts on aperture cards was initiated during the year, under the acronym of VIEW, for Vital Information for Education and Work. Considerable progress was made in developing this system which promises to provide all secondary schools, and any other schools desiring this information, with occupational data in a convenient and economical package. Recognizing that lack of information has previously been a bottleneck in providing sound information to students, the Research Coordinating Unit pioneered the system which provided aperture cards at very low cost, in a format which is compatible with COSATI standard microfiche and can thus be used on existing readers and reader-printers. With the State divided into ten geographic regions, it was believed the information would be sufficiently localized as to be meaningful for the students. Initial decks of cards were developed for some of the ten regions during the year. It is anticipated that this will provide considerable assistance and a strong stimulus to re-orienting previously college oriented guidance personnel.

Commendable effort was made during the year under review to orient guidance personnel with the student's needs for vocational education. A series of workshops were conducted throughout the State whereby guidance personnel had the opportunity to critically examine the need for vocational education in their communities and the student's needs for this type of preparation. Additional activities are planned for the 1971-1972 school year which should provide additional progress in this direction.

Much remains to be accomplished. Concerted efforts will be needed before school personnel become fully aware of the importance of vocational education for the large majority of students who will never receive college degrees. An occupational focus should be introduced at the elementary school level and continued through middle school, junior high and high school. More and varied vocational programs must be made available and the prevocational programs must be expanded until virtually all of the students are able to benefit from this or some other type of occupational orientation program designed to accomplish these objectives.

Topic III: Appraisal of the extent to which Advisory Council recommendations have received due consideration.

A. To whom were the recommendations made?

The Evaluation Report of the Advisory Council for 1970 was formally presented to the State Board of Education, which is the State Board for Vocational Education, at the regular September meeting on September 11, 1970. Sufficient copies of the Evaluation Report were supplied to the late Wade Martin, former Executive Director of the State Committee for Technical Education, and to Dr. Cecil Johnson, Director of the Office of Vocational Education, State Department of Education, that distribution could be made to appropriate members of their staffs. In addition, copies of the full evaluation report were mailed to all of the Area Vocational Centers, Local Superintendents of Education, and to the Technical Education Centers in the State.

B. What actions have been taken, and to what extent have these actions fulfilled the intent of the recommendations?

Progress has been made in some of the areas in which recommendations were made, while conditions appear unchanged in others. No immediate positive effect has been seen in the area of Federal funding, State funding, manner of allocation of funds to school districts, or other matters pertaining to financial procedures. (Recommendation Topic I, 1970.) The available data and use of the data is improving, while considerable progress remains to be accomplished. Little or no additional emphasis is seen in the support or encouragement of district and local advisory groups. In fact, this attitude is manifested at the State level in that other than the required State plan involvement, the Office of Vocational Education has not asked the Council for any input to major policy changes. In contrast, Technical Education has assumed this type of initiative. In the area of planning (evaluation Topic IV, 1970) there have been several changes which can be related to some of the recommendations. Also, there have been noticeable improvements in the degree or cooperation (evaluation Topic V, 1970) between agencies. This shows promise of continuing to improve in the future.

A more detailed report in reference to this question was requested from the Office of Vocational Education. This information is given as follows:

> "The document Vocational Education in South Carolina, An Evaluation Report for Fiscal Year 1970 by the South Carolina Advisory Council on Vocational Education is a publication consisting of 57 separate, but often repetitive, recommendations. In general, these recommendations apply to the following six

topics:

1. Objectives for Vocational Education
2. Vocational Education data
3. Distribution of funds
4. Public hearings
5. Personnel
6. Cooperation between agencies involved in vocational-technical education

Rather than attempt to respond to each of the 57 recommendations, the Office of Vocational Education elected to comment on the six general areas. These comments are as follows.

1. Objectives for Vocational Education

In essence the Advisory Council report states that objectives and priorities are not explicitly stated in the State Plan. The data in Table I in Part II of the State Plan indicate that both current and projected employment demands are greatest in the Trades and Industry, Office Occupations, Gainful Home Economics, Distribution and Marketing, and Health Occupations areas. In addition, in the section Vocational Education Needs in Part II of the State Plan the following statement indicates program priority -- 'Occupational information data indicate that major expansion is needed in the areas of Distributive Education, Health Occupations, Office Occupations, and Trades and Industrial Education if vocational education is to provide occupational training related to existing or expected job opportunities in the state.'

2. Vocational Education Data

The report is very critical of enrollments, number of courses, and employment opportunity data used in state plan development. The Office of Vocational Education conceded this point during the development of the state plan and had implemented reporting procedures designed to provide accurate data on numbers of programs and student enrollment. Employment opportunity data used was developed by the Employment Security Commission and represented the 'best' available data at the time. A recent contract with Employment Security Commission by the Office of Vocational Education and other agencies involved in manpower development has resulted in more reliable data.

3. Distribution of Funds

The report pointed out that procedures used in the distribution of funds were not clearly identifiable in the State Plan. Particular reference was made to identification of the base

year used in determining basic allocations and the method used to fund new area vocational education centers. These procedures have been spelled out in the new State Plan. In addition, reference was made toward rewarding school districts which made an effort to upgrade local vocational plans by increasing the amounts of local funds expended. The Office of Vocational Education agrees with this recommendation, but feels that such a step cannot be implemented at the present time because, with limited funds, such a move would involve lowering present allocations to some districts to increase allocations to other districts.

4. Public Hearings

The report pointed out that public hearings on state plan development were held late in the year and should be held earlier. The Office of Vocational Education agrees with this recommendation and will hold public hearings earlier.

5. Personnel

The report suggests that pre-service and in-service education programs be developed to supply both teaching and administrative personnel with opportunities to improve their capabilities or to master new areas of vocational education. In addition, the report recommends that additional teachers must be attracted into the vocational fields. The Office of Vocational Education agrees and has implemented programs to begin to provide these opportunities.

6. Cooperation Between Agencies

The Office of Vocational Education agrees that all agencies must cooperate if the needs of the state are to be met. Progress has been made in this area, both at the state and local level, and will continue."

Report presented by Dr. Cecil H. Johnson, Jr., Director of the Office of Vocational Education, at a special meeting of the South Carolina Advisory Council on Vocational Education, September 2, 1971, Columbia, S. C.

C. What factors influenced the success or failure of implementation of the recommendations?

Many factors undoubtedly were involved in the extent to which individual recommendations were given consideration. Some of the recommendations may have been too general in nature, while others could not be implemented due to the lack of additional financial resources. Although there must have been additional factors, these are not identified nor is it known to what extent these had a part in the success or failure of implementation of the recommendations. It is usually impossible to isolate causative incidents for actions taken during the administration of a complex state-wide program of any type in a democratic society.

D. What follow-through is being maintained by the Advisory Council?

Through the 1970-1971 year the Advisory Council left the responsibility for implementation of any procedures resulting from the 1970 evaluation with the Office of Vocational Education and the staff of the State Committee for Technical Education. Being mindful of the work-load and the concern for the people of the State that is shared by State educational leaders, it was thought this approach would be the most practical course to follow. In retrospect, it appears that in some instances the recommendations of the Council may have become overshadowed with concern for more pressing problems. It is noteworthy that not a single comment or annotation was attached to the 1970 evaluation prior to the time it was submitted to the designated National officials.

The Advisory Council would appreciate the courtesy of reactions to the recommendations in this report at intervals during the year. It will be noted that some of the recommendations relate to Vocational Education, some to Technical Education and others are either general in nature or apply to both agencies. Consequently the Council would appreciate periodic feed-back during the year from Technical Education and Vocational Education as to action taken or consideration given to the recommendations in this report.

It is hoped and expected that amiable cooperation will continue to denote the relationship between the Advisory Council and Vocational Education and between the Advisory Council and Technical Education. Throughout the year as during 1970-71, the Advisory Council will be pleased to assist in any way possible with developments in Vocational or Technical Education.

DUTIES OF THE COUNCIL

The Advisory Council on Vocational Education was originally established in 1969 to fulfill the requirement for a State Advisory Council as given in Public Law 90-576. The members were appointed by former Governor Robert E. McNair to be representative of various population or interest groups as specified in the Act. In 1971, Governor John C. West re-appointed many of the original members of the Council, and strengthened the membership through the appointment of additional members. At this writing the Advisory Council consisted of fifteen persons representing various population and interest groups, who were carefully selected as outstanding leaders in their respective professional positions.

The primary function of the State Advisory Council is to serve a catalytic role in working for the improvement of vocational and technical education. The Act under which the Council operates states that the Council shall:

"(B) advise the State board on the development of any policy matters arising in the administration of the State plan...including the preparation of long-range and annual program plans...."

"(C) evaluate vocational education programs, services, and activities assisted under this title [Vocational Education Amendments of 1968], and publish and distribute the results thereof; and"

"(D) prepare and submit through the State board to the Commissioner and to the National [Advisory] Council an annual evaluation report, accompanied by such additional comments of the State board as the State board deems appropriate,..."

The previously mentioned catalytic role is highly consistent with these duties when the dual administrative nature of vocational and technical education in South Carolina is considered. The Council is very concerned by the exigent conditions precipitated by limited finances which require the utmost of efficiency and effectiveness in educational program administration. Realizing that the key to success of educational programs rests with the attitudes and capabilities of the professional education personnel, the Council is anxious to further achieve a cooperative and harmonious climate throughout the State. Close coordination and participation with Vocational and Technical Education leadership should be highly beneficial in achieving success in this area.

MEMBERS OF THE ADVISORY COUNCIL

There are fifteen members of the South Carolina Advisory Council on Vocational Education, who give freely of their time for this activity. These persons represent a variety of interests, population groups, and geographic areas of the State. The members, the particular interest or population group each person represents, and their home towns or cities are given below.

T. C. Kistler, Chairman Darlington	...representative of school boards
Floyd Johnson, Vice Chairman York	...having special knowledge, experience or qualifications with respect to vocational education
Dr. James B. Berry Marion	...special educational needs of physically or mentally handicapped
Robert E. (Jack) David Columbia	...representing the Executive Branch of State Government
Billie S. Fleming Manning	...representative of the public and knowledgeable about the disadvantaged
B. Frank Godfrey Columbia	...representative of manpower and vocational education agencies and the CAMPS Plan
Robert A. Hariey Spartanburg	... representing State industrial and economic development agencies
T. A. Jackson Lancaster	...familiar with the administration of State and local vocational education programs
L. Currie McArthur Sumter	...representative of local educational agencies
H. E. McCracken Beaufort	...representing school systems with large concentrations of academically, socially, economically, and culturally disadvantaged students
W. L. McDuffie Denmark	...familiar with programs of technical and vocational education
Edgar L. McGowan Columbia	...familiar with the vocational needs and problems of management and labor in the State
Y. W. Scarborough Charleston	...representative of community and junior colleges and other institutions

Henry L. Sneed, Jr. Florence	...representative of local educational agencies
Isaac W. Williams Columbia	...representative of the general public and knowledgeable about the disadvantaged

VT 017 673
BLUEPRINT FOR COMMUNITY ACTION TO IMPROVE THE PROCESS OF YOUTH'S ENTRY INTO CLEVELAND'S WORK WORLD.

FEDERATION FOR COMMUNITY PLANNING, CLEVELAND, OHIO. THE MANPOWER PLANNING AND DEVELOPMENT COMMISSION.
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MANPOWER PLANNING AND DEVELOPMENT, COMMISSION
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PUB DATE - MAR72 159P.

DESCRIPTORS - *MANPOWER DEVELOPMENT; *COMMUNITY ACTION; *GUIDELINES; YOUTH EMPLOYMENT; MANPOWER NEEDS; *ENTRY WORKERS
IDENTIFIERS - *CLEVELAND

ABSTRACT - THIS BOOKLET WAS DEVELOPED BY THE MANPOWER PLANNING AND DEVELOPMENT COMMISSION AS A GUIDELINE FOR HELPING THE COMMUNITY FOCUS ITS RESOURCES IN DEVELOPING A SYSTEM TO FACILITATE A SMOOTH ENTRY INTO JOBS FOR YOUNG JOB SEEKERS IN CLEVELAND. CONTENTS OF THE BOOKLET INCLUDE THE FOLLOWING AREAS OF DESCRIPTION AND ANALYSIS: (1) A DESCRIPTION OF A THEORETICAL APPROACH TO THE PROBLEM (2) A DESCRIPTION OF ELEMENTS IMPINGING ON THE LABOR FORCE ENTRY PROCESS, (3) A PROJECTION OF PROSPECTS FOR LABOR FORCE ENTRY DURING THE 70'S, (4) RECOMMENDATIONS FOR THE EDUCATIONAL SYSTEM, THE EMPLOYING SYSTEM, AND JOB DEVELOPMENT SYSTEM, AND (5) RECOMMENDATIONS FOR SUGGESTED AREAS OF RESEARCH. (DL)

VT 017 673

BLUEPRINT

for

COMMUNITY ACTION TO IMPROVE THE PROCESS OF YOUTHS' ENTRY INTO CLEVELAND'S WORK WORLD

THE MANPOWER PLANNING AND DEVELOPMENT COMMISSION

of

The Federation for Community Planning

1972

Complimentary Copy

U.S. DEPARTMENT OF LABOR
OFFICE OF THE ASSISTANT SECRETARY
WASHINGTON

Manpower Planning
& Development Commission
RECEIVED JUN 23 1972

JUN 20 1972

Mrs. Everett H. Randall
Director, Manpower Planning
and Development Commission
Federation for Community Planning
1001 Huron Road
Cleveland, Ohio 44115

Dear Mrs. Randall:

On behalf of Secretary Hodgson I am writing to thank you for sending along a copy of Blueprint for Community Action and to offer my personal congratulations to the Manpower Planning and Development Commission for performing outstanding community service through development and publication of the report.

We in the Office of Policy Development have also been studying the problems and possible solutions in the area of school-to-work transition. We agree with the Commission's analysis that improvement requires efforts on the part of the three institutions that are involved with youth and labor market entry: schools, manpower agencies and the employing system, and that there is need for improvement and coordination of services.

Our judgment is that local commitment is required before changes will take place and that the kind of guideline your group has developed is an essential first step in mobilizing such commitment.

We would be interested in hearing about the kind of response the Blueprint elicits and hope you will be back in touch with us after there has been time to gauge the reaction of the groups whose cooperation is necessary for success.

Sincerely,

Michael H. Moskow
Assistant Secretary for Policy,
Evaluation and Research

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
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BLUEPRINT

for

COMMUNITY ACTION

TO IMPROVE THE PROCESS OF YOUTHS' ENTRY

INTO CLEVELAND'S WORK WORLD

THE MANPOWER PLANNING AND DEVELOPMENT COMMISSION

of

The Federation for Community Planning

Published March, 1972

$1.00 per Copy

This BLUEPRINT has been developed by the Manpower Planning and Development Commission as a guideline for helping the community marshall and focus its efforts, enthusiasms and resources toward the development of a coordinated, efficient system for facilitating the entry of our young job seekers into the Cleveland work world.

The BLUEPRINT is the product of sixty-nine different individuals - concerned community leaders and knowledgeable professionals from education, industry, unions, guidance, job placement organizations, social agencies and government. During seven months of frequent conferences and exchanges of ideas, intensive investigation of local resources and needs, and extensive exploration of the literature, these men and women gave liberally of their expertise and time to hammer out together what they believe is a doable plan of practical strategies and immediate actions within the community's systems and institutions for smoothing the transition experience from school to work.

If the BLUEPRINT recommendations are implemented by responsible community organizations and individuals, the Commission is convinced that the opportunities of our youth for meaningful participation as productive workers in the Cleveland area work world will be significantly enhanced. The joblessness of our youth is a waste of human resources, costly not only to the individual youth but to the entire community.

This BLUEPRINT, therefore, is a call and guideline for action by the community to bring about changes to meet identified needs. To this challenge the Manpower Planning and Development Commission pledges its full support and resources.

ACKNOWLEDGMENTS

The Manpower Planning and Development Commission expresses its sincere appreciation and gratitude to:

The MPDC Task Force members who so generously gave of their time, knowledge, and experience during the lengthy process of formulating the BLUEPRINT. (See Task Force Roster, Addendum A.)

The consultants to the Task Force who, through their suggestions and insights, provided valuable assistance in determining an approach to the problems of work world entry and major areas for Task Force concern. (See list of Consultants, Addendum B.)

The directors of youth placement organizations and their staff who administered the questionnaire to young rejected job applicants. Their assistance on this project added a needed dimension to an understanding of the work world entry problems of Cleveland area youth. (See list of participating agencies and organizations, Addendum B.)

The individuals who reacted to the Commission's original work paper on Labor Force Entry Patterns. Their evaluations and specialized knowledge about the local problem enabled the Task Force to identify and describe more specifically the local patterns of the labor force entry process. (See list of Information Resources, Addendum C.)

We sincerely hope that the generous efforts of these many individuals will be rewarded by a concerted community response toward reducing in the Cleveland area work world entry problems of youth.

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THE MANPOWER PLANNING AND DEVELOPMENT COMMISSION

MPDC

The Manpower Planning and Development Commission provides a central resource and mechanism for bringing together the thinking of the many elements of the Greater Cleveland community--industry, education, government, labor, welfare, minority, civic and neighborhood groups--on broad issue planning and promotion of manpower-related policies and services that represent the best for each interest and the community.

The Commission represents a unique citizen voice in the manpower field, in that it is not engaged in direct program operations nor is it an advocate of a special interest group.

MPDC's concern is the broad spectrum of the local labor force: the unemployed, the employed (the best utilization of their potential), and future workers (those not yet in the labor force, as youth in schools and colleges). Its interests extend from preparation for entry into and productive meaningful participation in the work world to preparation for retirement from the active work force.

Major Objectives of MPDC:

- PROCURE, ANALYZE AND DISSEMINATE MANPOWER INFORMATION essential for rational policy making and operational program planning by organizations in the community.

- IDENTIFY NEEDS AND OVERLAPS in the local manpower/employment system as documented by such objective data.

- DEVELOP RECOMMENDATIONS FOR REMEDIAL AND PREVENTIVE APPROACHES AND STRATEGIES AND ACTION toward meeting identified needs.

- PROVIDE THE CATALYTIC SPARK TO SET IN MOTION ACTION AND COOPERATION by appropriate organizations to implement such recommendations.

- FOSTER DEVELOPMENT OF INFORMED CITIZEN LEADERSHIP involved in a broad array of manpower/employment related areas.

- PROVIDE CONSULTATION AND TECHNICAL ASSISTANCE to voluntary and public organizations.

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BLUEPRINT HIGHLIGHTS

This BLUEPRINT was designed by the Manpower Planning and Development Commission to: 1) define more precisely the problems encountered by youth, 16 to 21 as they move from school into the Cleveland area work world, and 2) suggest workable strategies which will significantly improve the process of youths' entry into the local labor force during the 70's.

The labor force entry process is the movement, over time, of youth into the work force. This process is complex and varied, in many instances characterized by a pattern of shifting from job to job as the beginning job seeker familiarizes himself with the labor market. A young person's port-of-entry into the work world is a major determinant of his entire work pattern. (Pages 1-4)

APPROACH TO THE PROBLEM - To accomplish the above objectives, four possible approaches to the problems of labor force entry were considered: Seeking solutions within 1) individuals, 2) the environment, 3) systems, or 4) institutions. BLUEPRINT recommendations for change are based on the belief that most significant and expeditious change can be brought about through corrective actions in systems and institutions. (Pages 4-7)

ELEMENTS IMPINGING ON THE LABOR FORCE ENTRY PROCESS - A variety of elements impinge upon the labor force entry process which determine the degree of ease with which youth move into the work world. These elements have been classified into four major categories: (Pages 8-45)

1. Preparation for Labor Force Entry and Participation - Schools have primary responsibility for preparing youth with requisite work world, occupational and labor market information, career orientation, job entry techniques, and basic skills for employment.

   Inadequate preparation for labor force entry contributes to:

   - Unrealistic work world expectations
   - Inability to select career goals
   - Narrowing of the job search
   - Inability to meet minimum entry level requirements
   - Lack of job search and interview "know-how"
   - Work world adjustment problems
   - High job changing rates (Pages 9-10)

2. Job Referral and Placement Process - Youth seeking entry level positions rely primarily upon the assistance of friends and relatives. Primary components of the Cleveland area Job Development/Placement/Follow-up System are the schools and the Ohio Bureau of Employment Services. Youths' knowledge of this system and the

system's effectiveness and efficiency are essential for smoothing entry into the work world. (Pages 11-16)

3. Practices and Requirements of Employers and Labor Unions - The successful passage of youth into the work world is highly dependent upon their ability to meet employer and/or labor union requirements and practices, many of which present barriers to young labor force entrants. (Pages 16-18)

   - Educational requirements which arbitrarily exclude high school dropouts and/or are not accurate predictors of job performance.

   - Experience required when it is not essential.

   - Unvalidated testing procedures.

   - Job descriptions and requirements not up-dated.

   - Discrimination, either overt or covert.

   - Supervision insensitive to the needs and problems of the novice worker.

4. Tangential or Related Factors - Certain tangential factors which present difficult barriers to the labor force entry of youth do not receive in-depth treatment in the BLUEPRINT, but they are succinctly described both in the body and addenda of the BLUEPRINT. (Pages 30-45). They include:

   - Poverty
   - Psychological and Emotional Problems
   - Physical Handicaps
   - Transportation
   - Automation
   - Labor Market Structure
   - Housing
   - Life Styles
   - Discrimination

LOCAL PROBES OF THE LABOR FORCE EXPERIENCES OF YOUTH

To obtain essential information on the local labor force entry experiences of youth, the Manpower Planning and Development Commission conducted two separate investigations. (Pages 18-29)

Who Doesn't Get Hired? A survey of Cleveland area employers, revealed that youth are rejected for low skill entry level positions for the following major reasons:

- Lack of basic learning skills (reading, oral communication, arithmetic)

- Lack of basic clerical skills

- Lack of work world orientation and job search skills

- Lack of dependability and reliability

- Physical and emotional disabilities

Major findings from the Survey of Rejected Applicants indicate that:

- Rejected job applicants view the interview process as a"necessary evil", finding employer attention and the opportunity to express themselves inadequate.

- Some youth approach the job interview with the preconceived idea they will encounter discrimination, and thus attribute their rejection to this factor.

- Employment rejection does not seem to cause a negative self-image.

- Youth, when not told why they are rejected, do not realize that it is their own inability to meet employer requirements that is responsible.

- Many job-rejected youth feel defeated by their continuing inability to become job connected.

LABOR FORCE ENTRY DURING THE 70's - EASIER OR MORE DIFFICULT? - Changes in the ease or difficulty of the labor force entry process during the 70's is related to the following factors which are discussed and evaluated in the BLUEPRINT: (Pages 46-54)

- The Cuyahoga County youth population, 16 to 21, during the 70's will increase at a slower rate than during the 60's.

- The increase of black youth from 1970 to 1980 will be at a much faster rate than the white youth increase.

- Decreased U.S. military involvement during the 70's would increase the proportion of youth entering the work world directly after leaving high school.

- An increased tendency of youth to seek employment rather than continue their education beyond high school would also increase the number of young job seekers, ages 16 to 21.

- Dropout rates have decreased for two consecutive years in City of Cleveland high schools. Continuation of this trend would mean an increasing proportion of youth able to meet employers' education requirements.

- Vocational education opportunities are expanding in the Cleveland area, improving youths' potential for successful job entry.

- Structural changes in the local labor market are creating increasingly high skill requirements for entry level jobs.

- Industry is moving out of the city to the suburbs, shifting entry level job opportunities beyond the easier reach of poor, young city residents.

RECOMMENDATIONS

BLUEPRINT recommendations are based upon two criteria:

1. Workability and feasibility, and
2. Capacity to significantly improve the labor force entry process and transitional experience leading to career connection.

While recommendations are directed toward individual systems, in many instances it is not the sole responsibility of one system or institution within the system to implement the proposed strategy. A cooperative effort, therefore, between two or more community systems or institutions is essential for carrying out the BLUEPRINT recommendations. (Pages 55, 56)

Recommendations to the EDUCATION SYSTEM (Pages 58-75)

- As the community system with major responsibility for the employment preparation of youth, the Manpower Planning and Development Commission recommends that all Cleveland area schools should provide for all students to receive essential basic preparation for labor force entry and participation well before their initial entrance into the work world. On a long-range basis schools should provide all students comprehensive and continuous employment preparation through the introduction and/or expansion of the K through 12 Career Education curricula. (Pages 58-65)

- Cleveland area guidance departments acknowledge that insufficient counseling staff limits their ability to meet the employment-related

needs of youth. Therefore, the Commission recommends that Cleveland area high schools should increase their staffs of counselors and counselor aides, accompanied by regular on-going in-service training. This counselor staff increase will require the support of taxpayers, the State Department of Education and the State Legislature. (Page 65-68)

- The present school calendar year arrangement limits employment opportunities for both continuing students and high school graduates. All youth are released from school at the same time each year, flooding the labor market and competing for scarce job opportunities at their skill levels. Therefore, Cleveland area schools should actively investigate adjusting school calendars so as to increase work-related experiences and employment opportunities for youth. (Pages 69-70)

- Industry possesses resources and expertise which can be of high value in preparing youth for labor force entry. The Commission recommends that Cleveland area schools should initiate efforts to expand and improve cooperation and communication with industry and labor unions in developing employment and job entry preparation programs.

Recommendations to the EMPLOYING SYSTEM (Pages 76-91)

The role of the Cleveland area employing system - business and industry (both private and public) and labor unions - requires expansion and increased commitment if the work world entry experience of youth is to be improved. Specific areas in which increased industry concern and action are recommended to reduce obstacles to labor force entry and foster career connection are:

- Review and corrective revision of hiring practices, job requirements and career advancement opportunities, including elimination of discriminatory practices.

- Volunteer industry services to Cleveland area schools focused on preparation for and movement into the labor force.

- Industry has a special responsibility to lend its expertise to the schools in developing effective employment preparation programs for youth, as industry is a direct beneficiary of this employment preparation. The Manpower Planning and Development Commission recommends that Cleveland area industry respond affirmatively to the schools' quest for increased cooperative efforts to improve the employment preparation of youth.

- Efforts by the employing system to reassess hiring practices and job requirements must involve close examination of the following:

- Education and experience requirements for entry level jobs

- Upgrading and promotion policies

- Hiring practices related to criminal offenders (Employers should be aware of recent Federal regulations regarding employment of criminal offenders.)

- Practices which may be discriminatory (Both overt and covert discrimination should be removed through affirmative action programs.

Recommendations to the JOB DEVELOPMENT/PLACEMENT/FOLLOW-UP SYSTEM (Pages 97-107)

The Job Development/Placement/Follow-up System includes all the agencies and organizations in the Cleveland area which provide job counseling, job development, job placement and follow-up services to youth. Major components of this system are the schools, Ohio Bureau of Employment Services, Metropolitan Cleveland JOBS Council, and federally funded manpower programs.

- Job development efforts for youth in the Cleveland area have not been fully developed nor organized and coordinated to maximize the efficiency and effectiveness of these efforts. Therefore, the Manpower Planning and Development Commission recommends that as an initial step the Metropolitan Cleveland JOBS Council, because of its strategic position in the job development network, should convene all agencies and organizations involved in job development for youth to formulate an agreed-upon proposal for coordinated job development procedures in the Cleveland area.

- The job placement-related needs of all Cleveland area youth are far from being adequately met through local placement agencies, including the Ohio Bureau of Employment Services and the schools, two major resources for job development. Funding and staff size constraints and the absence of mechanisms through which OBES and the schools can coordinate their placement-related services are major factors in this lack of comprehensive job placement services.

  Concentrated follow-up support for youth referred to jobs is received primarily by selected students in specially funded projects and those enrolled in approved vocational education curricula. Youth who have the greatest need for follow-up services are least likely to receive it.

  To move toward the goal of readily available effective job placement assistance for every young Cleveland area job seeker the Commission recommends that a county-wide demonstration project

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should be developed to provide effective job placement and follow-up service for varying school populations, with the Manpower Planning and Development Commission as initial convener.

MAJOR BLUEPRINT CONCLUSIONS

- There is a major need for concentration by the Education System on providing preventive schools services and resources.

- In the Employing System there is a need for greater flexibility and relevance in job requirements and hiring practices, providing increased opportunities for youth to gain a foothold in the work world.

- The overriding need in the Job Development/Placement/Follow-up System is improved coordination of services, evaluation and client follow-up.

SUGGESTED AREAS FOR RESEARCH (Pages 110-112)

Based upon the limited empirical data in the Cleveland area regarding youth employment opportunities and labor force entry experience, further scientific investigation is recommended in the following areas:

- In-depth labor market analysis

- Creation of youth employment opportunities

- Alternatives to employment

- Extent of youths' educational deficiencies in relation to work world success

- Education management information system

- Cleveland area labor market statistics on youth

- Effectiveness of manpower programs

INTRODUCTION

RATIONALE

Labor force entry is the initial movement of youth into the work world. In this BLUEPRINT, labor force entrants are defined as out-of-school youth, ages 16 to 21, who are in the initial work stages, either attempting to obtain employment or employed but not career connected. Additional parameters of the BLUEPRINT are: a) education - high school graduates and dropouts; b) residence - Cuyahoga County, Ohio, an area whose largest city is Cleveland; and c) time span - the decade of the 70's.

Writings and studies which have dealt with the process of labor force entry indicate that new entrants into the labor force become job or career connected through a process which is complex and varies according to individual preparation for this transition. In many cases, youth are unprepared in terms of attitudes, expectations and skills for smooth movement into the labor force. This is confirmed by the unemployment rate of youth, ages 16 to 21, which is higher than that of any age group of workers in the labor force. For example, the national unemployment rate of out-of-school males, ages 16 to 21, was 15.2 percent in October, 1970. Out-of-school females, ages 16 to 21, had an unemployment rate of 13.2 percent.*(23) The unemployment rate of this age group was nearly three times higher than that of the total labor force, which was reported as 5.2 percent in October, 1971 by the Bureau of Labor Statistics.

* Reference numbers in parantheses refer to the list of information sources in the Bibliography.

The high unemployment rate of this age group is also partially attributable to their peripheral attachment to the labor force. Shifting from job to job characterizes the labor force entry pattern of many Cleveland area youth. This provides the labor force entrant an opportunity to familiarize himself with the labor market, particularly if he has not previously selected a career objective, is unprepared to reach or pursue this objective, and is naive concerning the realities of the work world.

While this pattern of work establishment may provide the entrant an opportunity to gain work experience and adapt himself to the requirements of the work world, this pattern also carries with it a risk. Youth who are unable to become career connected during the labor force entry process may find themselves entering only dead-end jobs and/or remaining marginally attached to the labor force throughout their work careers. This is a waste of "human" resources, costly not only for the individual worker, but also for the employer who must absorb the costs of high turn-over rates, and for the total community.

Methodology - In recognition of the pervasive negative effects of unemployment and under-employment on all aspects of an individual's life and the importance to the community of full development of youth employment potential, the Manpower Planning and Development Commission gave high priority in its F/Y '72 Plan of Work to this local problem of job entry and career connection for Cleveland area youth.

In conjunction with the MPDC Work Plan, a summary of the literature on this topic was compiled into a comprehensive report containing national

and local data. The report focused upon major elements involved in the labor force entry process. This quantitative information, in the form of a working paper, was reviewed by thirty-nine local consultants who have personal experience and expertise in various specialties of the problem area. Relating the national data to the Cleveland area situation, the group of local experts provided written critiques and recommendations.

Based on the reactions of the local consultants to the national data, a composite picture of the process of labor force entry in the Cleveland area was developed. This report, Labor Force Entry and Career Connection Patterns of Cleveland's Young Job Seekers, served as the basic working tool of the Task Force appointed by the Manpower Planning and Development Commission to investigate the labor force entry process. The major objectives of the MPDC Task Force were:

1. To identify the major impediments in the Cleveland area to a smooth transition of youth into the labor force, and
2. To develop practical recommendations of workable interventions and use of community resources which will significantly improve the transitional experience whereby youth become career connected.

To accomplish these objectives, the Task Force held work sessions on a regular basis during a seven-month period. Hearings were held by the Task Force at which representatives of the major systems in the Cleveland area affecting the labor force entry process of youth identified barriers and gaps in their respective systems and described specific difficulties young job seekers encounter. The Task Force extensively reviewed national literature and data on the subject of labor force

entry. The expertise of consultants representing various disciplines - economists, social-psychologists, and research specialists - was drawn upon to further illuminate the work world problems of youth and assist in policy formation.

The body of this BLUEPRINT contains descriptions of the major obstacles to the expeditious and successful labor force entry which the MPDC Task Force, on the basis of its intensive investigation, believes should and can be reduced or eliminated through the marshalling of coordinated community resources. The recommendations are a call for practical and feasible actions to bring about required changes.

THEORETICAL APPROACH TO THE PROBLEM

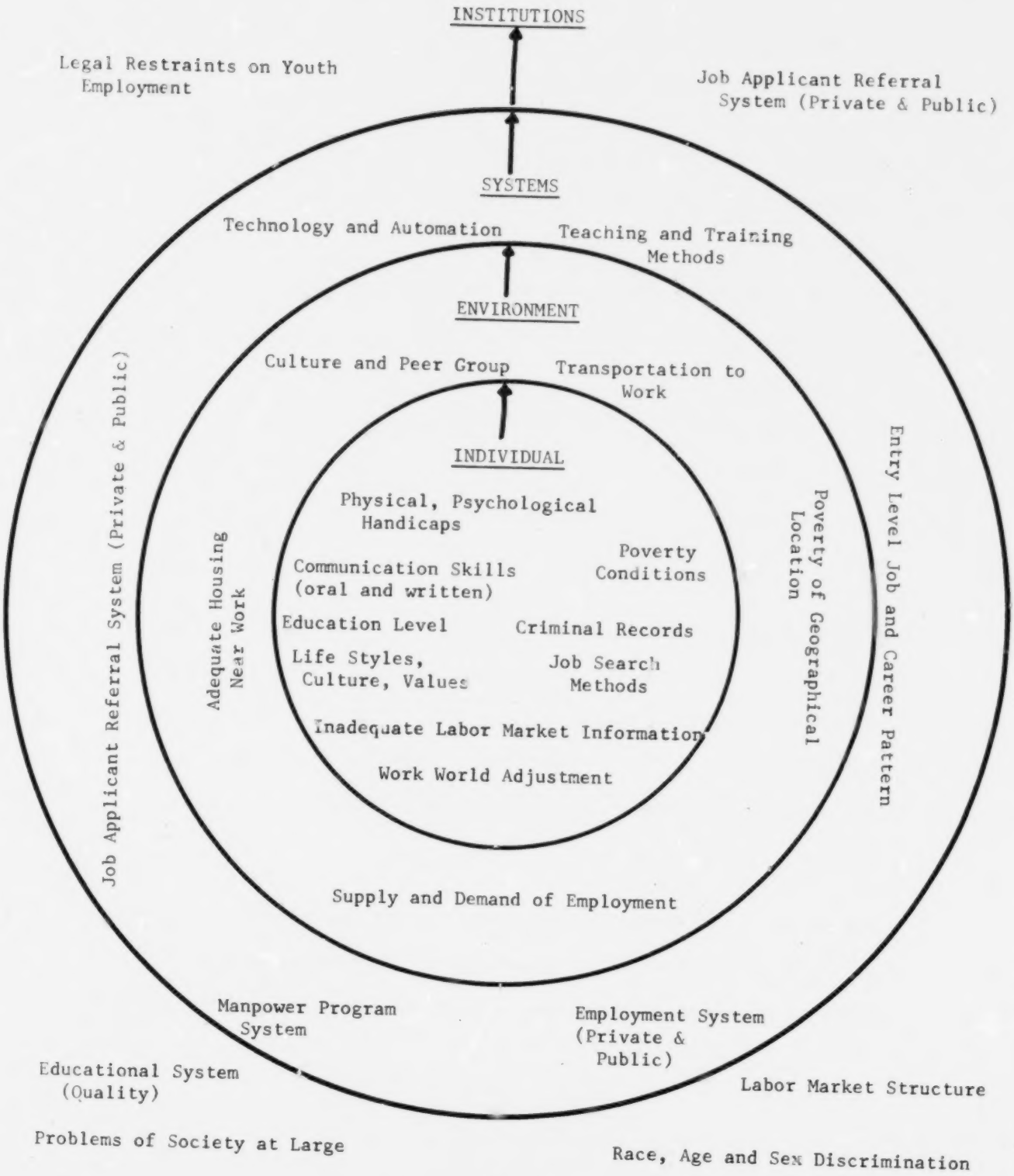
Barriers impinging on the labor force entry process can be classified within four groups:

1) Individual barriers
2) Environmental barriers
3) System barriers and
4) Institutional barriers

The barriers included within each of these classifications and their relationships are diagrammed on the following page. These four classifications are not all inclusive nor mutually exclusive, but provide a means of conceptualizing the problem and indicate alternative approaches for acting upon it.

Possible approaches to the problem of labor force entry include seeking solutions within at least four major levels: (1) Individuals; (2) Environment; (3) Systems; (4) Institutions. These are analytical

TRANSITION OF INDIVIDUAL FROM SCHOOL TO WORK



divisions only, whereas in reality these levels are fused. The Manpower Planning and Development Commission believes that the most significant and expeditious change may be brought about through emphasis on change in systems and institutions.

Rationale - If change is to be sought within the individual (e.g., modification of attitudes, alteration of life styles), it must be assumed that individuals can be changed or altered, and that the right exists to do so. As to the former assumption, individual behavior and attitudes are often a response to the larger environment, social values and conditions, and institutional constraints. Beneficial individual change cannot be brought about most effectively by focusing entirely upon the individual, but by focusing upon the elements to which he must respond. Assuming the right to change an individual disregards the reasons for his behavior or attitudes and his essential uniqueness.

Change in the environment will positively assist the labor force entry process (e.g., elimination of poverty). However, the environment is shaped, to an extent, by the actions and reactions of institutions to environmental conditions. Community actions geared to changing the environment will probably produce slow impact on labor force entry problems.

Systems which influence the labor force entry process subsume the institutional category. For example, the job referral system is composed of education institutions, employers, public and private employment

agencies, and manpower programs. Institutions, and therefore, systems, set and define patterns of behavior and retain power. Because of their power, institutions are in a position to change patterns.(1) Change originating from within systems and institutions is most likely, therefore, to have the greatest and earliest impact on labor force entry. Long-range strategies are necessary, for the most part, to effect environmental and individual change. As systems and institutions respond to the needs of labor force entrants by developing more accessible channels into the work world and by improving preparation for smooth movement through these channels, corresponding adjustments within the individual are likely to occur. For these reasons, focus in the MPDC BLUEPRINT has been placed on seeking corrective actions within our community's systems and institutions, rather than seeking environmental or individual change.

ELEMENTS IMPINGING ON THE LABOR FORCE ENTRY PROCESS

A variety of elements interact to determine the degree of ease with which youth enter the labor force. These elements have been classified into four major categories:

A. Preparation for Labor Force Participation

B. Job referral and Placement Process

C. Practices and Requirements of Employers and Labor Unions

D. Tangential or Related Factors

The first three categories include barriers to labor force entry upon which corrective local community actions can have the most immediate and direct impact. The barriers and gaps within these three categories can be dealt with through system and institutional changes.

The latter category, tangential or related factors, includes those barriers which have a negative impact on the labor force entry of youth, but cannot be dealt with under the research design of the BLUEPRINT. Actions to reduce these barriers, such as Poverty, Substandard Housing, and Labor Market Structure, require longer range strategies on a scope beyond that of the local community. BLUEPRINT recommendations for change are primarily focused, therefore, on the first three categories. A broad descriptive analysis of tangential factors is made in recognition of their significance in the labor force entry process and the need for more intensive local, state and national attention to these problems.*

*The extent to which the barriers in these four categories are encountered by labor force entrants varies according to the characteristics of the labor force entrants, such as age, sex, race, education, place of residence and family income. This variance is not discussed in this section due to the lack of quantitative information on Cleveland area labor force entrants. See Addendum D., Variance in Barrier Impact, for a discussion based primarily on national data.

A. PREPARATION FOR LABOR FORCE PARTICIPATION AND ENTRY

The information which beginning entrants into the labor force possess about the reality of the work world is, for the most part, vague or inadequate. (40) Possession of world of work, occupational and labor market information varies according to a number of factors, many of which are interrelated. Among these are education, age, race, part-time work experience, and socio-economic level.

For example, a youth from a family on public assistance is not so likely to be attuned to the realities of the work world as a youth from a middle-class background. Youth receive an inaccurate conception of the labor market when their primary exposure to the work world is information from close associates who are unemployed or marginally attached to it.

In regard to education, high school dropouts are, in general, less prepared for successful labor force entry than high school graduates. Work preparation in the schools is primarily available to youth ages 16 years and over, mainly through the vocational education programs. Therefore, the extent of work world knowledge of a school dropout who leaves at age 16 may be confined to occupations of immediate family members or significant others. Those youth who have been exposed almost exclusively to persons whose work experiences are in unskilled and semi-skilled jobs are likely to have only vague factual knowledge of the work world and lack skills essential for labor force entry.

Inadequate preparation for labor force entry and participation contributes to a variety of problems. Among these are:

- Unrealistic work world expectations
- Inability to select career goals
- Narrowing of the job search
- Inability to meet minimum entry level requirements
- Lack of job search and interview know-how
- Work world adjustment problems
- High job-changing rates

In general, a youth's port of entry into the labor market depends upon the degree to which he possesses the necessary information and skills. The port of entry has important consequences for an individual's entire employment history. Entry into low skill jobs by youth who are not equipped with marketable job skills and have not acquired the knowledge necessary to benefit from training imparted on-the-job may relegate them to low skill jobs throughout their work careers. An examination of the work histories of a sample of heads of households in Oakland, California provides evidence of the importance of a youth's port of entry. Through control of three variables - - education, father's occupation, and first job - - it was determined that the first job was the most important of the three predictors of their current occupation. (86)

There are youth from all races and educational and socio-economic levels who enter the labor force with inadequate preparation, although certain groups are more likely to be inadequately prepared than others. If the home environment does not provide youth with some of the basic information required for successful labor force entry, youth are solely dependent upon the schools as their primary source of information and skills.

B. THE JOB REFERRAL AND PLACEMENT PROCESS

For labor force entrants, establishment in the work world is a process over time rather than a single event. This process is characterized, in general, by high rates of job changing, voluntary mobility and school leaving and re-entering in the early years of labor force participation. This process affords the labor force entrant the opportunity to familiarize himself with the labor market, obtain experience and adapt himself to the world of work and the responsibilities imposed upon him as an employee.

Smooth transition into the work world hinges on labor force entrants' knowledge of how to actually secure a job. This includes knowledge of job search techniques, interview procedures, how to complete an employment application, familiarity with the Job Referral System and how to use it. Even youth armed with this basic work world information and skills will face difficulties in becoming job connected if they lack job-getting "savvy."

The majority of labor force entrants utilize informal job search methods, relying heavily upon friends and relatives for job leads. Many begin their initial careers in companies which employ relatives and friends. However, for those youth whose friends and relatives are not well established within the mainstream labor force this is an effective job search method.

Direct application at companies' gates is also a frequently utilized job search method. Labor force entrants tend, however, to apply

only at those companies with which they are familiar (primarily large-size companies) or at companies in their home neighborhoods.(87)

Some schools are a source of job search assistance to high school graduates. High school dropouts, by withdrawing from school, usually remove themselves from this service. Job placement services are provided in the schools, generally, by teacher-coordinators of cooperative education programs, vocational education instructors and vocational guidance counselors. Teacher-coordinators work closely with employers and devote a great amount of staff time to job development for their cooperative-education students. Vocational education instructors actively assist their students in finding jobs. In the Parma, Ohio school district, for instance, some vocational instructors realize job placement rates of nearly 100 percent.

Students not enrolled in vocational education programs receive job referral and placement services from guidance counselors. In most high schools in Cuyahoga County these counselors provide job referral and placement services mainly on an informal basis. This is a result of high student-counselor ratios (400 to 1 in Cleveland Public Schools) and the many responsibilities, other than placement, which guidance counselors must assume. The major exception to this pattern is the Job Development Placement Service operated by the Cleveland Board of Education in five inner-city high schools. Under this special federally-funded program, one counselor is assigned full-time responsibility for placement of graduates in each school. The

program provides students job preparation courses and interview referrals.

In addition to the schools, the Ohio Bureau of Employment Services (OBES) is a major source of job referral and placement services for youth. Under OBES, the Youth Opportunity Center (YOC) has been established to provide employment-related services exclusively to youth, ages 16 to 21. Services provided by YOC staff include counseling, testing, job development and placement. YOC also directs a school-cooperative program, offering group testing and individual job counseling services to employment-bound high school seniors. Each high school in the County is invited to participate in the School-Cooperative Program. This service is utilized primarily by suburban and parochial schools, with 27 individual high schools currently participating. More schools request to participate in the program than YOC is able to serve.

The Youth Opportunity Center also serves as headquarters for other youth programs administered by OBES. These include: Job Corps (work-experience provided youth, ages 16 to 21, in residential centers), Gatehouse Project (follow-up services for Job Corps graduates and dropouts), and the Apprenticeship Information Center (counseling, testing and placement services related to registered apprenticeships).

The Ohio Bureau of Employment Services also provides employment-related services through staff maintained at Neighborhood Opportunity Centers. As the major job placement agency in the community, OBES

provides job referral and placement services to its own clients and participants in special federal manpower programs, such as the Work Incentive program (WIN) and the Manpower Development and Training Act (MDTA) program.

Another major component in the job referral and placement system serving youth is the Metropolitan Cleveland JOBS Council. MCJC was recently established to provide service to the community's job referral agencies by coordinating job development for the disadvantaged within the private sector. Jobs developed by MCJC are registered in the Job Bank of OBES. Through the Job Bank a daily list of job openings, printed on a microfiche, is available for referral of OBES clients to employers. Arrangements have been made for certain special manpower programs to also have access to job orders in the OBES Job Bank.

Private fee-charging employment agencies are another source of job search assistance for youth. Approximately 150 private employment agencies are located in the Cleveland area. These agencies are seldom utilized by youth, however, because of their fee-charging policies and the limited number of entry level jobs registered with them.

A limited number of other agencies provide job referral and placement services on a selective basis to their clients. The following represent Cleveland area organizations involved in youth job referral and placement and their source of funding.

Organization	Source of Funding
Cleveland Neighborhood Centers	Private
Jewish Vocational Service	Private
The Urban League of Cleveland	Private
Vocational Guidance and Rehabilitation Services	Private
AIM-JOBS Project	Public
Jobs Optional	Public
Cleveland Offender Rehabilitation Program	Public
Commonwealth of Puerto Rico, Department of Labor, Migration Division	Public
Bureau of Indian Affairs Cleveland Employment Assistance Office	Public
Joint Apprenticeship Program	Public
Neighborhood Youth Corps	Public
Ohio Bureau of Vocational Rehabilitation	Public

Interviewers in Cleveland area business and industrial firms have indicated that most beginning job applicants "happen" in without the benefit of job placement services or newspaper ad leads.(97) They have also identified a widespread lack of knowledge about job search techniques, application-making and interview-taking among youth seeking entry level positions.

In addition to lack of job-getting know-how on the part of young job applicants, the job searches of youth are hindered by gaps in the community's job referral system. For example, the Job Development Service Project in five inner-city schools provides specific direct job development and placement and follow-up to all graduating students who desire this service. No other schools in all of Cuyahoga County have staff adequate to provide this kind of comprehensive job development referral and follow-up service for all graduates and dropouts. The lack of institutional or agency follow-up services results in youth falling between the components in the job referral system and, in

essence, becoming "lost" in the labor market.

Another gap is the lack of a continuous on-going year-round coordinated effort in job development for beginning job-seekers; the Metropolitan Cleveland JOBS Council has only a summer youth employment coordinator.

C. PRACTICES AND REQUIREMENTS OF EMPLOYERS AND LABOR UNIONS

Successful passage of labor force entrants into the work world is dependent, to a large extent, on their ability to meet employer or union requirements. Both companies and unions often have unrealistic requirements for entry-level jobs. For example, the employment practice of requiring a high school diploma as the minimum level of educational attainment for most jobs is a major barrier to employment. Likewise, requiring only experienced workers screens out youth seeking initial entrance into the work world. For example, the Job Opportunity List of the Cleveland Offices of the Ohio Bureau of Employment Services lists all job orders registered in the OBES Job Bank the day the list is compiled. On August 10, 1971 there was a total of 167 jobs registered with OBES for which youth, ages 16 to 21, could apply. Of these 167 jobs, 47 percent (or 78) required job-related experience.(37)

Job requirements are often defended on the basis of company or union policy, rather than on their necessity for actual job performance. Companies frequently fail to update job descriptions or may have no job descriptions. Tests utilized by companies and unions may not be validated as accurate predictors of job performance and screen out potentially useful workers.

Unvalidated tests have been criticized for cultural bias which prevents minority group members from obtaining employment. When issuing Executive Order 11246 which requires Federal contractors to validate employment tests, former Labor Secretary Willard Wirtz stated,

> ...The Labor Department has long been concerned by the growing use of unvalidated tests which often become a rigid condition of hiring or employee advancement. Frequently, such tests have been found to be the principle reason for the failure of members of minority groups to obtain jobs they could perform or to receive promotions they deserve...there has been a decided increase since 1963 in total test usage and particularly notable increase in the incidence of doubtful testing practices which, experience indicates, tend to have racially discriminatory effects. It has become clear that in many instances contractors are using tests to determine qualification for hire, transfer, or promotion without evidence that they are valid indices of performance potential.(2)

Compliance with the Supreme Court Decision of March 8, 1971 (Griggs v. Duke Power Company) should reduce inequities in hiring practices if adequately enforced. The Court ruled, in effect, that testing devices and educational requirements should not be given controlling force unless they are demonstrably a reasonable measure of job performance.

Some employers are reluctant to hire youth with criminal offense records. This response may stem from company difficulties in securing bonding, company non-compliance with federal regulations governing the employment of criminal offenders and/or inadequate federal enforcement of these regulations.

The supervision a youth receives upon entry into the labor force frequently affects his prospects for stable employment. In certain cases, youth require special attention to facilitate their productive absorption into the labor force. First-line supervisors need in-company training to sensitize them to the life styles, cultural values and experiences of new employees and as a preventive measure against discriminatory treatment and practices.

Some labor unions have been overtly discriminatory, purposely restricting the movement of youth into the labor force. The closed shop practices of certain craft unions is in direct conflict with the right to work of youth. Labor union practices must be closely examined to remove both overt and covert discriminatory practices.

D. LABOR FORCE ENTRY EXPERIENCES OF YOUTH - LOCAL PROBES

To ascertain more specific information about the labor force entry experiences of our own Cleveland area youth, particularly in relation to the three elements with which this BLUEPRINT is primarily concerned - 1) Preparation for Labor Force Participation, 2) Job Referral and Placement Process, and 3) Practices and Requirements of Employers - The Manpower Planning and Development Commission conducted two separate probes into the area of local labor force entry.

The first of these probes identified employers' major reasons for rejection at the hiring desk of applicants for entry level low-skill jobs. This 1970 report, Who Doesn't Get Hired?, was based on a survey of a representative cross-section of Cleveland business and industrial firms who

see large numbers of young entry level job seekers.

While this probe clearly identified the reasons for rejection of young job applicants, it viewed rejection only from the employers' vantage point. The Manpower Planning and Development Commission recognized that an understanding of the labor force entry experiences of youth must be based on information from both employers and youth who are attempting to enter the labor force. To add this missing dimension of information, youths' attitudes, opinions and impressions related to the interview process were explored by the Commission through a Survey of Rejected Job Applicants. This survey, conducted between December, 1971 and January, 1972, sheds light on how youth view the interview process, how they view themselves after job rejection, and whether they find the interview to be a learning experience.

Major findings of the two MPDC probes are highlighted below. Relevant reference is made to them throughout the BLUEPRINT.

Who Doesn't Get Hired?

Method - The Manpower Planning and Development Commission drew together employer-interviewers from a representative sample of Cleveland area industry -- large and smaller, private and public, manufacturing (durable and non-durable), and non-manufacturing. These firms were known to see relatively large numbers of young job applicants. All indicated they had available at that time entry level low-skill job openings.

A series of two-hour panel discussions was set up in which employer-interviewers in groups of twelve to nineteen were asked to present

their experiences so that more precise knowledge could be obtained about the characteristics of current job seekers, factors which keep them from being hired in low-level entry jobs. Employer-interviewer panel participants were assured of anonymity in any report, resulting in their honest and full sharing of their experiences and thinking.

Findings - Employer-interviewers from Cleveland area organizations identified the following factors as primarily responsible for the rejection of entry level job applicants at the hiring desk:

1. Lack of basic learning skills (reading, oral communication, arithmetic.)
2. Lack of basic clerical skills (spelling, filing, typing).
3. Lack of work world orientation and job search skills (little or inaccurate knowledge about work world requirements and disciplines, job-getting resources or job interview skills).
4. Lack of dependability and reliability (evidenced by poor school or job attendance patterns, spasmodic work history, continuing pattern of chronic arrests, indifferent attitude, etc.).
5. Physical or emotional disabilities.

Survey of Rejected Job Applicants

Method - Interview schedules were developed with the advice of a research consultant. The interview schedules were pre-tested by the staff of three agencies and revised accordingly. Cleveland area agencies responsible for job referral of youth were then requested to administer questionnaires to youth with the following characteristics:

- High school graduates and dropouts.
- Between the ages of 16 and 21.
- Interviewed and rejected for full-time jobs.

These agencies also administered a different questionnaire to the employers who had interviewed the rejected applicants.

The youth interview schedule was administered to each rejected young person by the agency staff person who had referred him to the interview. The youth were administered the questionnaire soon after returning from the job interview.

After interviewing the rejected applicant, the job referral staff member followed-up by contact with the employer to determine the actual reason for rejection of the applicant. The employer interview schedule was administered in an informal manner, to overcome possible employer hesitancy to respond.

Sample - Eight Cleveland area organizations involved in job referral of youth participated in the Survey of Rejected Job Applicants. (See Addendum B., Administrants of Rejected Job Applicant Questionnaire.) A total of 95 youth were interviewed. Originally, it had been anticipated that comparison of responses would be made by race, sex, education and age. However, the sample was composed primarily of black youth and youth ages 18 to 21. Therefore, comparison by race and age was not possible. Most Cleveland area schools, at the time of the survey, were not referring youth to jobs. The survey was conducted while school was in session, several months prior to graduation. Thus, the sample was primarily restricted to youth referred to jobs by Shaw High School in East Cleveland, which experiences a continuing need for placement assistance during the school year, the Youth Opportunity Center, and manpower programs. The clients of these organizations are predominantly black. The insufficient sample of youth, ages 16 and 17,

reflects the low labor force participation rate of this age group. Also, youth are not allowed to withdraw from school unless they have accepted a full-time job offer. If they leave school at age 16 or 17 they are employed and will not require placement assistance immediately.

The sex and education composition of the total sample of 95 is:

Male - 55%
Female - 45%

High School Dropouts - 50.5%
High School Graduates - 49.5%

Some respondents did not answer every item on the interview schedule. Results are based upon percentage of youth responding to each item.

Of the employers who interviewed the youth surveyed, 35 percent refused to answer the questions asked by the referral staff or could not respond because they had no recollection of the applicant. Results from the employer interview schedule are based on the response of the remaining 55 percent.

Findings - Interview Experience of the Rejected Applicants - The majority of rejected applicants (61 percent) reported that they had been previously interviewed less than five times for full-time jobs. High school dropouts had considerably less interview experience than graduates. One-half of the graduates had been interviewed more than five times for full-time jobs compared to approximately one-fourth of the dropouts. Males and females were equally likely to have participated in more than five interviews. However, the males applied for a greater number of jobs without being interviewed than females. While 54 percent of the

males had applied for five or more full-time jobs, only 41 percent reported being interviewed five or more times. The corresponding rate for females was 40 percent applying for five or more full-time jobs; 37 percent with five or more interview experiences.

Rejected Job Applicants' View of the Interview Process - Items on the questionnaire were designed to discover the applicants' views on the mechanics of the interview process and also the fairness.

In terms of mechanics, the majority of youth (66 percent) indicated that the interview began at the scheduled time. Most of these youth, however, who were not interviewed at the scheduled time found the delay upsetting. Annoyance ranged from mild (71 percent) to a great amount (6 percent). All but 11 percent of the applicants were requested to complete an employment application, most often before the interview began.

The youth were more critical in regard to the fairness of the interview process. Although the majority (76 percent) felt the interview was lengthy enough for the interviewer to judge their suitability for the job they were less satisfied with the interviewer's attention to them and the opportunity provided to present themselves as qualified for the job. In response to the question - Did the interviewer give you enough of a chance to explain why you thought you were right for the job? - 46 percent responded negatively. A greater proportion of the dropouts (50 percent) than the graduates (40 percent) felt they did not receive sufficient opportunity to "sell" themselves.

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Sixty-one percent of the youth felt the interviewer paid enough attention to what they said, while 39 percent rated the interviewers'attention as needing improvement.

In evaluating the fairness of their interviews, 42 percent of the youth expressed some degree of dissatisfaction, with 5 percent evaluating the interview as totally unfair. However, 14 percent rated their interview as very fair. Female applicants viewed their interview in a more favorable light than the males. Sixty-six percent of the females expressed satisfaction with the fairness of the interview process, compared to 51 percent of the males. Furthermore, 26 percent of the females rated their interviews as very fair, while only 4 percent of the males were highly satisfied.

In relation to the overall interview process, one-fourth of the youth expressed doubt that this is an adequate method of selecting employees. Thirty-five percent considered the interview an equitable way to make hiring decisions. The remainder (26 percent) were uncertain in their assessment of the interview process. There was little variance in response by age or education.

Reactions of the rejected applicants to reasons received for not being hired provide an indication of how they view the interview process. Fifty-four percent of the youth reported receiving no reason from the employer for their rejection. One out of six dropouts received no reason compared to almost one out of five graduates. There was only small variance by sex.

Of those who were told why they weren't hired, 19 percent did not believe they were given the actual reason. All but one of these respondents identified the real reason for their rejection as discriminatory employment practices. In contrast, only 4 percent of those youth who received no reason for not being hired felt the real reason was discrimination.

How Rejected Job Applicants View Themselves - In general, the youth rated their performance in the interview much higher than they rated the fairness of the employer and the interview process. Ninety-six percent of the job applicants felt they had presented themselves well during the interview. Only 4 percent expressed dissatisfaction with their performance. High school graduates reported the greatest displeasure with their interview performance (11 percent of the graduates were dissatisfied, while all dropouts reported satisfaction).

The youth rated themselves lower in relation to the impression they made on the employer than on the quality of their interview performance. Sixty-six percent felt they had favorably impressed the employer.

The majority of applicants (54 percent) were given no reason for their employment rejection. Their response to the question - What do you think was the real reason you weren't hired? - provides some insight into their self-image after being rejected. Forty-three percent responded that they didn't know the reason, while twenty-three percent cited as the reason depressed economic conditions (e.g.,"Employer not hiring now", "Employer accumulating applications."). Only 33 percent

felt that their rejection was the result of some individual deficiency (e.g., lack of skills, inadequate education, etc.).

Of the employers who responded, 44 percent reported not telling the applicant the real reason for his rejection. In every case, the actual reason was the applicant's skill or ability deficiencies or attitude. Rather than explain this to the youth, employers gave reasons which were beyond the youths' control, such as "No job openings" or "Will call you when a decision is reached."

In 65 percent of the cases when the youth was given no reason for rejection, the employer reported not hiring the applicant because of inability to meet job qualifications, appearance, or poor work records. Employers reported not hiring the other 35 percent because of no job openings.

Is the Interview Process a Learning Experience for Rejected Applicants? - Evidence is that the majority of youth view the job interview process as a learning experience, despite the fact that they are rejected as employees. Sixty-five percent of the youth indicated that they had learned something through their interview experience, 30 percent felt they hadn't and five percent were uncertain.

In relation to acquiring greater self-confidence through this experience for future interviews, 64 percent reported that they felt they had. This increased self-confidence was attributed, in almost all cases, to the additional exposure to interview procedures. For example, many cited better knowledge of what to expect (e.g., questions) in

the next interview, the likelihood that they would be less nervous during the next interview, and simply additional interview experience, as what they had learned.

Thirty-five percent were uncertain that this interview experience would assist them in terms of ease and confidence during future interviews. The reasons given were: 1) Every interview is different and one doesn't know what to expect, 2) The applicant is qualified for the job, but isn't hired. Interview experience will not overcome this, and 3) Interview experience will not improve problems,such as nervousness,during interviews.

High school graduates, it appears, gain more from the interview experience than high school dropouts. Seventy-two percent of the graduates felt they would be more at ease and confident during their next interview, compared to 56 percent of the dropouts. Eight out of ten female graduates felt their self-confidence during interviews would be improved, while little more than five out of ten males expressed this view.

Conclusion - Impressions and opinions of youth regarding the job interview process and themselves in relation to this process are difficult to precisely determine. However, some conclusions can be drawn from the Survey of Rejected Applicants which should be useful for job referral personnel and employers in assisting labor force entrants.

Most rejected job applicants, ages 16 to 21, who seek placement

assistance from community placement agencies have had limited job interview experience. They tend to view the interview process as a "necessary evil," finding employer attention and the opportunity to express themselves inadequate. The interview process was considered an equitable method for assessing job applicants by only 37 percent of the youth.

Possibly, some youth approach the job interview with a preconceived idea that they will encounter discrimination either because of race or age, and, thus, attributed their rejection to this factor. While most of the applicants surveyed accepted the reason they received from the employer for rejection as correct, all but one of those who did not cited racial discrimination as the reason for employment rejection. Youth who received no reason for rejection, in almost every case, did not mention discrimination as the probable cause. While it is recognized that discrimination is a barrier to labor force entry in the Cleveland area, it seems unlikely that discrimination was the reason for rejection of all of those youth in the former group who reported it.

Employment rejection does not seem to cause the formation of a negative self-image. The rejected applicants were overwhelmingly satisfied with their performance during the job interview.

Many youth, when not told why they are rejected, do not realize that it is their own inability to meet employer requirements which is responsible. Forty-four percent of those who were not told why they

were rejected could give no reason for their rejection. Yet, employers who reported why they didn't hire those applicants identified applicant inability to meet company skill, attitude and appearance expectations as the major reason for rejection.

While most rejected applicants feel that they learn from experience in the job interview, a significant proportion do not. (30 per cent of those surveyed).

The majority of youth rejected job applicants feel they gain self-confidence which will assist them in future interview situations. Youth who do not believe they gain in this respect indicate that they feel defeated by their continuing inability to become job connected. (See Addendum E, page IX for statistical findings.)

E. TANGENTIAL OR RELATED FACTORS

Tangential factors are those which present barriers to the smooth labor force entry of youth, but do not receive in-depth treatment in the BLUEPRINT because corrective actions are beyond the scope of the research design. The relationship of these factors to the labor force entry process is briefly described, supplemented by statistical information in the Addenda.

a. Poverty

Poverty is defined according to poverty guidelines established by the Office of Economic Opportunity as an annual non-farm income for a family of four below $3,967.00. On the national level there was an increase of 1.2 million poor people from 1969 to 1970, the first yearly increase in the poverty population since 1959. (36)

The incidence of poverty is increasing in certain areas of the City of Cleveland as residents in these areas with income above the federal poverty level relocate in other areas of the city or in the suburbs, leaving concentrations of poverty behind. The increased concentration of poverty heightens the labor force entry problems of youth residing in "poverty pockets." Black youth are most likely to be members of families with incomes below the poverty level. In Cleveland, four of the six poverty areas are predominantly black.

An official January, 1970 report of the Cleveland Area Cooperative Area Manpower Coordinating Planning System (CAMPS) estimates that there are 52,000 disadvantaged youth under 21 in Cuyahoga County

who require special employment related services. Three out of four of these youth are high school dropouts.(10) (See Addendum D, Poverty in Cuyahoga County.)

Labor force entry problems associated with poverty include:

- Financial need as a major consideration of early school leaving; dropping out of school limits the ability of poverty level youth to meet employer educational requirements.
- Absence of financial support to sustain the job search and ease movement into the labor market.
- Unattended medical difficulties which disqualify job applicants.
- Parents and significant others unable to provide job leads or labor market information.
- Lack of entry level jobs in poverty areas.

b. Psychological and Emotional Problems

The psychological and emotional characteristics of young job seekers determine, to a large extent, the effectiveness of their job search, success on initial jobs and opportunities for advancement. Some of the psychological and emotional problems which adversely affect the labor force entry process may manifest themselves in the following ways:

- Alienation from the employment "system" in general
- Estrangement from institutions
- Distrust of authority figures
- Hypersensitivity to criticism
- Poor work attitudes (i.e., attitudes which fall below the accepted norms of employers)
- High anxiety, often displayed in interview situations
- Lack of assertiveness and/or motivation

The formation of these psychological and emotional characteristics is influenced by a variety of elements, such as family environment, life style, influence of peers, and negative encounters with major

institutions. (See Addendum F, Highlights from the Literature on Psychological and Emotional Barriers to Labor Force Entry.)

c. Physical Handicaps

Physical problems are an obstacle to employment primarily for youth from poverty backgrounds. For the most part, low-income families receive medical care during emergency or crisis situations only, rather than receiving preventive or remedial care. For example, a study conducted in Midtown Manhatten found that children under 15 average two physician visits per year in families with income under $2,000 compared to 4.4 in families with incomes over $7,000. In families with incomes under $4,000, 22 percent of the children under 15 have never seen a dentist compared to 7.2 percent in families with incomes over $10,000.(33) (See Addendum G, Health Problems of the Poor.)

Physical and emotional care resources for persons who cannot afford a private physician are extremely inadequate in the Cleveland area. Therefore, it is not uncommon for labor force entrants from low-income families to fail physical examinations required for employment because of physical defects which have gone undiagnosed and uncorrected. Health problems such as obesity, hernia, back disabilities, high blood pressure, and poor eyesight that is uncorrectable rule out a significant percentage of entry-level job applicants in the Cleveland area.(97)

d. Transportation

Obstacles to the employment of City of Cleveland labor force entrants

have beem created by the movement of business and industry away from the central city toward the suburbs during the last decade. Since 1967 approximately 18 Cleveland manufacturing firms, each with more than 100 employees, have relocated in the suburbs.*

The 1967 Manpower Report of the President presented national information on the transportation problems facing inner-city dwellers.(48) Between 1954 and 1965 almost two-thirds of all new industrial buildings and approximately one-half of all new stores were constructed outside the central cities. Few inner-city residents hold jobs in the suburbs. The cost of transportation to the suburbs from central city areas (e.g.,$1.00 - $1.20 per day bus fare between Cleveland and suburbs) is prohibitive for many inner-city dwellers who are low-wage earners, and the transportation costs are continuing to rise rapidly.

These findings are further supported by findings of a 1971 survey of Cleveland area federally funded manpower program administrators.(36) The administrators unanimously agreed that "transportation is one of the most strategic factors involved in placing the disadvantaged in jobs."

Youth are particularly restricted in their job searches because most youth do not own automobiles and must rely upon public transportation if employed outside of their home neighborhoods. According to a study conducted in the central city of Boston, black inner-city

*Regional Planning Commission, November 17, 1971.

residents face greater transportation barriers to employment than their white counterparts. (35) The model white central city resident traveled to work by car, while the model black resident relied upon public transportation. Fifty-one percent of the white respondents and 26 percent of the black respondents used their own cars when traveling to work. Thirty-four percent of the blacks relied on bus service as compared to 11 percent of the whites. Black inner-city residents were less able to search for the higher quality jobs in the suburbs and lacked friends employed in these areas with whom to share the costs of a car pool.

e. Automation

Rapid technological advancements have changed work force requirements of business and industry, with a resultant negative effect on the availability of beginning job opportunities for youth workers. This is especially the case for youth who do not possess specific skills, a trade or a college education. Edward T. Chase, in Manpower Policies for Youth, estimated that "40,000 jobs disappear per week owing mainly to technological change, many of them so-called entry jobs of the lower skill variety". (46)

There has been tremendous increase in the demand for professional technological workers. The need for semi-skilled, skilled, clerical and service workers has also increased. Automation, however, has decreased job openings for unskilled workers. School leavers who are prepared only for entry into jobs of this nature must compete with more mature workers for the remaining unskilled and semi-skilled jobs.

The displacement of blue-collar workers has an impact on employment opportunities for black youth.(17) Blue-collar jobs in which blacks have been able to secure steady employment are being eliminated as a result of automation. On a national basis, white-collar workers are projected to outnumber blue-collar workers by more than 50 percent in 1980. As of 1970, approximately 36 percent of all workers were employed in white-collar occupations, while 28 percent of all workers held blue-collar jobs. Only a slight increase in blue-collar workers is expected during the coming decade.(96)

f. Labor Market Structure

The urban labor market is described in the 1971 Manpower Report of the President as consisting of two separate labor markets which operate side by side: the "primary" and "secondary" markets.(52) Employment opportunities for disadvantaged workers are primarily available in the secondary market where jobs are characterized as low-paying, irregular and generally undesirable. Upward mobility to the primary market is virtually impossible, except during a general scarcity of labor. Alternatives for the disadvantaged to employment in the irregular economy of secondary markets are illegitimate street activities or public assistance.

Inner-city youth, who have few models of success to emulate in the primary labor force, may turn to illegitimate activities for their livelihood and survival. Illegitimate activities offer an opportunity for success and neighborhood respect, whereas legitimate employment in the secondary market appears less profitable and ridden with disappointment or frustration.

Labor market structure also refers to the quantity and type of entry level jobs available. Although statistical data in this area is unavailable, consensus exists that entry level job seekers currently outnumber available entry level job opportunities.

The Regional Planning Commission has projected the increase in employment by industrial category to 1980 (based on the 1960 Census).(16) The expected employment change in Cuyahoga County from 1970 to 1980 follows:

	1970	1980	Average Annual Percentage Change 1970 - 1980
Total	810,000	875,000	+0.8
Mining	1,300	1,000	-2.6
Construction	33,000	36,000	+0.9
Manufacturing	296,000	302,000	+0.2
Transportation	50,000	51,000	+0.2
Trade	156,000	169,000	+0.8
Finance	39,000	44,000	+1.2
Service	155,000	179,000	+1.4
Government	80,000	92,000	+1.4

In general, employment opportunities will be greatest in trade, finance, services and government. Manufacturing, the backbone of Cuyahoga County's employment, will experience minimal growth, at best. The County's manufacturing firms are in keen competition with the firms in neighboring counties, where land costs are more reasonable and expansion less difficult.

These trends in employment by industry are further supported by data and conclusions in the Cleveland Area Manpower Coordinating Committee F/Y '72 Plan of Services.(9) The employment shift towards service

industry was found to be "decisive and continuous," while the manufacturing sector "has ceased to be an unlimited source for increasing job opportunities." The service industry accounted for 64 percent of the total employment increase (93,000) in Cuyahoga County from March, 1959 to March, 1966. Manufacturing's relative share of employment dropped from 38.3 percent to 34.7 percent during this period. This decrease is attributed to technological changes in manufacturing processes which inhibit growth of employment, although they create at the same time a demand for new skills.

More specifically, during this seven year period increased employment in the services industry was experienced mainly in government, services and retail trade. The leading employers in services were medical and health services and miscellaneous businesses.

These data do not predict the number of entry level jobs expected in each employment category, but, rather, the total changes in employment by industry. These employment trends provide a general indication of which industries will hold job opportunities for youth during the decade of the 70's.

g. Housing

Federal manpower program administrators in the Cleveland area have indicated that both the conditions and location of clients' housing is related to their successful participation in manpower programs.(36) Administrators involved with younger people or with clients taking

education courses saw the problem in relation to the condition of clients' inner-city housing; those involved with job placements tended to see the problem in terms of housing location.

In terms of housing conditions, 11.2 percent, or nearly 58,000 of Cuyahoga County's housing units, were substandard according to the 1960 Census. In the City of Cleveland, 17.8 percent, or over 50,000 units, were classified as substandard.(16) Superior job performance cannot be expected by those employees who must return daily to a deteriorating physical environment.(1)

In terms of housing location, segregated housing patterns in Cuyahoga County mitigate against the movement of low-income families and individuals close to job opportunities in the suburbs. Segregated housing patterns are illustrated by the extent of racial segregation in Cleveland schools. According to the U. S. Department of Health, Education and Welfare, during the 1970-71 school year, 67 percent of Cleveland's black students attended 99 to 100 percent black schools and 95.8 percent attended mostly black schools.(54) The absence of low-income housing in Cleveland area suburbs further supports this pattern. Under the Cleveland Metropolitan Housing Authority only about 10,000 public housing units have been built by 1970, concentrated entirely within the City of Cleveland.

h. Life Styles

The life styles and cultural values of youth, which have undergone a

rapid transformation in recent years, often conflict with employer expectations, and thus present a barrier to labor force entry. Elements in the life styles of youth which may obstruct labor force entry include:

- Dress and appearance of applicants which conflict with work world regulations and customs.
- Demands by applicants that employers be socially responsible and committed to community well-being.
- Diminishing belief on the part of applicants in the work ethic (i.e.,production as a value in itself).
- Unacceptability of work which is not challenging and satisfying to applicants.
- Increased emphasis on the separation of the individual's personal life from his work life (e.g., unwillingness to devote more time than required to the job and seeking self-fulfillment through non-work activities).

Charles A. Reich provides his impressionistic interpretation of the values emerging in our country's youth in the Greening of America.(32) The following excerpts highlight some of the attitudes of youth towards work which frequently conflict with the values and goals of employers.

> The artificiality of work and culture.Work and living have become more and more pointless and empty. There is no end of meaningful projects that cry out to be done, but our working days are used up in work that lacks meaning: making useless or harmful products, or servicing the bureaucratic structures. For most Americans, work is mindless, exhausting, boring, servile, and hateful, something to be endured while "life" is confined to "time off." At the same time our culture has been reduced to the grossly commercial; all cultural values are for sale, and those that fail to make a profit are not preserved. Our life activities have become plastic, vicarious, and false to our genuine needs, activities fabricated by others and forced upon us.

> The new way of life proposes a concept of work in which quality, dedication and excellence are preserved, but work is nonalienated, is the free choice of each person, is integrated into a full and satisfying life, and expresses and affirms each individual being.

Many youth are unwilling to conform to the values and expectations of a corporation in order to succeed in the work world. This has been described as a "co-worldly" existence, in contrast to the "one-worlder" who "limits his values and beliefs to one world - the firm." Eugene Emerson Jackson, Professor of Administrative Science at Michigan State University, explains the attraction of youth to "co-worldly" living in the following way:

> Much of youth today reflect in their life styles the emotional consequences of one-worldly type fathers. Fewer and fewer sons of businessmen opt for their fathers' careers. One reason is that when dad did come home, he felt guilty for being away so much that he moaned about how hard he had to work to get ahead. And then when he did have a good day at the office, he often took his wife out to dinner. The net impression upon the child was that dad had to sacrifice family for success.(14)

In their quest for meaningful work, youth are making unprecedented demands upon their employers, as illustrated by the following company complaint:

> At California's Security Pacific National Bank, young employees have become highly vocal in insisting on more purposeful work and in questioning the bank's traditional ways of doing business. "They want to know exactly how they influence the company," says a company officer. "We never had to put up with these kinds of demands before."

Industrial psychologist, Dr. Mortimer Feinberg, in his article "Making the Generation Gap Work For You," labels the drive of youth for participation in decision making a revolutionary change.(44)

> Young people these days will not automatically defer to their elders simply because the Old Guard is older, more experienced,or even of higher rank in the organization. They need to be convinced, and to have the opportunity to convince others.

The extent to which the life styles and values of youth interfere with their smooth movement into the work world has not been determined. However, it cannot be disputed that such attitudes toward work, as illustrated above, can be a real source of conflict between employer and employee or job applicant, thus presenting a barrier to smooth labor force entry.

i. Discrimination

Discrimination remains a barrier in the Cleveland area to the smooth transition of black and other minority group youth into the work world(80)Discrimination in the Cleveland area has decreased as an overt manifestation of this barrier and assumed a more subtle form expressed in diverse ways.

Dr. Anthony B. Downs, in the publication, Racism in America and How to Combat It, distinguishes between these two forms of discrimination or racism.(80)

> Overt racism is the use of color per se (or other visible characteristics related to color) as a subordinating factor. Institutional subordination is placing or keeping in a position or status of inferiority by means of attitudes, actions, or institutional structures which do not use color itself as the subordinating mechanism, but instead use other mechanisms indirectly related to color. The very essence of institutional subordination is its indirect nature, which often makes it hard to recognize.

Examples of overt racism, which are related to labor force entry problems, include,"...the deliberate exclusion of Negroes, Mexican Americans and other colored persons from labor unions, law firms, school districts, all-white residential neighborhoods..."

An example of institutional subordination resulting from past overt racism which is pertinent to labor force entry barriers facing minority group youth is:

> ...most new jobs are being created in suburban shopping centers, industrial parks, new office buildings, and schools or universities. But American suburban areas are overwhelmingly white in population (about 95 percent in 1966). So the suburban sources of new employment are usually far from where non-whites live. This makes it very difficult for the latter to know when such job openings exist, to get transportation to look for them, and to commute to work once they are found. Even if they do get jobs in the suburbs, they have great difficulty finding housing near their work.

The scope of the BLUEPRINT prohibits a comprehensive discussion of the complex topic of discrimination and its resulting effects. However, discrimination, both overt and covert, does present the following difficulties to minority group labor force entrants:

- High unemployment rates
- Lower upward job mobility than white counterparts
- Lower wage rates than white counterparts
- Limited access to employment opportunities
- Transportation and housing problems
- Entry into lower skill beginning jobs than white counterparts

Discrimination not only closes job opportunities to minority group youth, but also influences their perception of the labor market.

For example, to avoid expected discrimination, black youth will not apply for jobs at those companies where they have "heard" or where they "feel" discrimination is practiced. These self-imposed restrictions limit the job searches of black youth and the breakthrough of black workers into additional job categories.

For example, a comparison of the job search methods utilized by blacks and whites in Boston discovered that less than 10 percent of the blacks recalled any experience with job discrimination in the past 10 years. The tentative explanation given this limited amount of reported discrimination was that blacks are aware of the social patterns of discriminatory employment and, therefore, they place restrictions on their job searches. Substantiation of this explanation was derived from the fact that 80 percent of the blacks in the study indicated that they "anticipated" discrimination if they attempted to break into "white" job categories.(77)

To counteract self-imposed job search restrictions resulting from patterns of discrimination, it is necessary that job referral personnel be aware of this tendency to restrict the job search. Youth should be counseled to investigate the real job opportunities that do exist.

The U. S. Department of Labor Office of Federal Contract Compliance has identified the following categories in which minority group members are most likely to be underutilized: officials and managers,

professionals, technicians, sales workers, office and clerical, and skilled craftsmen. The Department of Labor requires federal contractors to develop affirmative action programs which will guarantee equal employment opportunities regardless of sex and race. Required components of these affirmative action programs are summarized below, intended to bring us closer to the goal of equal employment opportunities for our community's youth.

Affirmative action programs must contain the following information:

1. An analysis of all major job categories at the facility, with explanations if minorities are currently being underutilized in any one or more job categories. In determining whether minorities are being underutilized in any job category, the contractor will consider at least all of the following factors:

   - The minority population of the labor area surrounding the facility;

   - The size of the minority unemployment force in the labor area surrounding the facility;

   - The percentage of minority work force as compared with the total work force in the immediate labor area;

   - The general availability of minorities having requisite skills in the immediate labor area;

   - The availability of minorities having requisite skills in an area in which the contractor can reasonably recruit;

   - The availability of promotable minority employees within the contractor's organization;

   - The anticipated expansion, contraction and turnover of and in the work force;

   - The existence of training institutions capable of training minorities in the requisite skills; and

- The degree of training which the contractor is reasonably able to undertake as a means of making all job classes available to minorities.

2. Goals, timetables and affirmative action commitments must be designed to correct any identifiable deficiencies.

LABOR FORCE ENTRY DURING THE 70's

WILL IT BE EASIER? OR MORE DIFFICULT?

The BLUEPRINT is concerned not only with problems of today's labor force entrants, but also problems which will be encountered by labor force entrants throughout the decade of the 70's.

Quantitative information on labor force entrants in the Cleveland area is sorely inadequate. For example, unemployment rates for youth, ages 16 to 21, residing in the City of Cleveland, Cuyahoga County and the SMSA have not been developed. Likewise, projections related specifically to the employment experiences on the local level of this age group during the decade are non-existent. Therefore, the major factors taken into account to determine the ease of labor force entry during the decade are: 1) Cuyahoga County population projections to 1980, 2) local and national structural changes in the labor market, and 3) significant trends in education.

POPULATION TRENDS

During the decade of the 70's approximately 251,000 youth in Cuyahoga County will reach the labor force entry age. Not all of these young persons will actually enter the labor force between the ages of 16 and 21. For many, labor force entry will be postponed by additional education, military service, and marriage.

The national labor force participation rate of out-of-school youth, ages 16 to 21, in October, 1971, was 71.9 percent.(21) To ascertain a general

indication of the youth population in Cuyahoga County which will be entering the labor force, the national youth participation rate was applied to Cuyahoga County's youth population, adjusting for an estimated 40 to 60 percent of the County's youth enrolled in college. Utilizing this method, a gross estimate was made that between 72,200 to 108,300 youth will enter the Cuyahoga County labor market during the 70's.

Certain population trends in the County may have an impact on the labor force entry process. While Cuyahgca County's total youth population, ages 16 to 21, is projected to increase 10.3 percent from 1971 to 1980, the population of black youth will increase at a much faster rate during this time period. The black youth population, ages 16 to 21, will increase 24 percent, accounting for approximately 48 percent of the total populat on increase for this age bracket. (See Addendum I, Projected Cuyahoga County Population - 1971 and 1980.)

Furthermore, there will be a slower increase in the County's youth population during this decade than during the past decade. The population of youth, ages 16 to 20, will increase approximately 15.4 percent from 1971 to 1980, compared to a 35.6 percent increase from 1960 to 1970.

The Department of Labor also projects that the rate of growth of the national teenage labor force will slow down dramatically, from an increase of 43 percent during the past decade to an increase of 11 percent between 1970 and 1980.(21) The number of teenagers in the work force is expected to remain high until 1980, although the annual increase will be smaller. Thus, the number of

persons experiencing problems of labor force entry and adjustment should decrease.

COLLEGE ENROLLMENTS AND MILITARY SERVICE

The major implication of the trend just discussed is an improved ability of community resources to meet the employment-related needs of youth. However, two additional factors - college enrollments and service in the military - may have an influence on the direction and effectiveness of community services in meeting the employment needs of youth.

As college costs continue to spiral upward and unemployment rates of college graduates rise, the desirability of a college education is coming into question. If, in fact, this leads to decreased college enrollments, the number of labor force entrants, ages 17 to 21, will increase during the 70's.

With a decrease in our military commitment overseas, particularly the withdrawal of U.S. military forces from Southeast Asia, the number of youth, ages 16 to 21, serving in the military is declining. In turn, there is an increase in the number of males in this age group entering the labor force.

In the year ending October, 1970, the civilian population of male high school graduates, ages 16 to 21, not in school increased sharply, by nearly 400,000.(21) In contrast, this civilian population increased by some 80,000 the year before,and decreased from October, 1968 to October, 1969. The dramatic rise in the year ending October, 1971 is attributed

to a decline of about a quarter of a million 16 to 21 year olds in the military from October, 1969 to October, 1970.

Should the decrease in the number of youth entering the military continue and/or college enrollments decline, community resources will have to assume greater responsibility in the area of youth employment preparation. High schools may find it necessary to equip an increasing proportion of their students with the requisite information, attitudes, and skills for employment. The job development, placement and follo -up system would also find it necessary to gear up services to meet the needs of these youth whose labor force entry is not postponed by college enrollment or military se vice.

STRUCTURAL CHANGES IN THE LABOR MARKET

While predictions based on college enrollments and military involvement are open to much speculation, structural changes in the labor market can be more accurately delineated. The skill level required for entry level positions is increasing. Automation is contributing to a shrinking base of low skill beginning jobs. Prognostications, both for the Cleveland area labor market and on the national level, suggest that job opportunities are experiencing the greatest growth in professional, technical and service occupations. (See page 35 for Cuyahoga County projections.)

The Department of Labor predicts that national employment in professional and technical occupations will increase by 50 percent during the decade; in service occupations 45 percent. Furthermore, for the first time there will be as many professional and technical workers as blue-collar workers.

Interrelated with these structural changes in the labor market is structural unemployment. Structural unemployment differs from cyclical unemployment in that the latter is generated by a general decline in the rate of economic activity and responds to fiscal and monetary stimulation. Structural unemployment can be relieved, primarily, by unemployed workers obtaining new skills which are saleable in the job market.

The structurally unemployed fall into two major categories: 1) low skilled workers, primarily blacks, teenagers, and women, and 2) skilled workers and professionals whose skills have become obsolete by technological changes or changes in national priorities. These structurally unemployed groups have unemployment rates significantly higher than those of other workers. For example, in November, 1970 the Bureau of Labor Statistics reported the teenage unemployment rate at 17 percent, compared to a 6 percent rate for the remainder of the labor force.(23)

To reduce structural unemployment jobs must be found or created for the chronically unemployed. However, this solution cannot be utilized without the cost of rising inflation. As the number of structurally unemployed increases, a greater amount of inflation occurs just to maintain the unemployment rate at its same level. As a result "many economists are starting to talk of 5 percent as the 'full-employment unemployment rate,' in contrast to the 1960's figure of 4 percent."(42)

As one of the groups hit hardest by structural unemployment, youth face great difficulties in entering the labor market. Structural unemployment

is not expected to be abated without new approaches to the problem, such as the creation of public service employment opportunities.

A significant structural change in Cleveland area employment is the movement of industry from the city to the suburbs. As noted on page 32, since 1967 approximately 18 Cleveland manufacturing firms, each with more than 100 employees, have relocated in the suburbs.* Also, the Regional Planning Commission found that between 1967 and 1971 Cuyahoga County lost 20,000 jobs, mainly manufacturing, through plants going out of business, leaving Cuyahoga County or cutting back in production. Between 1960 and 1975 Cuyahoga County's employment in manufacturing is projected to decrease as much as 17 percent.(68)

The movement of industry away from the city increases job opportunities for suburban youth, but to the detriment of youth residing within the City of Cleveland. As noted in Addendum D, Poverty in Cuyahoga County, poverty is concentrated within the City of Cleveland. Thus, many youth cannot afford to follow the jobs moving out of the city. Also, the movement of industry to the suburbs is highly detrimental to Cuyahoga County's black youth. Approximately 87 percent of Cuyahoga County's black population resides within the City of Cleveland. Between 1960 and 1970 the white population in the City of Cleveland decreased by 26.4 percent while the black population increased by 14.7 percent.

EDUCATION

In the City of Cleveland an increasing proportion of youth have been

* Regional Planning Commission, November 17, 1971.

acquiring high school diplomas. Comparison of the 1969-70 high school dropout rates to those of 1968-69 reveals that the dropout rate increased in only one school during the 1969-70 school year. During the 1970-71 school year, 13.2 percent of the students in Cleveland high schools dropped out of school, compared with a 14.4 percent dropout rate in 1969-70.(85). Likewise the dropout rate in the junior high schools decreased from 2.4 percent in 1969-70 to 2.2 percent in 1970-71.*

The major significance of this trend is the ability of an increased number of youth to meet the employer requirement of a high school diploma. However, this information does not reflect the quality of education provided each student nor the ability of individual students to meet other employer requirements upon graduation.

A significant development in education affecting the labor force entry process of youth is the expansion of vocational education programs and facilities throughout the State of Ohio. State legislation requires all school districts in the State of Ohio to provide an adequate program of vocational education for 40 percent of all high school youth by 1974. The increased availability of vocational education programs will equip an increasing proportion of Cleveland area youth with marketable job skills during the decade.

PREDICTIONS FOR THE 70's

In answering the question - Will labor force entry be easier or more difficult during the 70's? - a simplistic answer will not suffice.

* Comparison of dropout rates among school systems in Cuyahoga County is not possible. Dropout rates are not measured uniformly among school systems.

Three trends -- improved educational attainment of youth, greater availability of vocational education programs, and a declining increase in the youth population during the decade -- will have positive influence on the labor force entry process. At the same time, structural changes in the labor market will demand of youth the ability to move into ever-rising skill levels of beginning jobs and increase the likelihood that they will join the ranks of the structurally unemployed. Also, the mobility of youth residing within the City of Cleveland will determine their ability to follow job opportunities which are leaving the city.

The response of community resources to these employment trends appears to be the key to the labor force entry process in the future. The schools must keep abreast of structural changes in the labor market and provide all students the quality of education which will assist them in meeting the increasing challenges of a higher skilled technological labor market. The job development, placement and follow-up system must provide a highly coordinated and effective link between the school and employers. Within this system, adequate supportive services must be available to assist with such problems as transportation to the increasing sources of jobs outside the city. Industry assistance must play a vital role in shaping the employment preparation of youth and in promoting equitable practices and validated requirements.

The ease of the labor force entry process hinges on these "ifs". It appears likely that without a viable response of the community to the

present labor force entry problems of youth, the movement of youth into the work world will become a more difficult process during the decade, particularly in light of the Cleveland area's changing labor market structure. The recommendations in the following section, we believe, can aid the Greater Cleveland community in promoting a smoother transition of its young job seekers into the work world during the decade of the 70's.

RECOMMENDATIONS

Recommendations which are presented in this section are based primarily on two criteria:

1. Workability and feasibility, and

2. Capacity to significantly improve the labor force entry process and transitional experience leading to career connection.

Recommendations are presented in sections, with each section devoted to the specific system which is primarily responsible for implementation. However, in many instances, it is not the sole responsibility of one system or institution within the system to implement the recommended strategy. A cooperative effort between two or more community systems or institutions is required for the promotion of the majority of changes which are required to smooth the labor force entry process.

An apparent lack of effective communication linkages and cooperative actions exists among those community groups which currently assume some role in the movement of youth into the work world. The formation of a closer working relationship among those groups is absolutely necessary, therefore, to assure the most efficient and effective utilization of the community's resources in resolving labor force entry problems.

The chart on the following page contains major recommendations made, agency and/or organization responsible for implementation of the recommendations, and pages in the narrative corresponding to each recommendation. The recommendations are presented according to the system they pertain to - The Education System (green section), The Employing System (yellow section), and the Job Development/Placement/Follow-Up System (blue section).

MAJOR BLUEPRINT RECOMMENDATIONS

	Major Recommendations	Implementors	BLUEPRINT References
I.	Cleveland area schools should provide for all students to receive essential basic preparation for labor force entry and participation well before their initial entrance into the work world.	Schools - primary responsibility Counselors State Department of Education State Legislature	Pages 59-65
II.	Cleveland area schools should increase counselor and counselor aide staffs for employment-bound students, accompanied by regular on-going in-service training.	Schools - primary responsibility State Department of Education Industry Taxpayers	Pages 65-68
III.	Cleveland area schools should actively investigate adjusting school calendars so as to increase work-related experiences and employment opportunities for youth.	Schools	Pages 69-70
IV.	Cleveland area schools should initiate efforts to expand and improve cooperation and communication with industry and labor unions in developing employment and job entry preparation programs.	Schools - primary responsibility Industry Labor Unions	Pages 70-75
V.	Cleveland area industry and labor unions should reassess hiring practices and job requirements for entry level jobs.	Industry Labor Unions Federal Government	Pages 77-84
VI.	Cleveland area industry and labor unions should respond affirmatively to the schools' quest for improved cooperation and communication.	Industry Labor Unions	Pages 86-91
VII.	An effective coordinated local System of Job Development should be developed.	All agencies in the Job Development System, with the Metropolitan Cleveland JOBS Council as primary convener.	Pages 95-100
VIII.	A County-wide demonstration project should be developed to provide effective job placement services for varying school populations.	Schools Ohio Bureau of Employment Services Other placement agencies with the Manpower Planning and Development Commission as initial convener.	Pages 100-106

RECOMMENDATIONS

THE EDUCATION SYSTEM

The educational experiences of youth prior to labor force entry are critical factors in successful labor force entry and career connection. High school education, in the main, has achieved a high level of success in preparing youth for college entry. The potential of a high school education, however, in preparing non-college bound youth for successful participation in the labor force has, too often, been overlooked and/or underemphasized.

The education system is beginning to recognize more fully its role in employment preparation and the importance of education which is relevant to the needs of employment-bound students. This is evident in Ohio by a recent State Board of Education regulation which requires a minimum offering of vocational education courses in every school district and the commitment of State funds to increase vocational education opportunities.

With the exception of vocational programs, immediate employment goals generally are not of prime concern in school curricula. In the 1970-71 school year, approximately 15 percent of all students in Cleveland area high schools were enrolled in vocational courses. (40) It is estimated that between 30 and 40 percent of Cleveland area graduating high school seniors enroll in college. Therefore, many Cleveland area youth who enter the labor force each year, perhaps as many as one half, have received inadequate exposure and orientation to the work world in the general or college preparatory curricula they have pursued in high school.

Exposure of youth to the work world and preparing them for labor force entry is a legitimate and necessary educational function. The following recommendations are made to promote this function and, therefore, the employment potential of Cleveland area youth.

WORK WORLD AND OCCUPATIONAL INFORMATION DELIVERY

A variety of resources exist in the community which assume some responsibility for the delivery of work world and labor market information to youth. However, a gap is apparent in the delivery of this information from the available resources to the youth who are in need of such information. Evidence of this gap are the following labor force entry problems, attitudes and behavioral patterns of Cleveland area youth:

> Many youth who leave school, either as graduates or dropouts, have not developed career plans or goals for themselves, and upon entry into the labor force seek any job rather than employment related to their interests, abilities or goals. This irrational choice of an entry level job increases the propensity to move from job to job, seeking employment satisfaction.
>
> Work world and labor market information is generally not built into the school elementary/secondary curricula as an integral part of the student's total educational experience. In general, basic work world concepts and occupational information are not an integrated part of the on-going academic curriculum until youth enter state-supported vocational education courses, which, in the main, are unavailable to youth under age 16. Approximately 50 percent of the June, 1970 Cleveland high school graduates who entered the labor force had no formalized "vocational education." (40)
>
> Youth who drop out of school before or at age 16, (when they legally may do so) have, therefore, little experience or exposure to information necessary for successful labor force entry, except as it may have been offered in a special vocational guidance unit.
>
> High pupil-counselor ratios prevent guidance counselors from providing intensive vocational and occupational counseling. (e.g., Pupil-counselor ratios are approximately 400 to 1 in Cleveland high schools and 350 to 1 in Parma high schools; the State's basic requirement is 1 counselor for every 400 students.)

Parents can provide their children basic work world information and strongly influence their attitudes toward the work world. In many cases, however, parents are not closely attached to the labor market and, thus, are unable to assist their children. This is particularly true of families from lower socio-economic levels.

Labor force entrants frequently lack realistic work world expectations in regard to wages, advancement opportunities and responsibilities of an employee. Unrealistic expectations contribute to difficulties in securing the initial job and adjusting to the work environment.

In light of the schools' access to the majority of youth prior to labor force entrance, and the potential of education for preparing youth for the work world, the following recommendations are made by the Manpower Planning and Development Commission.

Recommendation I.A. describes how the schools, as an immediate short-term goal, should be meeting the employment preparation needs of youth. Recommendation II.B refers to the need for a comprehensive employment preparation program which should be the schools' long-term objective, introduced as early as possible into all Cleveland area schools.

I.A ALL CLEVELAND AREA SCHOOLS, AS AN IMMEDIATE SHORT-TERM OBJECTIVE, SHOULD PROVIDE FOR ALL THEIR STUDENTS TO RECEIVE THE BASIC MINIMUM PREPARATION FOR LABOR FORCE PARTICIPATION AND ENTRY WELL BEFORE THEY BEGIN THEIR INITIAL ENTRANCE INTO THE WORK WORLD. THIS BASIC PREPARATION SHOULD INCLUDE:

1. WORLD OF WORK INFORMATION AND MOTIVATION (e.g., basic concepts regarding work such as the relationship of work to the individual's personal, social, economic and ethical values, the importance of employment after leaving school, etc.);

2. CAREER ORIENTATION AND OCCUPATIONAL INFORMATION (e.g., school workshops, laboratories and work-study opportunities where youth "get the feel" of different occupational clusters, etc.);

3. LABOR MARKET INFORMATION (e.g., information on jobs available, entry job requirements, wage rates, job search know-how, etc.,); and

4. BASIC SKILLS that are required for most entry level jobs which can be built upon for career advancement (e.g., communication, writing, mathematics, manual skills, etc.).

B. THE K TRHOUGH 12 CAREER EDUCATION CURRICULUM (now operating on a pilot basis in selected school systems in Ohio) SHOULD BE INTRODUCED AND/OR EXPANDED WITHIN ALL SCHOOLS IN THE CLEVELAND AREA. THE STATE LEGISLATURE SHOULD PROVIDE SUFFICIENT FUNDS TO ENABLE THE STATE DEPARTMENT OF EDUCATION TO EFFECTIVELY MONITOR CAREER EDUCATION PROGRAMS WHEN THEY ARE NO LONGER IN THE PILOT STATE.

In all certainty, the K through 12 Career Education program will not be introduced into all schools in Cuyahoga County immediately. It is more likely that it will be introduced gradually, probably beginning in the lower grade levels and proceeding eventually through the secondary grades. Therefore, it is essential that until the K through 12 Career Education program is implemented in all elementary and secondary schools in the community, youth should be provided with at least the basic minimum preparation as recommended in I.A., which is essential for a smooth transition into the work world.

Dr. Sidney P. Marland, U.S. Commissioner of Education, has succinctly described the K through 12 Career Education concept as "All educational experiences -- curriculum, instruction, and counseling -- should be geared to preparation for economic independence, personal fulfillment and an appreciation of the dignity of work. Career education is designed to give every youngster a genuine choice, as well as the intellectual and occupational skills necessary to back it up." (56)

Basically, career education requires the revision of curriculum, beginning in kindergarten and extending through high school, to relate work world concepts and labor market information to the subjects being taught. "Vocational development is usually not accomplished by a single decision. It is more normally a long term process which may continue throughout an individual's life span." (53) Integration of vocational goals with academic goals throughout the formal education experience is logical and sensible, since education leads to vocational selection and labor market participation.

The content of the K through 12 Career Education curriculum varies according to the grade level of students, increasing in specificity as youth move through school. At the lower elementary school level, basic work world concepts, such as the meaning of work and its importance to the individual, are incorporated within the core subject material. The curriculum increases in sophistication as youth move through the upper elementary high school levels. For example, labor market information in relation to the economic and industrial systems is explored at the high school level, and emphasis is placed on career development for the individual student, culminating in the specifics of job search techniques and local employment opportunities.

Teachers assume primary responsibility for relating subject matter to the work world. Counselors serve as resources for teachers and administrators and as coordinators with community agencies, in addition to working with individual pupils. All school staff in their occupations can provide meaningful examples of the world of work.

In awareness of the incongruity between the career needs of students and their present school curricula, the K through 12 concept is being advocated by the U.S. Office of Education and the State of Ohio Department of Education. The Center for Vocational and Technical Education at the Ohio State University has been appointed project manager and prime contractor for a Comprehensive Career Education Model program under the U.S. Office of Education. (8) Currently, the K through 12 concept is being introduced into five Cleveland schools on a pilot basis.

Ongoing evaluation of the K through 12 Career Education curriculum is essential for the effectiveness of the program. Presently, the Ohio State Department of Education lacks sufficient funds for this kind of evaluation when programs are no longer in the pilot or demonstration phase. Sufficient funds provided by the state legislature for evaluative purposes will assure objective assessment of ongoing curricula and efficient utilization of program operating funds.

Since the K through 12 Career Education program can not be immediately and fully implemented in all Cuyahoga County schools, these elements of a comprehensive K through 12 Career Education program, as described below, should be made available now in order to provide youth the basic preparation necessary for successful labor force entry.

I.a Company and plant tours have been a method of work world and occupational exposure in many schools. The too frequent pattern, however, is for large groups of students to visit companies, gaining only a superficial view of occupations. An improvement on this method would be the <u>exposure of students in small groups to individual occupations within a company, viewing the occupation on an intensive</u>

basis as it is performed and meeting with the individuals who perform the occupation.

The schools should take actions which will assure that these tours are valuable mechanisms for increasing students' knowledge of the work world. For example, such procedures as discussion groups, before and after the tours, will reinforce the learning experience of the tour. Provisions should also be made by the school for follow-up contact with the companies visited. Through such contact the school will be better able to evaluate the educational content of the tours and to maintain linkages with companies in order to develop additional employment-related learning experiences for students.

I.b Youth frequently approach labor force entry with unrealistic expectations. They may have vague or inaccurate impressions about employer standards and requirements in relation to such things as wages, attendance, dress, supervision, work discipline and job performance. Acceptance of supervision and personal relations with co-workers are areas in which labor force entrants often encounter difficulties.

To inform students of "what they are up against" in the work world, many schools have developed speaker programs. Top company executives and middle managers have been most frequently utilized as resource speakers. In selected cases, recent high school graduates with a few years of work experience have been utilized as program speakers. The response of students to these speakers indicates that recent high school graduates who are working are highly successful in conveying to students realistic work world information about the beginning job

experience. These young workers are able to judge, through their own recent experience in entering the work world, the misconceptions in-school youth may hold about this process and the information which would be most beneficial to them.

As a valuable element in a career preparation program, schools are urged to utilize as speakers in vocational information programs recent high school graduates who are employed.

I.c Youth require specific information during the final years of their education on techniques of finding a job. Development of job search skills should receive special emphasis in the final stages of career preparation at the points where youth are preparing for direct labor force entry. As an additional method of assuring that youth know how to maneuver in the job seeking market, the schools should provide job readiness group counseling to students, with special emphasis on job search skills.

A major advantage of this counseling technique, which maximizes efficient use of limited counselor time, is that more students receive assistance than if job readiness counseling were provided on an individual basis. Also, information presented in group counseling sessions is reinforced by peer group interaction.

COUNSELING PERSONNEL

Dr. James B. Conant recommended 12 years ago in "The American High School Today" that the nation's high schools should have one vocational counselor for every 250 to 300 pupils. The national ratio is currently only one counselor for every 550 pupils.

The Cleveland area schools fare somewhat better in this respect. For example, in the Parma School District each counselor serves between 350 to 400 students and in the Cleveland School District the counselor pupil ratio is approximately 1 to 400. However, guidance departments acknowledge that counseling staff is insufficient to serve students' employment-related needs. More counseling personnel is needed to provide opportunity for job development activity, work with individual students, and follow-up services.

The expanded use of para-professionals as counseling aides could help to relieve the shortage of counseling staff. Para-professionals have been employed most effectively in employment-related counseling, particularly in Cleveland's Job Development Placement Services program and the Employability Development Guidance Project operating on a demonstration basis in selected Cleveland and East Cleveland High Schools. Although they do not hold the education credentials of counselors, para-professionals with experience in business and industry possess employment expertise which is of high value to students. Para-professionals who can be drawn from the community surrounding the schools enable students to relate with counseling staff from a similar environment.

In Service Training

Increasing the counseling staff, without providing appropriate training for them, will not guarantee, however, that the employment-related needs of youth will be met. Counselors are frequently more closely attuned to the academic world than to the work world. In part this is a result of counselor certification requirements. A certified school counselor, under State of Ohio regulations, is required to hold a master's degree, possess a standard teaching certificate and have had three years of employment experience, one of which

must have been in classroom teaching. Counselors regularly receive in-service training in certain schools of Cuyahoga County. However, this is not a widely practiced procedure within the County.

Not only counseling staff, but all school personnel in each occupational and skill category, have a potential influence on the work world knowledge and preparation of youth. These contacts between students and school employees - including teachers, administrators, counselors, clerical staff, maintenance staff, kitchen staff, nurses and librarians - can provide occupational-related experiences which contribute to the work world readiness of youth if the school administrators, faculty and staff are made aware of their potential in this area and informed on the techniques of meaningful sharing their specialized occupational knowledge and experience.

Industry assistance is highly desirable in in-service training programs designed to upgrade the work world knowledge of counselors and teachers. The following are example of ways in which industry assistance could be enlisted by the schools for current occupational information about the local work world as an aid to their counseling staff:

1. Through plant and office visits for counselors and teachers.
2. Through workshops, conferences and seminars between schools and industry.
3. Through counselor attendance at local industry meetings and free memberships in local industry associations.
4. Through provision of summer or vacation actual work experience for counselors in a formalized in-service program coordinated by boards of education.

Counselors, in some instances, are unaware of the specific labor force

entry problems of youth. Counselors should inform themselves fully about these factors so they are better able to assist youth who encounter labor force entry obstacles.

Counselors training programs, for example, should inform counselors about new federal regulations related to job seekers with offense records and about community services available to meet the needs of young criminal offenders. Among these are:

1. The Bonding Demonstration Program, funded by the Department of Labor and administered by the Ohio Bureau of Employment Services, under which a criminal offender may be bonded if it is necessary to secure employment or if a job will be lost if the offender is not bonded, and

2. State legislation providing for sealing of a first and only juvenile offense record if, within a two year period after the offense was committed, no additional offense is committed and the offender requests the record be sealed. (27)

In light of the critical need for additional counseling staff time devoted to moving youth into the work world and the need for counselor in-service training, the Manpower Planning and Development Commission recommends that:

II. CLEVELAND AREA SCHOOLS SHOULD INCREASE THEIR STAFFS OF COUNSELORS AND ANCILLARY COUNSELING AIDES TO MORE ADEQUATELY MEET THE NEED OF EMPLOYMENT-BOUND STUDENTS. ACCOMPANYING THIS INCREASE, SCHOOL COUNSELLING PERSONNEL SHOULD RECEIVE ON-GOING IN-SERVICE TRAINING RELATED TO JOB PLACEMENT COUNSELING.

To provide increased counseling staff, public taxpayers must be convinced of this need and urged to support necessary levies. Other influential groups, as the State Department of Education, must lend their active support if this recommendation is to be implemented.

EXPANDED WORK EXPERIENCE OPPORTUNITIES FOR IN-SCHOOL YOUTH

Work experience while attending school eases the movement of youth into permanent employment. Studies reveal that upon leaving high school both dropouts and graduates are more likely to have a job waiting for them if they have worked while attending school. (88) Work experience prior to full-time labor force participation also fosters work world adjustment, realistic work expectations and the formation of career objectives.

The present school calendar year arrangement limits employment opportunities for both continuing students and high school graduates. All youth are released from school, either for vacation or because of graduation, at the same time each year. This results in youth flooding the labor market at one time, and particularly during the summer, and competing for scarce job opportunities at the skill levels for which they are qualified. Competition for these jobs is particularly acute during periods of depressed economic conditions. Evidence of this is the significant decline in summer work experience of males, ages 16 to 21, who were enrolled in school during 1970, a year when the economy was slack, compared to previous years when the economy was expanding. (99)

Therefore, the Manpower Planning and Development Commission recommends that:

III. CLEVELAND AREA SCHOOLS SHOULD ACTIVELY EXPLORE ADJUSTING SCHOOL CALENDARS SO THAT THE WORK-RELATED NEEDS AND EMPLOYMENT OPPORTUNITIES FOR YOUTH ARE MORE EASILY MET.

For example, if schools were in session 12 months each year and students were released for vacation or graduated on a rotating basis throughout the year, employment opportunities would be increased. Adjustments of school operating schedules to allow class attendance during the evening might also

increase opportunities for youth to obtain valuable work experience. Investigation by the schools of these and other means of increasing work opportunities for youth should receive attention.

SCHOOL/INDUSTRY COMMUNICATION AND COOPERATION

"High in priority among societal goals which are converging with those of industry executives and corporations is improvement in the relevance and quality of education," states Samuel E. Burt of the W. E. Upjohn Institute. (91) In the past, many business and industry executives have volunteered their services to the school systems. To improve, expand, and enrich school programs Cleveland area school systems must strengthen existing relationships with industry and develop new relationships in areas where industry support and assistance is needed.

In Mr. Samuel M. Burt's documentation of the extent and willingness of industry to work jointly with education in the W. E. Upjohn Institute Report on "Strengthening Volunteer Industry Services to Public Education," he concludes, "It is the responsibility of school administrators to seek ways and means to make involvement possible, to guide industry in its efforts to become involved, and to provide the necessary leadership."

Industry possesses resources and talents which, if applied more extensively to the employment preparation of youth through cooperation with the schools, would increase the employment potential of youth and also assure industry that youth would have the appropriate knowledge and skills to meet future manpower needs. The prime concern of the schools is to meet the needs of students rather than serve the needs of industry. Industry, however, benefits from the employment preparation provided students in the schools

and has a responsibility to contribute to this preparation.

To foster close liaison between schools and industry in the preparation of in-school youth for subsequent employment it is recommended that:

IV. CLEVELAND AREA SCHOOLS SHOULD INITIATE EFFORTS TO EXPAND COOPERATION AND IMPROVE COMMUNICATION WITH INDUSTRY AND LABOR UNIONS IN THE DEVELOPMENT OF EMPLOYMENT AND JOB ENTRY PREPARATION PROGRAMS.

Certain areas upon which an improved school/industry partnership should concentrate follow. Note should be made that this partnership cannot be sustained if the special interests of either group has predominance, but only if the educational needs of youth are paramount.

IV.a Cleveland area schools, industry and unions should work cooperatively to develop curricula related to local area job requirements.

The absence of close cooperation and communication between Cleveland area schools and employers restricts the ability of the school to equip youth with skills demanded for local entry level positions. Interviewers in Cleveland area business and industrial firms have identified the inability of entry level applicants to meet basic reading, math and communication skill requirements as a major reason for employment rejection. (97) Also, labor force entrants seeking clerical positions are often found to be deficient in spelling, filing and typing skills.

School curricula too frequently do not reflect the realities of the work world. Since employers are dependent on the schools for a quality labor force supply, they should be responsive to the schools' requests for assistance in curricula development.

IV.b In further conjunction with insufficient school/industry communication, employers and unions are frequently unaware of the skills

imparted to youth through vocational education programs. In some instances, industry supervisors fail to recognize the skills of these youth and assign them to jobs not commensurate with their abilities. Cleveland area schools, therefore, should take the initiative in promoting increased employer and union awareness of the skills and abilities of youth completing vocational education curricula so that these skills can be more effectively utilized.

IV.c Cooperative education programs, which involve the part-time employment of the student outside the school along with part-time related classroom instruction, have been incorporated in the vocational programs of Cleveland area high schools. These programs involve close cooperation between the school and the employing firm. A school coordinator is responsible for arranging work stations with qualified employers.

Students, assigned to work sites on the basis of their interests and abilities, receive on-the-job supervision from the employer. The school maintains a coordinating function by serving as a resource to both employer and student worker.

Evidence is that students who have participated in cooperative work-education programs make a smoother transition from school to work than all other vocational program graduates. Studies indicate they have the best placement records (as many as 90 percent find jobs in the areas for which they are trained) and greater job satisfaction and higher job stability. (86)

Cleveland City and East Cleveland schools report that these programs have proved to be an effective means in keeping dropout prone students

in school. The East Cleveland school system estimates that cooperative work education programs reduce the dropout rate of students enrolled in these programs by 25 to 35 percent.

The East Cleveland school system has identified additional benefits derived from co-operative work-education programs. Students enrolled in such programs in 1970 attended school 30 percent more days than they had in previous years. Their grades increased almost a full letter grade over grades from the year before. No student enrolled in these programs was in any serious trouble with the law or school officials. Only two graduates of the cooperative-education programs were unemployed upon graduation in June, 1970.

Participation in cooperative-education programs is also an effective means of exposing youth to the realities of the work world. Youth receive labor market information first-hand and develop skills which will be of value when permanent employment is sought. Cooperative-education exposes youth to work on a part-time basis, thus easing the adjustment to full-time employment. Selection of the port-of-entry into the labor force by youth who have had work experience is more likely to be a rational decision based on career goals.

Only a relatively small number of Cleveland area youth are enrolled in cooperative-education programs. Because of the special value of these programs in facilitating labor force entry, Cleveland area schools, industry and industry associations and labor organizations should jointly promote the expansion of cooperative-education programs.

Cooperative-education programs which introduce youth to occupational "clusters" have been used effectively in some school systems. Distributive education, for example, is a cooperative program

exposing youth to the range of occupations in retail services. Dr. Sidney P. Marland, U.S. Commissioner of Education, has endorsed cooperative arrangements concentrated in clusters because a student "will retain sufficient flexibility to enable him to switch to a related occupation later with a minimum of additional training." (56)

IV.d A closer school/industry alliance formed to improve the employment preparation of youth could serve as a viable mechanism to expand and improve parental involvement in the labor force entry process. Parents can have a strong positive influence on the labor force entry process of their children. Some parents, particularly those who are not closely attached to the labor market, are not in a position to transmit labor market information to their children, instill in them positive attitudes toward work, or assist in the job search. Youth from these families must rely on the schools and other community resources for labor force entry preparation and assistance. Other parents, although they are well attached to the labor market, do not realize the needs of their children who are about to enter the work world and ways in which they could assist them.

Cleveland area schools should take the initiative in drawing together employers and the communications media to maximize parental assistance to labor force entrants, particularly in the areas of labor market information, job search skills, and work world adjustment, by cooperatively interpreting to them and helping them understand the role of parents in assisting labor force entry.

Presentations on the role of parents in labor force entry could be made to a vast variety of adult groups, supplemented by emphasis on this parental role by way of the communications media.

RECOMMENDATIONS

THE EMPLOYING SYSTEM

The changing philosophy of the industrial system in the United States, the greater intervention in the operations of business and industry by the federal and state governments, and the social concerns of business executives themselves forecast growing involvement in societal affairs by business and industry at all levels.(91)

In relation to this trend, the role of the Cleveland area employing system - business and industry (both private and public) and labor unions - requires expansion and increased commitment in public affairs and social concerns if the labor force entry process of youth is to be improved. There are several compelling factors to support increased concern of the employing system with the labor force entry process. Among these are:

- The employing system's need for qualified manpower, the source of which is today's labor force entrants and future labor force entrants.
- Industry requires viable communities in order to survive and prosper. Realization of the employment potential of youth is a major contributor to community viability.
- Public expectations that industry and labor unions contribute to social progress have been rapidly increasing. Efforts of the employing system to facilitate the labor force entry process will foster credible public images.
- Industry possesses vast resources and great expertise. Involvement of industry's capabilities in a cooperative effort with other community systems is essential to bring about the required changes in the labor force entry process.

Specific areas in which increased industry and labor union concern and activity are

needed to reduce obstacles to labor force entry and foster career connection include:

I. Review and corrective revision of hiring practices, job requirements and career advancement opportunities, including elimination of discriminatory practices.

II. Volunteer industry and union services to Cleveland area schools focused on preparation for and movement into the labor force.

I. HIRING PRACTICES AND JOB REQUIREMENTS FOR ENTRY LEVEL POSITIONS

Entry into the labor force for many Cleveland area youth is a process fraught with difficulties and obstacles which often appear or actually are insurmountable. Hiring practices and job requirements for entry level jobs are often a major contributor to these difficulties. Employers frequently utilize hiring practices and job requirements which do not gauge the ability of job applicants to perform jobs at the entry level. The resultant effect is often underemployment of higher qualified labor force entrants and unemployment of lesser qualified labor force entrants.

The entry level job secured by young persons has important consequences for their entire career patterns. The level of entry into the labor force is an important determinant of the types of positions held throughout an individual's work history, his job satisfaction, and his attachment to the labor force. Furthermore, unrealistic hiring practices and job requirements may completely prevent entrance of many youth into the mainstream labor force, relegating these youth to careers as marginal labor force members, necessitating illegitimate activities as means of support, and/or increasing dependency upon

scarce community resources.

The 1968 Manpower Report of the President concluded from studies on the relationship between employer hiring practices and requirements that many potentially useful workers are being barred from a wide range of jobs. (49) To assure that the employment potential of our community's youth is most effectively utilized and developed, the Manpower Planning and Development Commission recommends that:

> V. CLEVELAND AREA INDUSTRY AND LABOR UNIONS SHOULD REASSESS THEIR HIRING PRACTICES AND JOB REQUIREMENTS FOR ENTRY LEVEL POSITIONS, BASED ON OBJECTIVE AND VALID SELECTION CRITERIA. THIS REASSESSMENT SHOULD INVOLVE AGGRESSIVE PURSUIT OF NON-DISCRIMINATORY HIRING, SUPERVISION AND PROMOTION PRACTICES.

Efforts by the employing system to reassess hiring practices and requirements must involve close examination of: 1) education and experience requirements for entry level jobs, 2) upgrading and promotion policies, 3) hiring practices in relation to criminal offenders, and 4) non-discriminatory hiring, supervision and promotion practices.

Identified below under each of these categories are specific problems encountered by youth entering the labor force which require employer attention.

Education and Experience Requirements

Employer requirements for entry level jobs frequently are not validated as reliable indicators of job performance. In particular, education

and experience requirements may present insurmountable barriers to youth seeking entry level jobs. Educational requirements have become increasingly rigorous, with some employers requiring high school diplomas for their lowest skill jobs. "Educational credentials have become the new property in America," according to Ivar Berg. "Their use as a screening device systematically assigns large numbers of people, especially the young, to a social limbo."(12)

Youth who do not possess high school diplomas or have graduated without receiving adequate vocational training in school have difficulty moving into even the lowest level jobs. The practice of requiring experienced workers for all job categories severely limits job opportunities for youth moving out of school into the work world.

Frequently, employers and unions are unaware of the excellent skills possessed by graduates of vocational education programs. The result is underemployment of these youth. Employers should recognize the skills of vocational education graduates, employing them in jobs commensurate with their abilities. The schools also have a responsibility for promoting employer awareness of the vocational skills they impart to youth.

Jules Cohn, in The Conscience of the Corporations, states, "Most employers are still attempting to enforce job qualifications developed many years ago and never since reappraised. Government officials who review industry's upgrading programs tend to accept company definitions of qualifications required to do the job. But

these stated qualifications do not necessarily reflect levels of education and training actually needed for effective performance." (12) The Federal government has a responsibility to provide greater enforcement of existing laws governing employment requirements. Likewise, the State of Ohio needs to adopt adequate laws to protect job applicants and to provide for increased monitoring and enforcement of existing legal requirements.

Upgrading and Promotion Policies

Closely related to the problems created by job requirements not corresponding with job performance are company policies regarding upgrading and promotion. Stiff entry job requirements are often defended on the basis that companies require individuals with promotion potential. However, in many instances, promotions from low level positions occur slowly and infrequently, if at all.

Rigid hierarchies of job classifications exist in many companies, severely restricting upward mobility. These classifications and job descriptions often remain entrenched for years as company policy. In addition, training and upgrading opportunities for low-skill employees may not be sufficiently available. Dr. John L. Iacobelli surveyed the training policies, attitudes and practices of 131 employers in Greater Cleveland.(92) Based on employer comments, he concludes that, "...training does not hold a high priority among employers and that training is done as a matter of necessity when the employer has little other choice. The employer turns on his training system when skill

shortages grow until he has no choice but to train his own people, and the employer turns off his training system when the skill shortages ease to a tolerable level."

The absence of career advancement opportunities for low-skill entry level workers retards the career connection process of youth and may relegate able employees to low level jobs throughout their careers.

Hiring Practices in Relation to Criminal Offenders

The labor force entry process, in some instances, is obstructed for those youth who have criminal records. Some employers have assumed the hiring stance that applicants with criminal records are acceptable if the pattern and nature of offenses will not have a negative effect on job performance. However, employment is "automatically denied" to criminal offenders by some companies.(12)

Unjustifiable denial of employment to criminal offenders would be eliminated if employers were aware of and complied with recent Federal regulations governing the employment of such applicants. Federal compliance agencies must review denial of employment to criminal offenders more intensely and vigorously enforce existing laws. The need for improved efforts in this area were highlighted by the U.S. Civil Rights Commission's 1970 indictment of the Federal government's poor results in enforcement of civil rights legislation.

In recent months, three major regulations governing the employment of criminal offenders have been set forth. These are:

- Supreme Court Decision of March 8, 1971 (Griggs v. Duke Power Company) - The Supreme Court ruled, in effect, that hiring selection methods which are not demonstrably a reasonable measure of job performance are unlawful.

- Equal Employment Opportunity Commission Decision, May 19,1971 - EEOC ruled that a company's application forms requiring applicants to list all arrests, interrogations, or other conviction, were unlawful discrimination.

- California Federal District Court Dicision of 1970 (Gregory v. Litton Systems, Inc.) - The court ruled that denial of employment to a job applicant because of his arrest record, regardless of conviction, amounts to an unlawful employment practice because the policy has a discriminatory impact on Negroes.

Employers are sometimes hesitant to hire criminal offenders because of bonding and insurance complications. Small and medium-size companies, in particular, report that they encounter difficulties in securing bonding for their employees. A Bonding Demonstration Program sponsored by the U.S. Department of Labor has been in operation in Cleveland since September, 1967. Bonding is provided to those persons who are qualified for and would be hired on a specific job or whose current job is in jeopardy if bonding is not secured. Employer awareness of this program must be promoted, as evidenced by the number of individuals who have been bonded under this program since its inception. As of May, 1971 only 40 individuals were bonded through the program.(40)

Non-discriminatory Practices

Cleveland area employers, unions, educators, and job placement personnel admit that discrimination still remains a barrier to the smooth transition of minority group youth into the work world. (40) (See pages 39-43, The Effects of Discrimination on Labor Force Entry.) Discrimination is practiced in a more subtle form than previously, but its effects

remain as enervating on the work careers and lives of those who encounter it. Discrimination in employment is probably most common according to race, but it is also practiced according to ethnic affiliation, religion, and sex.

Efforts are being made in the community to eradicate discrimination in employment. The Equal Employment Opportunity Ordinance, enacted by the City of Cleveland in December, 1969 is prime among these efforts. Yet, discrimination has assumed such a subtle form that exposing and eliminating it is difficult, if not impossible, without the cooperation and commitment of each individual company and union.

Discrimination exists not only in company and union hiring practices, but also in the supervision and promotion of minority employees. Since employers have a responsibility to ensure employment and advancement opportunities for minority group members, employer associations and labor organizations should continue to encourage and assist their individual member companies and union locals in aggressively pursuing non-discriminatory hiring, supervision and promotion practices.

If such affirmative action programs are conscientiously pursued by individual employers and union locals, much of the bias against young beginning workers, often subtle and covert, can be eliminated. These affirmative action programs must be designed to eliminate covert racism which has resulted from three centuries of overt racial discrimination. Dr. Anthony Downs, in his U.S. Civil Rights Commission publication, Racism in America and How to Combat It, illustrates the indirect form

covert racism or "institutional subordination" has assumed in employer hiring practices.(80)

> Consider an employer who needs workers to fill certain jobs that demand advanced carpentry skill. Naturally, he requires that applicants have such skills in order to be hired. But what if the local carpenters' union excludes all Negroes and Mexican Americans as members? ...Or what if unions accept minority group apprentices specially trained in local high schools, but the only high schools providing such training are in all-white neighborhoods, either too far from minority group neighborhoods for convenient attendance, or far enough to be placed in different school districts... ...assume that the employer saves money by never advertising available job openings. Instead, he relies solely upon word-of-mouth communications from his present employees to their friends to find applicants - but all his present employees are white. ...the employer is taking actions which are not overtly racist in either nature or intent - but which nevertheless have racist effects - that is, they subordinate people because of their color. ...the effects occur because the seemingly reasonable and "unbiased" behavior of the employer takes place in an institutional context that still contains profoundly racist elements remaining from three centuries of overt racism. If the employer had carefully examined his recruiting practices to see whether he was giving members of all groups an equal chance to compete for his jobs, he might have discovered this situation.

II. VOLUNTARY INDUSTRY AND LABOR UNION SERVICES TO EDUCATION.

Cooperative action in the Cleveland area between education and the employing system must be strengthened if our community's youth are to move successfully into the labor force. The Committee for Economic Development, in its publication Social Responsibilities of Business Corporations, has reviewed the extent of private sector voluntary involvement in social improvement and concluded:

these voluntary efforts need to be expanded and intensified. Voluntarism is a power that has always contributed a great deal to the improvement and functioning of our pluralistic, democratic society. It should be utilized to the fullest extent possible by the business community in discharging its responsibilities to society. By exercising greater initiative and leadership, business can be more effective in shaping the future development of its social environment. In this way, business can guide change and enhance its operational scope and flexibility, rather than lapse into the constricting role of a rearguard defender of the status quo.

A most appropriate area of concentration for Cleveland area industry and labor voluntary efforts is employment and job entry preparation of youth. Industry contributions in this area will shape, in a positive direction, the social environment of the community by promoting youth employability. Industry has a special responsibility to lend its expertise to the schools, for the private sector is dependent upon the schools to prepare youth with the skills and attitudes needed in the work force. As direct beneficiaries of employment preparation provided by the schools, industry should become more involved in the employment and job entry preparation process, assisting the schools to the fullest extent possible.

Therefore, the Manpower Planning and Development Commission recommends that:

VI. TO INTENSIFY COOPERATION IN THE EMPLOYMENT AND JOB ENTRY PREPARATION OF YOUTH, CLEVELAND AREA INDUSTRY AND LABOR UNIONS SHOULD RESPOND AFFIRMATIVELY TO THE QUEST INITIATED BY THE SCHOOLS FOR IMPROVED AND EXPANDED COMMUNICATION AND COOPERATIVE EFFORTS.

Industry in the Cleveland area currently provides voluntary services to the school systems. For example, in the Cleveland City schools for every major vocational program area there is an advisory committee composed of business and labor representatives. But there are other contributions by the employing system which can assist the labor force entry process of youth. Specific strategies are suggested below which require closer cooperation and communication between Cleveland area schools and the employing system.

VIa. Counselors are frequently more closely attuned to the academic world than to the work world. In part this is a result of counselor certification requirements. A certified school counselor, under State of Ohio regulations, is required to hold a master's degree, possess a standard teaching certificate and have had three years of employment experience, one of which must have been in classroom teaching.

The following examples are <u>ways in which industry assistance could provide current occupational information about the local work world to school counseling staffs</u>:

1. Arrange plant and office visits for counselors.
2. Offer industry and business experience workshops, conferences, and seminars.
3. Invite guidance counselors to attend local industry meetings and offer free memberships in local industry associations.
4. Finance college credit community resources study courses.

5. Provide summer or vacation actual work experience for counselors through a formalized in-service program coordinated by local boards of education.

VIb. Closer cooperation and communication between Cleveland area employers and schools will improve the ability of the school to equip youth with skills demanded for entry level positions. School curricula do not always reflect the realities of the work world, as revealed by the Manpower Planning and Development Commission finding that many young job applicants are rejected for entry level positions because they cannot meet basic reading, math, and communication skill requirements.(97) Also, labor force entrants seeking clerical positions are often deficient in spelling, filing and typing skills.

Employers are, naturally, the experts on local job requirements which youth should be prepared to meet. A close working relationship, therefore, between business, industry, labor unions and the schools to develop curricula relevant to the work world is essential.

VIc. Cooperative education programs, which involve the part-time employment of the student outside the school along with part-time related classroom instruction, have been incorporated in the vocational programs of Cleveland area high schools. These programs involve close cooperation between the school and the employing firm. A school coordinator assumes the responsibility of arranging for work stations with qualified employers. Students are then assigned

to work sites on the basis of their interests and abilities and receive on-the-job supervision provided by the employer. The school maintains a coordinating function by serving as a resource to the employer and the student worker.

Evidence is that students who have participated in cooperative work-education programs make a smoother transition from school to work than all other vocational program graduates. Studies indicate they have the best placement records (90 percent find jobs in the areas for which they were trained) and greater job satisfaction and higher job stability.(86)

Cleveland area employers who have employed students through cooperative-education programs, for the most part, have been highly satisfied with the program. The program provides them a source for full-time employees whose skills, abilities, and potential they are fully aware of.

Cleveland City and East Cleveland schools report that cooperative education programs have been found to be an effective means of keeping dropout prone students in school. The East Cleveland school system estimates that cooperative work education programs reduce the dropout rate of students enrolled in these programs 25 to 35 percent.

The East Cleveland school system has identified additional benefits derived from cooperative work-education programs. Students enrolled in such programs in 1970 attended school 30 percent more days than

they had in previous years. Their grades increased almost a full letter grade over grades from the year before. No student enrolled in these programs was in any serious trouble with the law or school officials. Only two graduates of the cooperative-education programs were unemployed upon graduation in June, 1970.

Participation in cooperative-education programs is also an effective means of exposing youth to the realities of the work world. Youth receive labor market information first-hand and develop skills which will be of value when permanent employment is sought. Cooperative-education exposes youth to work on a part-time basis, thus easing the adjustment to full-time employment. Selection of the port-of-entry into the labor force by youth who have had work experience is more likely to be a rational decision based on career goals.

Only a relatively small number of Cleveland area youth, however, are enrolled in cooperative-education programs. Because of the special value of these programs in facilitating labor force entry, individual industrial companies and industry associations and labor organizations should jointly promote with schools in Cuyahoga County the expansion of cooperative-education programs.

VId. The employing system can further promote the quality and relevance of the education process by providing internships for in-school youth. A successful example of internships is a project directed by the Cleveland area members of the National Academy of Arts

and Sciences. Members of the Academy have volunteered their time and expertise to work with high school students, using facilities of five local television stations. During the 1970-71 school year five student groups, utilizing Academy members as resource persons, produced complete public service announcements. Four of these are currently being aired.

In recognition of the resources and expertise at business and industry's disposal to further the work readiness of youth, Cleveland area schools and employers should promote the development of workshops and internships within industry for in-school youth.

VIe. A closer school/industry alliance formed to improve the employment preparation of youth could serve as a viable mechanism to expand and improve parental involvement in the labor force entry process. Parents can have a strong positive influence on the labor force entry process of their children. Some parents, particularly those who are not closely attached to the labor market, are not in a position to transmit labor market information to their children, instill in them positive attitudes toward work, or assist in the job search. Youth from these families must rely on the schools and other community resources for labor force entry preparation and assistance. Other parents, although they are well attached to the labor market, do not realize the needs of their children who are about to enter the work world and ways in which they could assist them.

Employers and unions in the Cleveland area, schools, and the communications media should maximize parental assistance to labor force entrants, particularly in the areas of labor market information, job search skills, and work world adjustment, by interpreting to them the role of parents in assisting labor force entry. Presentations on the role of parents in labor force entry could be made to a vast variety of adult groups, supplemented by emphasis on this parental role by way of the communications media.

RECOMMENDATIONS

THE JOB DEVELOPMENT/PLACEMENT/FOLLOW-UP SYSTEM

The Job Development/Placement/Follow-up System includes all the agencies and organizations in the Cleveland area which provide job counseling, job development, job placement and follow-up services to youth. Youth, with the exception of those who obtain employment entirely through their own efforts or through the intervention of relatives and friends, are dependent upon this system to obtain initial employment. To assure youth a smooth transition into suitable entry level jobs, the components of the Job Development/Placement/Follow-up System must be coordinated so as to effectively and efficiently bridge the movement from school to work and develop, to the extent possible, channels of access to beginning jobs.

COMPONENTS OF THE JOB DEVELOPMENT/PLACEMENT/FOLLOW-UP SYSTEM

Cleveland area agencies or organizations with primary responsibility for services to labor force entrants are the schools, the Ohio Bureau of Employment Services, the Metropolitan Cleveland JOBS Council, and federally funded manpower programs.

Formalized concentrated school placement services through the Job Development Placement Service project of the Cleveland Board of Education are provided in five inner-city schools to all graduates entering the work force upon graduation. In the remainder of high schools in Cuyahoga County, job placement services are provided only incidentally, or to the extent that

counselors and teachers are able to offer such specialized assistance within their counseling /teaching loads. An exception is in the ease of students graduating from state-approved vocational education curricula. For these graduates, representing a minority of Cuyahoga County high school students, job placement and follow-up is a state-mandated function to be provided by the school, usually by the vocational education teacher or coordinator.

The Ohio Bureau of Employment Services operates a Youth Opportunity Center (YOC) in Cleveland which furnishes employment services exclusively to youth under the age of 22. YOC staff offer counseling, testing, referral, placement and limited follow-up services to youth. Staff members also participate in the School Cooperative Program, offering group testing and individual job counseling services to employment-bound high school seniors in schools requesting this service. YOC staff has access to the OBES Job Bank, a central source in Greater Cleveland for registration of job opportunities. Through the Job Bank, a daily list of job openings, printed on a microfiche, is available for referral of clients to employers.

The Metropolitan Cleveland JOBS Council (MCJC) is a private, non-profit corporation responsible for the development of jobs in private business and industry for the "disadvantaged". MCJC is also the Cleveland Metropolitan office for the National Alliance of Businessmen. A "disadvantaged" person as defined by the Department of Labor, is a poor person (one whose four-member family net income does not exceed $3,800 per year) who is not

suitably employed and who possesses one or more of the following characteristics:

1) A school dropout
2) Under 22 years old
3) 45 years or over
4) Handicapped
5) Member of a minority

MCJC's job development staff is composed of a) loaned executives from Cleveland area companies, and b) loaned staff from AIM-Jobs Project and the Neighborhood Youth Corps, two manpower programs operating under the City of Cleveland. The primary function of MCJC job developers is to obtain job orders from employers, on an ongoing basis, for disadvantaged job seekers.

Most of Cleveland's federally funded manpower programs are set up to serve a certain number of youth among their clientele. During fiscal year 1971 manpower programs served approximately 5,100 youth, ages 16 to 21. This was 33 percent of the total number served, down from 45 percent in 1969.(36) However, job placement in full-time gainful employment was effected for only 30 percent of all clients served during fiscal year 1971. All but three percent of the manpower program clients resided within the City of Cleveland. Therefore, it is evident that the number of youth served and placed in jobs through Cleveland's manpower programs is more than offset by the approximately 4,000 youth who annually drop out of Cleveland public schools and generally require employment-related services.

The remaining components in the Job Development/Placement/Follow-up System, provide placement-related services only to a relatively small youth population, primarily on a selective basis. These include public, voluntary,

and fee-charging agencies.

There are approximately 150 private fee-charging employment agencies in the Cleveland area. Youth utilize the services of these agencies only to a minor extent because of fee-charging policies and the limited number of entry level jobs registered with these agencies.

Employment-related services are only a minor aspect of the total programs in voluntary sector agencies. Neighborhood Centers, the Jewish Vocational Service and Vocational Guidance and Rehabilitation Services provide job referral services on a selective basis to clients. The Urban League provides job referral services to youth 17 years of age and over; to younger applicants only in special cases.

The Ohio Bureau of Vocational Rehabilitation, a public agency which provides special rehabilitation services to physically and mentally disabled persons, was projected to serve some 300 "disadvantaged disabled", mainly in-school clients, during 1971. (71)

JOB DEVELOPMENT SERVICES FOR YOUTH

The success of job referral and placement efforts is dependent to a significant degree upon the availability of job openings for youth. In the Cleveland area the major organizations with primary responsibility for developing jobs for youth are the Metropolitan Cleveland JOBS Council, the Ohio Bureau of Employment Services, the latter through its Youth Opportunity Center, and the Job Development Service in five inner-city high schools of Cleveland. Other organizations involved in youth job

referral and placement services may carry on their own job development efforts, but these efforts are generally not as formalized nor as extensive as those of OBES, MCJC or JDS. School guidance counselors and vocational education instructors develop jobs informally, primarily through ongoing contacts with employers. The extent of job development among other community agencies serving youth varies from full-time staff assigned to job development to informal contacts with employers.

Job development efforts for youth in the Cleveland area have not been fully developed nor organized and coordinated to maximize the efficiency and effectiveness of these efforts. Among major problems in the community's job development system which require community attention and corrective actions are the following:

- The Ohio Bureau of Employment Services has not reached its potential as a source for placement assistance to youth. Many jobs which become available in the Cleveland area are not registered with OBES. The job penetration rate of OBES is estimated at 20 percent. That is, some 20 percent of the job openings in the Cleveland area are listed with OBES. As a major job source for youth, it is important that OBES enlist the cooperation of employers in job registration.

- An Executive Order of June, 1971 requires that: "Federal executive departments and agencies list all job openings with the public employment service, and Federal contractors list openings 'to the maximum extent feasible', including full-time, temporary, and part-time jobs."

Implementation of this regulation, effective as of September 24, 1971, coupled with OBES's efforts to improve its relationship with employers should substantially increase the job penetration rate of OBES.

- The Metropolitan Cleveland JOBS Council, which spearheads the community's Summer JOBS Program for disadvantaged youth, employs a youth coordinator to direct the summer program but has not staff assigned this responsibility during the remainder of the year.

- Since many disadvantaged youth, ages 16 to 21, are not attending school and require labor force entry assistance throughout the year, and since MCJC has assumed major responsibility for job development in the private sector for disadvantaged persons, it appears highly desirable for MCJC to assign a year-round youth coordinator to promote and sustain a continuing community concern with the employment needs of young job entrants.

- The Metropolitan Cleveland JOBS Council is not responsible for placement of the disadvantaged into the jobs they develop. Agencies responsible for filling employer job orders obtained by MCJC are the Ohio Bureau of Employment Services, AIM-Jobs, the Neighborhood Youth Corps (NYC) and the Work Incentive Program (WIN).

Job orders secured by MCJC loaned job developers from private industry are immediately registered in the OBES Job Bank. Job orders developed by AIM-Jobs and NYC job developers, on loan to MCJC, must be held for five days so that AIM-Jobs and NYC have an opportunity to place their own clients in the jobs their loaned staff develop. After the five-day hold on AIM-Jobs and NYC orders, the unfilled orders also enter the OBES Job Bank.

Under Department of Labor regulations, a 48 hour preference for veterans, AIM-Jobs and WIN Program clients is placed on all jobs registered with the Job Bank. After this time period, any OBES disadvantaged client may be referred to the Job Bank job openings.

Also adding to the possible time lapse between job order given to MCJC by an employer and referral of an applicant is the time necessary for actually listing the order in the Job Bank microfiche, a period which can take from one to two days.

As a result of these time referral delays, a job order developed by MCJC may be held as long as eight days without being filled. (For example, the Neighborhood Youth Corps, at the end of five days, may not have a qualified applicant to refer to an opening developed by their staff members. Another day is utilized to list the unfilled order with the

Job Bank. If OBES has no qualified veterans, WIN or AIM-Jobs clients to refer to the job, the unfilled order goes into the mainstream Job Bank. Thus, eight days can elapse without the employer receiving a job applicant.)

These extended time delays in referring applicants to jobs result in some employers filling job openings themselves, often from walk-in applicants. Rather than wait for the referral of disadvantaged clients, the employer discovers it is much faster to hire employees through his own efforts. Due to time delays, therefore, a significant percentage of the jobs developed through MCJC are not filled with disadvantaged clients registered with community agencies.

- Many employers in the Cleveland area are not fully aware of the job referral procedures utilized to fill job orders given to MCJC and also the variety of services MCJC can offer to employers. Among these services are:

    1. Helping employers obtain National Alliance of Busenessmen (NAB) contracts which provide funds for special training costs.

    2. Developing orientation or training programs to meet a company's special needs.

    3. Providing technical assistance such as job analysis and turnover studies.

In light of the above problems in Cleveland's job development system, the Manpower Planning and Development Commission recommends that:

VII. ALL CLEVELAND AREA ORGANIZATIONS AND AGENCIES INVOLVED IN DEVELOPMENT OF JOBS FOR YOUTH SHOULD COOPERATE ACTIVELY IN DEVELOPING AN EFFECTIVE COMMUNITY JOB DEVELOPMENT SYSTEM.

THE METROPOLITAN CLEVELAND JOBS COUNCIL, BECAUSE OF ITS STRATEGIC POSITION IN THE JOB DEVELOPMENT NETWORK AS THE AGENCY WITH PRIMARY RESPONSIBILITY FOR JOB DEVELOPMENT FOR THE DISADVANTAGED IN THE PRIVATE SECTOR, SHOULD SERVE AS THE CONVENER OF ALL AGENCIES AND ORGANIZATIONS SERVING YOUTH SEEKING FULL-TIME JOBS (SUCH AS YOC, AIM, NYC, JDS, URBAN LEAGUE, ETC.) FOR THE PURPOSE OF FORMULATING AN AGREED-UPON PROPOSAL FOR COORDINATED JOB DEVELOPMENT PROCEDURES. MCJC, ON ACCEPTANCE OF THIS CONVENER RESPONSIBILITY, SHOULD REPORT ITS PROGRESS TO THE MANPOWER PLANNING AND DEVELOPMENT COMMISSION AT THREE MONTH, SIX MONTH AND ONE YEAR INTERVALS.

JOB PLACEMENT AND FOLLOW-UP SERVICES FOR YOUTH

Two agencies in the Cleveland area have major responsibility for job placement of youth as they move out of school and into the work world: the schools and the Ohio Bureau of Employment Services, primarily through its Youth Opportunity Center.

The schools are mandated to provide youth vocational guidance counseling and employability development, while OBES is mandated to provide job development and job referral/placement services. In actuality, the division in functions between the schools and OBES are not as separate as these mandated functions indicate. For example, the schools provide

some youth job placement and follow-up services, particularly to graduates of vocational education programs. OBES staff are involved in vocational testing and guidance of youth who have left the schools without receiving adequate vocational guidance or benefiting from the guidance and counseling which was provided. In addition, OBES staff are involved with the schools in the testing and job placement counseling of youth through the School Cooperative Program (see page 13) and serve as resource persons for school career day programs.

Thus, though both the schools and OBES provide job referral and placement services to youth, the job placement-related needs of all Cleveland area youth who drop out or graduate from high school and seek employment are far from being adequately met. A major reason for this are funding and staff size constraints under which both agencies operate. Also, the mechanisms through which OBES and the schools can coordinate their placement-related services to meet more fully the needs of varying school populations have not been fully developed.

The placement/follow-up services and limitations of the schools and OBES are briefly delineated here to provide a clearer indication of the need for closer more effective working relationships between them.

Schools

Vocational education instructors and cooperative-education coordinators provide, for the most part, intensive job placement services to their students. The State of Ohio requires that all vocational education program graduates be followed-up annually by school vocational education

departments to obtain information on the graduates in relation to employment status, area of employment (e.g., is it training related?), length of employment etc.

Graduates of other high school programs, general and academic, who desire employment may receive placement assistance from vocational guidance counselors. However, guidance counselors, in general, are unable to devote an extensive amount of time to the placement of individual students because of high pupil-counselor ratios and additional job responsibilities. Also, Cleveland area schools do not maintain the policy that direct job placement for all students is a major function and service of the schools. Therefore, placement and related services are provided primarily on an informal basis. No formalized follow-up procedures are mandated of counselors as they are of vocational education personnel. Also, most students do not return to the schools for assistance in second placements and beyond.

Under State of Ohio regulations, a youth who drops out of school must secure a work certificate for a specific job which has been offered to him. Dropouts, for the most part, secure their first full-time jobs without the placement assistance of the schools. The reason frequently cited for this lack of job placement assistance is that it might be a disincentive to remaining in school.

The Job Development Service (JDS) is a unique pilot project which provides a complete package of job development, placement, and follow-up services to graduating high school seniors. Operated through federal funds by the

Cleveland Board of Education, JDS has developed a three-phase program for students in five inner-city high schools in poverty areas. Included is a job preparation course, an in-school Job Center with arranged company interviews for students, and direct referral to jobs with personal follow-up. Para-professionals are responsible for JDS job development. JDS does not, however, have access to job orders in the OBES Job Bank, a linkage which would be beneficial to the program. There is ample evidence that JDS is a valuable technique and service for the student population it serves. Adaptability of this type of program to other school populations has not been determined.

Youth Opportunity Center

The OBES Youth Opportunity Center is established to provide employment-related services to in-school and out-of-school youth, ages 16 to 21, exclusively. (See page 13 for range of services.) YOC is the community's major continuing source of placement assistance to youth, particularly high school dropouts. Staff of YOC have access to the OBES Job Bank, a daily revised listing of all registered job orders. YOC, however, does not have the familiarity with its clients' abilities and potential which the schools have through long-term involvement with youth and through access to school records.

Those federally funded manpower programs which have clients, age 16 to 21, such as AIM-Jobs, NYC, MDTA and WIN, tie in their placement services with the OBES Job Bank to which they have access (see page 14).

Among the community's placement agencies, their job placement services for youth have not been coordinated to assure that services are not duplicated for the same youth population, that services youth require are available at the appropriate time, and that close linkages among the components (agencies) exist.

Examples of this lack of coordination indicate that:

- The schools do not have access to job orders in the OBES Job Bank.
- The respective functions of the Youth Opportunity Center and the schools in youth placement are not clearly delineated.
- Job development is carried out by a variety of agencies and organizations, each competing among themselves for employer cooperation.
- Linkages between the Neighborhood Youth Corps Program and the Job Development Service are minimal for NYC youth enrolled in the schools where JDS is operative.

To assure the most effective utilization of the community's placement resources it is necessary that the responsibility or "turf" of each agency or organization with a placement function be specifically identified.

Placement Follow-Up Services require significant staff time and expertise if they are to be effective. For example, each youth referred to a job opening should be immediately followed-up by staff of the referring agency to ascertain whether he was hired, and, if so, on what job. If he is not hired, he should be invited to return for further re-interviewing to help him assess why he was not hired and to assist him to another referral. the staff placement person has the responsibility to take the initiative

in supportive active counseling and referral service until the job applicant is satisfactorily placed and/or indicates he no longer needs or desires this service. This kind of concentrated follow-up support, which requires considerable staff time, is not provided by OBES or the schools except for selected students in specially funded projects and those enrolled in approved vocational education curricula. The irony here is that vocational education graduates are the youth who least need this kind of specialized assistance because of their saleable skills, but because of the higher cost of vocational education, the state desires assurance of its investment. At the same time, the general curriculum student, whose education costs less, receives correspondingly less in essential job placement/follow-up services.

Follow-up services in Cleveland's federal manpower programs vary from none to staff contacts with clients by mail, phone, and/or home and job site visits in several programs.

The Manpower Planning and Development Commission believes that a goal of the community should be to have readily available to every new young job seeker effective assistance toward his satisfactory entrance and participation in the work world. While this goal is not immediately achievable, identification of cooperative arrangements among placement resources tailored to meet the needs of individual school populations would be a major first step toward realization of this goal and the development of a community placement system. To initiate this process, the Manpower Planning and Development Commission strongly recommends the following:

VIII. A DEMONSTRATION PROJECT ON A COUNTY-WIDE BASIS SHOULD BE DEVELOPED TO TRY-OUT AND EVALUATE CERTAIN STRATEGIES FOR FACILITATING THE ENTRY OF YOUTH INTO THE WORK WORLD, WITH THE SCHOOLS AND OBES (THE AGENCIES PRIMARILY RESPONSIBLE FOR MAJOR YOUTH PLACEMENT AT THIS TIME) AND OTHER LOCAL RESOURCES ALL TIED TOGETHER IN A COOPERATIVE, COORDINATED ARRANGEMENT OF JOB PLACEMENT AND FOLLOW-UP SERVICES. THE DEMONSTRATION PROJECT SHOULD BE DESIGNED TO MEET THE NEEDS OF STUDENTS IN SELECTED APPROPRIATE SCHOOLS WITH DIFFERENT POPULATION COMPOSITIONS.

THE MANPOWER PLANNING AND DEVELOPMENT COMMISSION IS REQUESTED TO CONVENE FROM THE SCHOOLS, OBES AND OTHER APPROPRIATE COMMUNITY INTERESTS OFFICIAL REPRESENTATIVES WITH THE AUTHORITY AND ABILITY TO DEVELOP AND PROMOTE SUCH A COUNTY-WIDE DEMONSTRATION PROJECT, EXPLORING AND UTILIZING ALL RESOURCES (PERSONNEL, FACILITIES, SERVICES, FUNDS) AVAILABLE FROM LOCAL, STATE AND FEDERAL LEVELS AS AN INITIAL EFFORT TOWARD PLANNING AND DEVELOPING A FLEXIBLE EFFECTIVE JOB PLACEMENT SYSTEM FOR BEGINNING JOB SEEKERS.

This recommendation is based on the belief that no single job placement arrangement can meet the needs of every school population. High schools in Cuyahoga County vary greatly in the number of students enrolling in college, dropout rates, career/employment expectations of students and parents, income-levels, culture/environment patterns, etc.- -all factors directly related to the job placement and work world entry needs of youth.

CONCLUSION

Youth face a host of obstacles to successful entry into the labor force, many major ones which have been identified in this BLUEPRINT. Obstacles arising out of barriers, gaps and inadequacies in local systems which shape the labor force entry process should be the focus of community attention. Positive change in the labor force entry process can be brought about most expeditiously through the coordinated response of community resources to these identified gaps and barriers in systems.

There is need for concentration on prevention by the education system, the community's major resource for employability development. Preventive education policies and programs geared to developing youths' abilities and potential for labor force entry will relieve some burden from other community resources responsible for remediation. These community resources, such as the manpower programs, will then be able to focus their attention on a smaller number of youth whose serious employment-related handicaps could not be overcome in the education system.

In the employing system there is a need for greater flexibility and relevance in job requirements and hiring practices, providing increased opportunities for youth to gain a foothold in the work world. Efforts should be made to screen-in youth, particularly the disadvantaged, rather than following procedures which totally screen-out youth with certain characteristics. The employing system should intensify its alliance with the schools in the area of employment and job entry preparation. There is particular need for this closer association if the schools are to successfully carry out preventive programs.

the overriding need in the Job Development/Placement/Follow-up System is improved coordination of services, evaluation and client follow-up. Delivery of employment-related services by this system is fragmented, resulting in unmet placement needs of many youth. Evaluation is needed in terms of the total system of services and in relation to individual program accomplishments. Increased follow-up services to clients would assist at both levels of evaluation, in addition to assuring youth on-going placement assistance.

Solving the labor force entry problems of youth is most difficult because of one basic overall need - sufficient funds. Planning, coordination, research and development related to youth employment are only in elementary stages, at best, because of the absence of financial resources channeled toward these functions. Because of funding restrictions, individual programs tend to operate with tunnel vision, placing major focus on current program operation and services while evaluation and coordination receive minimal attention. Research, which is an integral part of effective planning and coordination, has too seldom been directed towards the area of youth employment. This absence of research is particularly evident on the local level.

The recommendations in this BLUEPRINT have been designed to promote a coordinated system of labor force entry services for youth. The Manpower Planning and Development Commission firmly believes that the existence of such a system will have a major impact on increasing the mainstream employment of the youth of our community and their meaningful productive participation in the Cleveland area work world.

SUGGESTED AREAS FOR RESEARCH

In developing this BLUEPRINT for Community Action, concerted attempts were made to formulate recommendations based on quantitative information regarding the labor force entry process. While such information is available on the national level, at the local level it is noteworthy for its absence. Therefore, the BLUEPRINT substance is based on national findings, limited empirical data on the Cleveland area, and a great amount of qualitative information provided by sixty-nine different educators, employers, and job development and placement agency personnel who are familiar with the labor force entry problems of Cleveland area youth and the inadequacies of community systems serving young job seekers.

To develop additional strategies which will ease the transition from school to work, it is essential that scientific investigation be carried out in the Cleveland area on youth employment opportunities, labor force entry problems and services related to labor force entry. The following are suggested areas of research for educators, manpower programs and local planning agencies.

1. An in-depth labor market analysis is needed to ascertain structural changes forecast for the Cleveland area. The information this type of analysis would generate is essential to gauge employment opportunities for youth and to design relevant employment preparation programs.

2. Creation of youth employment opportunities. Investigation of potential employment opportunities for youth which have not been developed is needed. For example, job developers may need to increase efforts in the service categories and decrease efforts in manufacturing. Public sector employment might provide a valuable source of entry level positions for youth. Employment opportunities for black youth might be provided by the development of an independent economy in the black community.

3. Alternatives to employment. If enough entry level jobs for all youth entering the labor market do not exist, non-work alternatives require consideration. Alternatives to work might include such programs as the Peace Corps and Urban Corps and various kinds of public welfare assistance such as public service employment.

4. Extent of educational deficiencies of youth. The Manpower Planning and Development Commission found in 1970 that a major reason Cleveland area employers reject applicants for entry level jobs is absence of basic reading, writing, mathematic and communication skills.(97) Federal manpower program administrators in the Cleveland area have noted that functionally illterate youth are entering their programs after dropping out of high school at the tenth and eleventh grade.(36) The incidence of these educational deficiencies among labor force entrants and the reasons for these deficiencies have not been empirically determined in the Cleveland area.

5. Education. Local boards of education in Cuyahoga County should prepare, maintain and issue objective and complete socio-economic statistics covering all areas of education to ensure greater accountability to taxpayers. The Martha Holding Jennings Foundation 1971 State Conference on Elementary and Secondary Public School Education found accountability in education a major concern requiring attention.

> Ohio needs to build on its basically-sound system of accountability to the people by periodically reporting on what happens in the schools. It is important to hold School Board members, administrators, and teachers accountable for the performance of their responsibilities. Parents and students should have the opportunity to participate in planning and programs.

Accountability in our schools is also needed to assure each student the right to quality education and equal educational opportunities.

6. Cleveland area labor market statistics on youth. Currently, there are no labor market statistics in the Cleveland area pertaining specifically to youth. Statistics are needed on youth unemployment, labor force participation rates, employment by industry and wage rates.

7. Effectiveness of manpower programs - Research is necessary to evaluate the effectiveness of currently operating manpower programs, especially in relation to their services to youth. A rational basis is needed to judge these programs before they receive additional funds or new programs are created.

B I B L I O G R A P H Y

1. Ad Hoc Resource Consultant Meeting, Manpower Planning and Development Commission, Cleveland Welfare Federation, October 22, 1971.

2. AIC Bulletin to Members, The Associated Industries of Cleveland, Ohio, December 1, 1968.

3. Attitudes, Opinions and Level of Job Satisfaction of Inner City Youth, Kenneth L. O'Connell, Masters Thesis, Department of Sociology and Anthropology, Kent State University, June, 1970.

4. The Businessman's Role in Closing the Gap Between Education and the Job, Elmer L. Winter, The Princeton Manpower Symposium, The Transition from School to Work, May 9-10, 1968.

5. Career Counseling Needs Unfilled, Sylvia Porter, Plain Dealer, October 7, 1971.

6. Career Thresholds, Volume I, Manpower Research Monograph No. 16, U.S. Dept. of Labor, Manpower Administration, 1970.

7. Case Studies of Displaced Workers, Bulletin No. 1408, U. S. Dept. of Labor, 1964.

8. Centergram, Center for Vocational and Technical Education, The Ohio State University, Vol. VI., No. 8, August, 1971.

9. Cleveland CAMPS F/Y '72 Plan of Services, Cleveland Area Manpower Coordinating Committee, September, 1971.

10. The Cleveland Metropolitan Area Comprehensive Manpower Plan, Fiscal Year 1971, Part B, Cleveland Manpower Coordinating Committee, July 31, 1970.

11. Cleveland, Some Constructive Challenges, Chester J. Gray, Call and Post, June 16, 1971.

12. The Conscience of the Corporations: Business and Urban Affairs, 1967-1970, Jules, Cohn, John Hopkins Press, Baltimore, 1971.

13. Counseling with Dropouts: A Three-Year Study, Harry E. Leubling, Vocational Advisory Service, New York, March, 1967.

14. The Co-Worldly Executive, Eugene Emerson Jennings, Management of Personnel Quarterly, Bureau of Industrial Relations, The University of Michigan, Ann Arbor, Summer, 1971.

15. Credentials and Common Sense: Jobs for People without Diplomas, Rose Wiener, Manpower Report No. 13, U. S. Dept. of Labor, Manpower Administration, December, 1968.

16. Cuyahoga County, 1990, Population - Housing - Employment, Cuyahoga County Regional Planning Commission, December, 1969.

17. Cybernation: The Silent Conquest, Donald N. Michael, Center for the Study of Democratic Institutions, Santa Barbara, California, 1962.

18. Description of Poverty in Cleveland, Research Department, Cleveland Welfare Federation, October, 1964.

19. The Differential Impact of an Urban Labor Market upon the Mobility of White and Negro Potentially Skilled Workers, Joseph R. Rocha, Jr., unpublished Ph.D. dissertation, The University of Iowa, 1966.

20. Electing Election Economics, Pierre A. Rinfret, 1971 Economic Forecast Luncheon, Cleveland Central National Bank, November, 1970.

21. Employment of High School Graduates and Dropouts, Special Labor Force Report 121, U. S. Department of Labor, August, 1970.

22. Employment of School Age Youth, Forrest A. Bogan, Monthly Labor Review, Vol. 91, No. 10, U. S. Dept. of Labor, October, 1968.

23. Employment of School-Age Youth, Special Labor Froce Report 135, U. S. Department of Labor, Bureau of Labor Statistics, 1971.

24. Employment Patterns of Graduates Served by the Job Development Service Project: A Follow-Up Study, Cleveland Public Schools, Division of Educational Research, June, 1968.

25. End of the Impossible Dream, Peter Schrag, Saturday Review, Vol. LIII, No. 38, September 19, 1970.

26. Entry into the Labor Force, A Survey of Literature on the Experience of Negro and White Youths, Jeffry Piker, Institute of Labor and Industrial Relations, The University of Michigan, Wayne State University, December, 1968.

27. Few Juveniles Ask Clearing of Record, Bob Modic, The Cleveland Press, November 30, 1971.

28. First Jobs and Career Patterns, S. M. Lipset and F. T. Malm, American Journal of Economics and Sociology, Vol. 14, 1955.

29. Five for Tomorrow, Schools' Neighborhood Youth Corps, Cleveland Public Public Schools, September, 1970.

30. From School to Work, Highlights from a Study of the Early Employment Experience of Youth in Seven Communities, 1952-1957, U. S. Dept. of Labor, Bureau of Labor Statistics, March, 1960.

31. Goal Aspirations and Goal Fulfillments: Differences between Deprived and Affluent American Adolescents, David Gottlieb, Ph.D., American Journal of Ortho-Psychiatry, Vol. 34, 1964.

32. The Greening of America, Charles A. Reich, New York, Random House, 1970.

33. Health Interview Survey, National Center for Health Statistics, Series 10, Nos. 60 and 61, U. S. Department of Health Education and Welfare.

34. Information Networks in Labor Markets, Albert Rees, The American Economic Review, Vol. LVI, No. 2, May, 1966.

35. Interracial Comparisons of Labor Market Behavior, Alice H. Kidder, unpublished Ph.D. dissertation, Massachusetts Institute of Technology, August, 1967.

36. Inventory of Cleveland's Federally Funded Manpower Programs. Fiscal Year 1971, Manpower Planning and Development Commission. Cleveland Welfare Federation.

37. Job Opportunity List, Greater Cleveland Area, Ohio Bureau of Employment Services, August 10, 1971.

38. Job Patterns and Entry into the Labor Market, S. M. Lipset, R. Bendix, F. T. Malm, Social Forces, Vol. 33, March, 1955.

39. Job Seeking Patterns of Disadvantaged Youth, Saul S. Leshner and George Snyderman, Employment Service Review, November, 1965.

40. Labor Force Entry and Career Connection Patterns of Cleveland's Young Job Seekers, Manpower Planning and Development Commission, Cleveland Welfare Federation, 1971.

41. Lessons from the Pattern of Unemployment in the Last Five Years, Gertrude Bancroft, Prosperity and Unemployment, New York, John Wiley and Sons, 1966.

42. Living with a Higher Jobless Rate, Business Week, December 25, 1971.

43. The Long Duration Unemployed, Edward J. O'Boyle, Special Labor Force Report 118, U. S. Dept. of Labor, 1970.

44. Making the Generation Gap Work for You, Dr. Mortimer Feinberg, Sales Management, September 1, 1971.

45. Manpower Perspectives for Urban Redevelopment, Alvin Mickens, New York University, Graduate School of Social Work, Summer, 1967.

46. Manpower Policies for Youth..., Edward T. Chase, The U. S. Employment Service in Perspective, Columbia University Press, 1966.

47. Manpower Report of the President, U. S. Dept. of Labor, March, 1966.

48. Manpower Report of the President, U. S. Dept. of Labor, March, 1967.

49. Manpower Report of the President, U. S. Dept. of Labor, 1968.

50. Manpower Report of the President, U. S. Dept. of Labor, 1969.

51. Manpower Report of the President, U. S. Dept. of Labor, 1970.

52. Manpower Report of the President, U. S. Dept. of Labor, 1971.

53. Middle School Years and Career Development, William A. Stanton, Ohio Guidance News and Views, 1970.

54. More Here in All-Black Schools, Alan Horton, Press Washington Writer, The Cleveland Press, June 18, 1971.

55. The Negro and Equal Employment Opportunities: A Review of Management Experience in Twenty Companies, Louis A. Ferman, University of Michigan, under the U. S. Dept. of Labor. Manpower Administration, 1966.

56. News, National Advisory Council on Vocational Education, Vol. 1, No. 19, Washington, D.C., October, 1971.

57. 1970 Census of Population, Advance Report, U. S. Bureau of the Census, PC (VI) - 37.

58. 1970-1971 Statistical Summary of School Counselors, State of Ohio, Dept. of Education, Division of Guidance and Testing.

59. Official Proceedings of the Board of Education, Cleveland City School District, June 24, 1971.

60. Ohio Laws and Regulations Governing Teacher Education and Certification, October 12, 1970.

61. Operation Retrival--Disadvantaged Youth: Problems of Job Placement, Job Creation, and Job Development, Louis A. Ferman, Final Report, U. S. Dept. of Labor, Office of Manpower Policy, Evaluation and Research, Ann Arbor, University of Michigan, September, 1966.

62. Opportunities and Requirements for Initial Employment of School Leavers with Emphasis on Office and Retail Jobs, Fred Cook and Frank Lanham, Wayne State University, College of Education, 1966.

63. Out-of-School Youth, February, 1963, Vera C. Perrella and Forrest A. Bogan, Monthly Labor Review, 1260-8 and 1416-24, U. S. Dept. of Labor, November and December, 1964.

64. Out-of-School Youth - Two Years Later, Vera C. Perrella and Elizabeth Waldman, Monthly Labor Review, Vol. 89, No. 8, U. S. Dept. of Labor, August, 1966.

65. Patterns of Occupational Mobility Among Negro Men, Otis Dudley Duncan, University of Michigan, Population Studies Center, Ann Arbor, Michigan, 1967.

66. Personnel Testing and Equal Employment Opportunity, Betty R. Anderson and Martha P. Rogers, editors, Equal Employment Opportunity Commission, December, 1970.

67. A Pilot Study of the Employment Experiences of High School Graduates, Philadelphia Commission on Human Relations, Philadelphia, July, 1956.

68. Planning Techniques for Regional Development Policy, Curtis Harris, Jr. and M. C. McGuire, Journal of Human Resources, Bureau of Economic Research, University of Maryland, Fall, 1969.

69. A Portrait of the Unemployed, Carol B. Kalish, Monthly Labor Review, U. S. Dept. of Labor, January, 1966.

70. Poverty - The Broad Outline, Chicago, U. S. Dept. of Labor, Bureau of Labor Statistics, North Central Region, Urban Employment, Report No. 2, March, 1970.

71. Practical Strategies for Reducing the Flow into Cleveland's Disadvantaged Jobless Labor Pool of Inadequately Prepared Young Job Seekers, A Proposal from a Special Task Force on Manpower Planning and Development Commission, Cleveland Welfare Federation, 1970.

72. President's Council on Youth Opportunity, Vol. II, No. 40, December, 1969.

73. Problems in the Transition from School to Work as Perceived by Youth Opportunity Center Counselors, A National Survey, The Center for Vocational and Technical Education, The Ohio State University, 1970.

74. The Process of Work Establishment, Marcia Freedman, Columbia University Press, New York, 1969.

75. Project Talent, Bulletin No. 5, University of Pittsburgh, July, 1966.

76. Promoting Jobfinding Success for the Unemployed, Harold L. Sheppard and A. Harvey Belitsky, The W. E. Upjohn Institute, April, 1968.

77. Racial Differences in Job Search and Wages, Alice Kidder, Monthly Labor Review, Vol. 91, No. 7, U. S. Dept. of Labor, July, 1968.

78. Racial Differences in Job Search Patterns, William Vernon Pace, unpublished Ph.D. thesis, North Carolina University at Raleigh, Dept. of Economics, 1967.

79. Racial Differences in Migration and Job Search: A Case Study, M. Lurie and E. Rayack, Southern Economic Journal, Vol. 33, No. 1, July, 1966.

80. Racism in America and How to Combat It, Dr. Anthony Downs, U. S. Commission on Civil Rights, Clearinghouse Publication, Urban Series No. 1, January, 1970.

81. Reading Level Poverty Rates Show Link, The Plain Dealer, April 23, 1971.

82. A Report of Dropout Rates for the Period July 1, 1968 to June 30, 1969, in the Cleveland Public Schools, Board of Education of Cleveland, Division of Research and Development Bulletin No. 59, March 19, 1970.

83. Report of the Cleveland Inner City Action Committee on Employment, August, 1967.

84. Report of the Manpower Planning and Development Task Force, Submitted to Hon. Carl B. Stokes, Mayor, City of Cleveland, August 4, 1971.

85. School Dropout Rate is Lowest Ever, Bill Ingram, The Cleveland Press, October 29, 1971.

86. School for Schooling's Sake: The Current Role of the Secondary School in Occupational Preparation, Rupert N. Evans, The Princeton Manpower Symposium, The Transition from School to Work, May 9-10, 1968.

87. School-To-Work Transition: Some Observations Based on the Experience of the Manpower Administration Experimental Demonstration Program, Judah Drob, Chief Division of Program Utilization, Manpower Administration, U. S. Dept. of Labor, Princeton Manpower Symposium, May 9-10, 1968.

88. The Second Chance in the Transition from School to Work, Garth L. Mangum, The Princeton Manpower Symposium, May 9-10, 1968.

89. Social Mobility and Occupational Career Patterns, S. M. Lipset and R. Bendix, American Journal of Sociology, Vol. 57, January, 1952.

90. Some Private and Social Aspects of Juvenile Labor Mobility, Larry Singell, Bowling Green State University, Department of Economics, 1963.

91. Strengthening Volunteer Industry Service to Public Education, Samuel M. Burt, The W. E. Upjohn Institute, September, 1971.

92. Training in Private Industry - Policies, Attitudes, and Practices of Employers in Greater Cleveland, John L. Iacobelli, Manpower Research Monograph No. 22, U. S. Department of Labor, 1971.

93. The Transition from School to Work: A Summary of Viewpoints, Philip Arnow, Frederick Harbison, et al., Princeton Manpower Symposium, May 9-10, 1968.

94. Unemployment and the "Overeducated Worker," Ivar Berg, New Generation, Winter, 1968.

95. U. S. Census of Population and Housing: 1960, U. S. Bureau of the Census, Cleveland SMSA, PHC (1) - 28.

96. U. S. Manpower in the 1970's, Opportunity & Challenge, U. S. Dept. of Labor, 1970.

97. Who Doesn't Get Hired?, The Manpower Planning and Development Commission of the Cleveland Welfare Federation, 1970.

98. Why and How Workers Shift from Blue-collar to White-collar Jobs, David B. Johnson and James L. Stern, Monthly Labor Review, U. S. Dept. of Labor, October, 1969.

99. Work Experience of the Population in 1970, Anne M. Young and Kopp Michelotti, Monthly Labor Review, Vol. 94, No. 12, December, 1971.

100. Work Programs and Youthful Offenders, Edward Cole, Center for the Study of Unemployed Youth, Graduate School of Social Work, New York University, June, 1966.

101. Worker Adjustment Problems of Youth in Transition from High School to Work, The Center for Vocational and Technical Education, The Ohio State University, Columbus, Ohio, Research and Development Series No. 43, December, 1970.

102. Workers and Industrial Change, Leonard P. Adams and Robert L. Aronson, Cornell University, 1957.

Addendum A

Manpower Planning and Development Commission

TASK FORCE

on

LABOR FORCE ENTRY AND CAREER CONNECTION PATTERNS
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Addendum C

INFORMATION RESOURCES

The following reviewed the Labor Force Entry Work Paper and submitted written comments, suggestions and resource information:

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POVERTY IN CUYAHOGA COUNTY

The Report of the Manpower Planning and Development Task Force, prepared by a Committee appointed by the Mayor of Cleveland in August, 1971, determined where the poor are located in Cuyahoga County.* The rate of public assistance cases (AFDC, General Relief, and ADCU recipients) per 1,000 persons was determined for each census tract in Cuyahoga County. These data provide minimum poverty rates or indicators and are conservative estimates of the incidence of poverty. The major findings were:

> At the City level, it is obvious that the greatest concentrations of high welfare rates are in the cities of Cleveland and East Cleveland. Their rates are many times higher than those for the remainder of the cities in Cuyahoga County.

Summary Figures for Cleveland, East Cleveland, and the Remainder of Cuyahoga County:

	Population	Absolute Number of Cases	Rate Per 1,000
Cleveland	744,680	34,785	46.9
E. Cleveland	39,382	1,262	32.1
Remainder of Cuyahoga County	933,958	1,674	1.79
TOTAL	1,718,020	37,721	21.4

The Task Force also ranked Social Planning Areas according to the rate of public assistance cases. These findings are compared on the following page to the findings of a 1964 study, Description of Poverty in Cleveland, which determined the poverty rank of social planning areas on the basis of seven factors.**

This report was based on the 1960 Census. Forty-two social planning areas were ranked from greatest to least poverty on the following factors:

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* Report of the Manpower Planning and Development Task Force, submitted to Hon. Carl B. Stokes, Mayor, City of Cleveland, August 4, 1971.

** Description of Poverty in Cleveland, Research Department, Cleveland Welfare Federation, October, 1964.

- Families with incomes below $3,000
- Unemployed males
- Persons completing less than eight school grades
- Substandard Housing Units
- ADC case rate
- General Assistance case rates
- Male official and unofficial delinquency complaints

1971		1964		
Social Planning Area	Rank	Social Planning Area	Rank	Rate Per 1,000
Central	1	Hough	1	127.4
Central West	2	Central West	2	119.0
Downtown	3	Central	3	103.0
Central East	4	Kinsman	4	90.0
Hough	5	Central East	5	77.2
Kinsman	6	Glenville	6	75.9
Goodrich	7	Tremont	7	58.0
Tremont	8	Near West Side	8	55.3
Glenville	9.5	Norwood	9	44.8
Near East Side	9.5	Mt. Pleasant	10	44.1
University	11	Goodrich	11	43.8
Mt. Pleasant	12	East Cleveland	12	32.1

Comparison of these data indicates shifts in the location of Cleveland's poor. The greatest change in poverty rank occurred in East Cleveland. In 1964 East Cleveland received a poverty rank of 25. During a seven year span East Cleveland's poverty rank rose by 13, to a rank of 12.

The Cleveland Board of Education conducted a 1971 study of school poverty rates.* The poverty rates in each school were determined according to the percent of children whose families receive public assistance. The chart on the following page contains senior high school poverty rates from 1967-68 to 1971-72:

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* Officials Proceedings of the Board of Education, Cleveland City School District, June 24, 1971.

Rates of Poverty
1967-1971

Senior High School	1967-68	1968-69	1969-70	1970-71	1971-72
East	55%	34%	34%	64%	66%
East Technical	57	38	39	68	65
John Hay	18	29	31	47	46
Glenville	21	26	31	37	36
John Adams	11	12	12	17	22
Lincoln-West	9	7	9	14	18
John F. Kennedy	7	7	8	11	15
West High	12	6	9	7	14
South	4	4	5	7	9
Collinwood	3	3	4	4	7
James Ford Rhodes	1	1	1	1	2
John Marshall	1	1	2	1	2

Ten schools with high rates of poverty were more closely examined. The average student population in these ten schools had decreased from 600 to 400 students, while at the same time the average poverty rate had grown from 40 percent to over 80 percent.

These findings indicate that poverty is becoming concentrated in certain areas of the City of Cleveland. Families not dependent on public assistance are migrating out of poverty neighborhoods, leaving behind greater concentrations of welfare families.

Addendum E

MANPOWER PLANNING AND DEVELOPMENT COMMISSION

JOB APPLICANT INTERVIEW SCHEDULE
(Questions and Results)

Total Sample - 95

Sex and Education Composition - Male 55% Female 45% High School Dropouts - 50.5% High School Graduates - 49.5%

(Replies indicated in percentages)

1. How many full-time jobs have you ever applied for?

	Total	Male	Female	Graduates	Dropouts
0-5	58%	46%	60%	41%	60%
5 and over	52%	54%	40%	59%	40%

2. How many interviews for full-time jobs have you ever had before this one?

	Total	Male	Female	Graduates	Dropouts
0-5	61	59	63	50	72
5 and over	39	41	37	50	28

3. Did your job interview begin on time or did you have to wait?

	Total	Male	Female	Graduates	Dropouts
On time	66	69	60	61	70
Wait	44	31	40	39	30

4. Did having to wait for the interview bother you a lot, a little bit, or not at all?

	Total	Male	Female	Graduates	Dropout
A lot	-	13	-	6	7
A little bit	77	54	69	70	57
Not at all	23	33	31	24	36

5. If you filled out an application, was it before, after or during the job interview?

	Total	Male	Female	Graduates	Dropout
None filled out	11	5	13	14	9
Before	64	32	63	65	63
After	4	2	8	4	4
During	21	13	16	17	24

6. How did you feel during the job interview; very comfortable, fairly comfortable, uneasy, or very uneasy?

	Total	Male	Female	Graduates	Dropout
Very comfortable	23	24	22	24	23
Fairly comfortable	61	62	60	56	65
Uneasy	14	12	16	15	12
Very uneasy	2	-2	2	5	-

7. Did you feel the interviewer spent too much time, enough time, or not enough time with you?

	Total	Male	Female	Graduate	Dropout
Too much	1	2	-	2	-
Enough	76	74	79	68	83
Not enough	23	24	21	30	17

8. If the interviewer had spent more time with you, do you think your chances of being hired would have been better, the same, or not as good?

	Total	Male	Female	Graduate	Dropout
Better	81	75	89	77	88
Same	9.5	27	11	8	12
Not as good	9.5	3	-	15	1

9. Did the interviewer give you enough of a chance to explain why you thought you were the right person for the job?

	Total	Male	Female	Graduate	Dropout
Yes	54	52	58	60	50
No	46	48	42	40	50

10. When you were talking to the interviewer, was his attention to what you said good, poor, or so-so?

	Total	Male	Female	Graduate	Dropout
Good	61	58	65	57	63
Poor	1	-	5	4	-
So-so	38	42	30	29	27

11. Some folks think that an employer can find out enough about a person from an interview to make a fair decision about hiring him. Do you feel this employer did in your interview?

	Total	Male	Female	Graduate	Dropout
Yes	37	39	42	39	35
No	26	28	37	35	23
Not sure	37	30	21	26	42

12. Would you say that the interview you had was very fair, fair, somewhat fair, or not fair at all?

	Total	Male	Female	Graduate	Dropout
Very fair	14	4	26	20	8
Fair	44	47	40	39	48
Somewhat fair	37	43	30	33	42
Not fair at all	5	6	5	8	2

13. Now tell me, how satisfied were you with the way you presented yourself during the job interview: very satisfied, fairly satisfied, dissatisfied, or very dissatisfied?

	Total	Male	Female	Graduate	Dropout
Very satisfied	33	33	34	33	33
Fairly satisfied	63	65	63	59	67
Dissatisfied	4	2	3	11	-
Very dissatisfied	-	-	-	-	-

14. What kind of impression do you think you made on the interviewer: very favorable, favorable, or unfavorable?

	Total	Male	Female	Graduate	Dropout
Very favorable	17	18	16	21	13
Favorable	49	49	50	45	52
Unfavorable	6	6	7	6	6
Uncertain	28	27	28	27	29

15. Did the interviewer give you any reason why he didn't hire you?

	Total	Male	Female	Graduate	Dropout
Yes	46	43	50	52	40
No	54	57	50	48	60

15A. What reason did he give for not hiring you?

15B. Do you feel this was the REAL reason?

	Total	Male	Female	Graduate	Dropout
Yes	76	73	80	75	78
No	19	18	20	21	17
Uncertain	5	9	-	4	5

16. What do you think was the REAL reason you weren't hired?

17. Do you think you learned anything in this interview that will help you in the next?

	Total	Male	Female	Graduate	Dropout
Yes	65	60	71	67	64
No	30	35	24	33	26
Uncertain	5	5	5	-	10

18. Do you think you will feel more at ease and confident during your next job interview?

	Total	Male	Female	Graduate	Dropout
More	64	53	79	72	56
Less	-	-	-	-	-
Uncertain	26	47	21	28	44

18A. What makes you think so?

EMPLOYER INTERVIEW SCHEDULE

(Questions and Results)

Total Sample - 61

(Replies indicated in percentages)

1. Did you tell the applicant why he wasn't hired?

Yes	55%	(Ask question 2.)
No	41%	(If no, skip to question 3.)

2. What was the reason you gave the applicant for not hiring him?

2A. Was this the actual reason for not hiring him?

Yes	56%	(Stop)
No	44%	(Ask question 3.)

3. What was the reason for not hiring the applicant?

Addendum F

HIGHLIGHTS FROM THE LITERATURE ON PSYCHOLOGICAL AND EMOTIONAL BARRIERS TO LABOR FORCE ENTRY

Source - Manpower Report of the President, U. S. Department of Labor, 1967.

Findings - Data from inner-city areas in several large cities revealed that inner-city residents lack the psychological attitudes and attributes necessary for a successful job hunt. Among the characteristics attributed to a successful job hunt, and in which inner-city residents were found to be deficient, are faith in the efficacy of personal planning, assertiveness and lack of interview anxiety.

Source - Promoting Jobfinding Success for the Unemployed, Harold L. Sheppard and A. Harvey Belitsky, the W. E. Upjohn Institute, April, 1968.

Findings - Sheppard and Belitsky conducted a study concerned with the social-psychological characteristics in job finding behavior and determined methods to measure levels of interview anxiety. The effects of high anxiety on job search methods provide insight into the job-seeking behavior of the disadvantaged, who tend to exhibit high anxiety in the job interview situation. (See above findings.) Those with high job interview anxiety begin their job search later than those with low anxiety. Those with high anxiety are unlikely to employ the "active" job search technique of direct application. The public employment service was a source of job information often utilized by workers with high anxiety. The job seeker with high interview anxiety benefits from the assistance of an institutional intermediary.

Source - Counseling with Dropouts: A Three Year Study, Harry E. Leubling, Vocational Advisory Service, New York, March, 1967.

Findings - This study focused on the characteristics, attitudes and values which affect the entry of economically disadvantaged high school dropouts into the labor force. The dropouts were distrustful of authority figures. Their inadequate knowledge of the work world contributed to unrealistic aspirations and work attitudes. They were hypersensitive to criticism or rejection. These feelings were manifested overtly in the tendency of dropouts to miss appointments. The dropouts would appear a day or two later at the scheduled place of appointment, which indicated their need to be accepted on their own terms. Strong dependency needs were evident in the behavior of many from this group. Fear of failure and feelings of

inadequacy produced dependency in decision making. Other characteristics of the economically disadvantaged dropouts which affect their job searches were: a facade of toughness carried over from peer group relationships, impaired or confused self-concepts, and the rejection of social values resulting in the absence of long-range goals.

Source - Attitudes, Opinions and Level of Job Satisfaction of Inner City Youth, Kenneth L. O'Connell, Masters Thesis, Department of Sociology and Anthropology, Kent State University, June, 1970.

Findings - A study of Cleveland inner-city youth enrolled in a summer job program revealed attitudes which have a bearing on discontinuation of employment and level of job satisfaction. Enrollees who dropped out of the program had lower morale, greater distrust of authority figures, were more estranged from educational pursuits and had greater difficulty in adjusting to environmental surroundings than did enrollees who remained in the program. The enrollees were not found to have profound inferiority feelings, indicating that these attitudes probably originated from negative experiences with major institutions, particularly the schools.

Source - Goal Aspirations and Goal Fulfillments: Differences between Deprived and Affluent American Adolescents, David Gottlieb, Ph.D., American Journal of OrthoPsychiatry, Vol. 34, 1964.

Findings - This article is a review of findings resulting from research among a wide sampling of white and black high school students regarding their perceptions, aspirations and values.

Choice of occupation varied considerably between black and white males. Those occupational fields requiring graduate or professional school training were usually avoided by the black students. Both black males and females preferred occupations which require either a bachelor's degree or less than four years of college.

This would seem to indicate that although there is a high level of educational aspiration among black students, there is comparatively low expectation in occupational placement.

Among white students this discrepancy between aspiration and expectation lessens as one moves up the class scale. At least 20 percent of the black students, however, from each class indicate a desire to go to college but do not really expect to be able to fulfill their aspirations. And black students from southern segregated schools are more likely to match aspirations with expectations than those from northern segregated schools.

HEALTH PROBLEMS OF THE POOR

The National Center for Health Statistics (U. S. Department of H.E.W.) produces a series of statistical reports based on data collected from a nationwide sample of households interviewed in the Health Interview Survey. The annual Health Interview Survey obtains information on illnesses, injuries, chronic conditions and impairments and other health topics. The surveys are conducted on a cross section of the U. S. population, by age, income, and geographic regions.

The following findings illustrate the incidence of health problems and certain health-related characteristics of the poor in comparison with higher income groups.*

- Chronic illness, particularly that with activity limitation, is more common in the lower income groups...among persons with family incomes of less than $2,000, about 29 percent have chronic limitation of activity. As income increases, the percent with chronic limitations of activity decreases to the extent that less than 7.5 percent with family incomes of $7,000 or more are so limited. Differences occur among all age groups--the percent afflicted in the under $2,000 category among persons under 17 years of age being one and one-half times over the $7,000 income group, for age 17-44, two times greater, for ages 45-64, five and one-half times greater.

- Heart conditions, arthritis and rheumatism, and orthopedic impairments are the leading causes of activity limitation and are significantly more prevalent in persons with family incomes under $2,000 a year.

- Measurement of disability days associated with illness or injury indicates that all types of disability days are greater in the low-income groups. A person with family income of less than $2,000 has about 17 more days of restricted activity and six more days of bed disability than a person with an income of $7,000 or more.

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* Health Interview Survey, National Center for Health Statistics, Series 10, Nos. 60 and 61, U. S. Department of Health Education and Welfare.

- During a year, a larger portion of persons who live in low-income families have multiple hospital episodes than those who live in higher income groups. The length of hospital stay is longer for the poor--10.2 days for the income groups under $2,000 per year, 7.2 days for the income groups over $7,000. In addition, the poor are more often hospitalized for non-surgical conditions. All of this exists in spite of the fact that the poor are much less likely to have hospital insurance to cover the bill.

- Certain communicable diseases are more common among the poor for a variety of factors including increased likelihood of exposure, decreased likelihood of diagnosis and treatment, lower immunization status, and possibly less effective host defense mechanisms. Tuberculosis is more common among the urban nonwhite poor, and in fact is strikingly concentrated in the crowded central core of America's largest cities and on the Indian reservations. The venereal diseases such as syphilis and gonorrhea have a similar distribution and prevalence.

- Although in recent years the incidence of polio, tetanus, and tetanus-neonatorum have declined rapidly with the introduction of effective vaccines, the cases that now occur are concentrated in the poor nonwhite or Spanish-speaking groups, especially in the Southwest region, and are directly related to inadequate immunization.

VARIANCE IN BARRIER IMPACT

The impact of barriers delineated on pages varies with the characteristics of labor force entrants, such as age, sex, race, education, place of residence and family income. The impact of each barrier according to these variables has not been ascertained for the Cleveland area. However, general statements and examples of this variance can be made.

The unemployment rates of youth, ages 16 to 21, illustrate the variance in ease of transition into the work world by race, education, and sex.

UNEMPLOYMENT RATES OF YOUTH, 16 to 21, OCTOBER, 1971*

	High School Graduates	High School Dropouts
Total	11.6	21.5
White	10.6	18.7
Negro and Other Races	19.8	31.2
Male		
Total	12.0	21.4
White	11.2	19.4
Negro and Other Races	18.5	27.8
Female		
Total	11.2	21.8
White	10.0	17.3
Negro and Other Races	20.8	37.4

The chart above reveals that Negro and other races have higher unemployment rates than whites in all categories. This unemployment pattern also applies to the Cleveland area. In June, 1971, City of Cleveland unemployment was approximately 8 percent, while blacks in Cleveland were unemployed at a rate of between 15 and 20 percent.**

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* "Employment of Graduates and Dropouts," Monthly Labor Review, Dept. of Labor, May, 1971

** "Cleveland, Some Constructive Challenges," Chester J. Gray, Call and Post, June 16, 1971.

In terms of education, high school dropouts have higher unemployment rates than high school graduates in all categories. The greatest variance between female and male unemployment rates was 2.1 percent with one exception. Non-white female high school graduates had an unemployment rate of 37.4 percent compared to a rate of 27.8 percent for males.

Race

Studies comparing the labor force entry experiences of black and white youth have found black youth to be at a disadvantage in terms of labor market information possessed, entry level position secured and upward mobility. The greater employment difficulties encountered by black youth are attributable to many complex and interrelated factors. Among these are racial discrimination, quality of education, environment, and poverty. Major findings regarding the labor force entry and career connection patterns of black youth follow.

Males, ages 14 to 24, were tested in a national sample to ascertain their knowledge of the world of work. The study revealed dramatic differences between the labor market information of white and black youth.* Forty-six percent of the white males who participated in the study scored high on the test. Only 14 percent of the black youth received a high score. When age, school enrollment status and educational attainment were controlled, the scores of the white youth remained above those of black youth in almost every category of labor market information.

The 1971 Manpower Report of the President reveals that black youth in urban labor markets face critical problems which contribute to high dropout rates. Increased educational attainment does not benefit black youth in terms of higher wages and reduced unemployment as it does the rest of the population. For example, a high school education was found to have three times as high a pay-off in terms of wages for whites in inner-city areas as for black inner-city residents. In addition, unemployment was found to drop as education increased for white inner-city residents. The reduction in unemployment was negligible for blacks with similar education attainments.

An examination of the early labor market experiences of black and white graduates of a vocational education program in Baltimore indicated variance by race in the number of jobs held during initial work careers.** The median number of jobs held by blacks was 3.5 as compared to a median of 2.25 jobs held by whites during the same period of time. The high mobility of the black youth did not yield

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* Career Thresholds, Volume I, Manpower Research Monograph No. 16, U. S. Department of Labor, Manpower Administration, 1970.

** The Differential Impact of an Urban Labor Market upon the Mobility of White and Negro Potentially Skilled Workers, Joseph R. Rocha, Jr. unpublished Ph.D. dissertation, University of Iowa, 1966.

for them an advantage in occupational status. The black youth were concentrated in operative, service, and labor jobs, while their white counterparts were concentrated in craft and sales occupations.

A major conclusion from a comprehensive survey of the literature on young job seekers is that white youth are more successful than non-white youth in gaining access to a fairly wide range of entry occupations and industries.* White male high school graduates are more likely to enter the labor force through white collar jobs than through service or general laboring jobs. Comparison of the entry level positions obtained by male dropouts are concentrated in skilled and semi-skilled blue collar jobs. Their non-white counterparts are concentrated in semi-skilled, unskilled and service jobs. White female high school graduates are more likely than non-white females with the same education to enter the labor market through clerical jobs, and they are less likely to enter through service jobs. In comparing female dropouts it is noted that whites are concentrated in white collar jobs while non-whites are heavily represented in service and household jobs. Vocationally trained non-white graduates are less able to obtain entry jobs in the fields related to their training than whites who have received vocational training.

Education

High school graduates, in general, experience easier transition from school to work than high school dropouts. The U. S. Department of Labor conducted a follow-up survey to assess the progress of high school dropouts and graduates over a two year period.** The high school graduates made greater advances whatever the measure used, e.g., unemployment rate, earnings, steadiness of employment. Analysis of work experience during an entire year revealed that a larger proportion of graduates worked the entire year, relatively fewer had some unemployment and their annual earnings were higher than high school dropouts.

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* Entry into the Labor Force, A Survey of Literature on the Experience of Negro and White Youth, Jeffrey Piker, Institute of Labor and Industrial Relations, The University of Michigan, Wayne State University, December, 1968.

** Out-of-School Youth - Two Years Later, Vera C. Perrella and Elizabeth Waldman, Monthly Labor Review, Vol. 89, No. 8, U. S. Department of Labor, August, 1966.

Evidence indicates that work experience while attending school fosters work world orientation and facilitates movement into the first job after leaving school. High School graduates are more likely to have been employed while attending school than high school dropouts.

In 1966 three-fifths of the youth who graduated from high school had held jobs while attending school, as compared to one-half of the high school dropouts.* Of those who worked while attending school, three-fourths had jobs waiting for them when they left school. A study based on a national sample of youth, 16 to 21 years of age, who were not in school in February, 1963 found that the main difference between high school graduates and dropouts was that graduates were substantially more likely to have had a job waiting for them when they left school.** Thirty-three percent of the graduates had a job waiting in comparison to 22 percent of the dropouts.

The following chart compares occupations of youth, ages 16 to 21, by educational attainment and sex.

Occupations of Employed High School Graduates and High School Dropouts by Sex, in October, 1969 (Percentage Rates)

	Graduates		Dropouts	
	Male	Female	Male	Female
White-collar workers	19.8	68.9	8.8	24.3
Professional and Technical	2.6	2.7	1.3	1.2
Managers and Proprieters	2.6	.7	1.0	.2
Clerical workers	10.6	60.3	4.8	18.6
Sales workers	4.0	5.2	1.7	4.3
Blue-collar workers	70.5	12.8	75.4	38.1
Craftsmen and foremen	17.1	.7	13.8	2.0
Operatives	38.3	60.3	37.4	34.7
Nonfarm laborers	15.1	5.2	24.2	1.4
Service Workers	5.7	18.1	8.3	35.7
Private household workers	.2	2.3	-	9.2
Other Service Workers	5.5	15.8	8.3	26.5
Farm Workers	4.0	.2	7.4	1.8

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* The Second Chance in the Transition from School to Work, Garth L. Mangum, The Princeton Manpower Symposium.

** Entry into the Labor Force, A Survey of the Literature on the Experience of Negro and White Youth, Jeffrey Piker, Institute of Labor and Industrial Relations, Univ. of Michigan, Wayne State U.,1968.

The chart shows that high school graduates were more likely than dropouts to be employed in white-collar jobs.* Approximately twice as many graduates held white-collar jobs as did dropouts. However, approximately three-fourths of both graduates and dropouts were in blue-collar occupations predominantly as operatives.

Regardless of the amount of schooling they had, much greater proportions of women than men were in white-collar occupations, primarily in clerical work. Nearly 70 percent of those with a high school education were in white-collar jobs, including 60 percent in clerical occupations. Twenty-four percent of the female dropouts were employed as white-collar workers, with the largest percent employed in clerical occupations.

Place of Residence

Evidence indicates that environment and place of residence also serves as a determinant of labor force entry ease or difficulty. For example, the rates of juvenile complaints per 1,000 boys in Cleveland inner-city areas are 50 to 100 percent higher than for the City as a whole.** Also, the highest death rates from tuberculosis occur in these areas. Health problems and criminal records have been previously identified as barriers to labor force entry, and this data reveals that these barriers occur with higher frequency in inner-city areas of the City of Cleveland.

The 1967 Manpower Report of the President found that the job search of inner-city residents is limited by problems which other job seekers generally do not encounter. The major job search problems encountered by inner-city residents included:

1. Inner-city residents generally lack information which is available on job openings and the most effective ways of looking for jobs.
2. Inner-city residents typically have limited access to, and faith in, traditional job placement agencies.
3. Really effective ways of communicating job information do not exist in the inner-city.
4. Newspaper, radio, TV ads, and placement offices fail to reach out sufficiently into the inner-city.
5. The principal means of obtaining information about jobs is through personal contact.

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* Employment of High School Graduates and Dropouts, Special Labor Force Report 121, U. S. Department of Labor, August, 1970.

** Report of the Cleveland Inner City Action Committee on Employment, August, 1967.

The Manpower Report of the President also concluded from data gathered in the inner city of several large cities that inner-city residents lack psychological attitudes and attributes necessary for a successful job hunt. Among the characteristics attributed to a successful job hunt, and in which inner-city residents were found to be deficient are faith in the efficacy of personal planning, assertiveness and lack of interview anxiety.

Income Level

Income level is another characteristic by which barriers to labor force entry vary. For example, in April, 1971 the Cleveland school system released the results of reading comprehension tests taken by elementary school pupils.* The general finding was that reading comprehension scores decline as poverty and mobility rates increase. Possession of reading skills is a basic employment requirement for entry level jobs.

Disadvantaged youth tend to restrict their job search to a few occupations and industries because they prefer to stay close to home. The major reason for this preference are fear to travel outside of the home neighborhood; the youth feel their chances to get a job are better if the employer might know them, and many don't know their way around the city. The results of a study of 450 young disadvantaged job seekers in Philadelphia illustrates the restrictive influence of poverty on a job search. Forty-one percent of the youth had never made a single contact with an employer while looking for employment and only 1 in 5 of the youth had made as many as one contact per week with an employer.** The longer the youth were unemployed the less effort they made to find work.

The U. S. Department of Labor, in a national study of high school graduates and dropouts, ages 16 to 21, found a direct relationship between the amount of family income and the likelihood of a young person's graduating from high school.***The higher the family income, the better the chances are that a youth will graduate. Of the youth 16 to 21 years old living at home whose families had incomes of $3,000 or less, about 40 percent graduated from high school compared with 84 percent of the youths whose family income was $7,500 or more. The study concluded that a greater proportion of black than white youth are dropouts because relatively more of them are in families in the lowest income groups where dropping out is most frequent.

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* Reading Level Poverty Rates Show Link, The Plain Dealer, April 23, 1971.

** Manpower Perspectives for Urban Redevelopment, Alvin Mickens, New York University, Graduate School of Social Work, Summer, 1967.

*** Employment of High School Graduates and Dropouts, Special Labor Force Report 121, U. S. Department of Labor, August, 1970.

Summary of Variance in Barrier Impact

Youth of all races and from all education and socio-economic levels appear to encounter considerable difficulty in the movement from school to work. In general, however, evidence shows that of the two groups of young labor force entrants, high school dropouts and high school graduates, high school dropouts are the most disadvantaged with respect to labor force entry and must surmount additional barriers to move successfully into the work world. Being of a minority group and/or being from a lower socio-economic level compounds these labor force entry barriers.

Note should be made that although variance was discussed particularly in reference to black and white youth, youth in the Cleveland area who are American Indian, Appalachian white or Puerto Rican encounter considerable difficulty when entering the labor market. The impact of barriers upon these youth was not discussed because of the lack of statistical information. Estimates do indicate that a large proportion of these youth do not complete high school and unemployment rates for these youth are high. For example, a rough estimate of the unemployment rate of American Indians, ages 16 to 24, in the Cleveland area has been made at 60 percent, while their dropout rate was estimated to be as high as 30 percent.* Similarly, Puerto Rican and Appalachian white youth experience high unemployment and dropout rates.

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* Labor Force Entry and Career Connection Patterns of Cleveland's Young Job Seekers, Manpower Planning and Development Commission, Cleveland Welfare Federation, 1971.

PROJECTED CUYAHOGA COUNTY POPULATION - 1971 AND 1980

AGES 16 TO 21

Based upon the Advance Report of the 1970 Census of Population, the population of the age group 16 to 21 in Cuyahoga County is projected to 1971 and 1980. This age group is further broken down according to the total male and female population and Negro male and female population, reflecting the Census population divisions.

The population of youth, ages 16 to 21, was projected to 1971 and 1980 by determining which 1970 age groups would compose the 16 to 21 age group during the years for which projections were made. This method does not take into account mortality rates, which would be quite low for the age group under consideration, nor mobility rates.

The Negro population data was presented in the 1970 Census by ten year intervals. Therefore, projections were made under the assumption that the proportion of Negroes, between the ages of 16 to 21, generally reflect that of the total population and the proportion of Negroes within the age interval 16 to 21 will remain relatively stable within the projected time period. The latter assumption is supported by projections of the Cuyahoga County Regional Planning Commission. Using the 1960 Census as a base, the Regional Planning Commission projected little change in the age composition of Cuyahoga County between 1960 and 1990. For example, the proportion of the population under 20 years of age is expected to increase from 36.0 percent in 1960 to 36.1 percent in 1990.

Projected Cuyahoga County Population - 1971 and 1980

Ages 16 to 21

All Races	1971	1980	Absolute Increase 1971-1980	Percentage Increase 1971-1980
Total	179,150	197,603	18,453	10.3
Male	87,372	100,199	12,827	14.7
Female	91,778	97,404	5,626	6.1
Negro				
Total	36,671	45,466	8,795	24.0
Male	17,239	21,580	4,341	25.2
Female	19,432	23,886	4,454	22.9

Percent by Race and Sex of Cuyahoga County Population,

Ages 16 to 21

	1971	1980
All Races		
Total	100	100
Male	48.8	50.7
Female	51.2	49.3
Negro		
Total	20.5	23.0
Male	9.6	10.9
Female	10.8	12.1

The 1971 population of youth, ages 16 to 21, in Cuyahoga County is 8 percent of the total county population. The population of this age group is expected to increase by 10.3 percent in Cuyahoga County between 1971 and 1980. The Negro population in this age group will account for 47.6 percent of the increase. Currently, the Negro population, ages 16 to 21, comprises 20.5 percent of the total population in this age group and will increase to 23 percent of the total youth population, ages 16 to 21, in Cuyahoga County by 1980.

The total male population, ages 16 to 21, is expected to increase by 14.7 percent between 1971 to 1980, compared to a total female increase of 6.1 percent. The 1971 projection of male population excludes, for the most part, the institutionalized population. Therefore, most males who have entered the military services are not included in the 1971 population count. Because of the projection method utilized, the 1980 projection includes the institutionalized population, thus, inflating the increase of the total male population (an increase of 14.7 percent), ages 16 to 21, between 1971 and 1980. This inflationary effect does not apply to the Negro male population because the necessary adjustments were made.

The increase in the Negro population, ages 16 to 21, corresponds to the increase of the total Negro population in Cuyahoga County. Between 1960 and 1970 the Negro population in Cuyahoga County has increased by 28.6 percent and other races increased by 177.8 percent, an absolute increase of 5,845. The white population decreased by 0.3 percent.

Cuyahoga County Population - 1960 and 1970

	1960	1970	Absolute Difference	Percentage Change
Total	1,647,895	1,721,300	+ 73,405	+ 4.4%
White	1,389,298	1,383,749	- 5,549	- 0.3%
Negro	255,310	328,419	+ 73,109	+ 28.6%
Other	3,287	9,132	+ 5,845	+177.8%

The City of Cleveland has also experienced a decrease in the white population and an increase in the population of Negro and other races. The total City of Cleveland population has decreased by 14.2 percent between 1960 and 1970.

City of Cleveland Population - 1960 and 1970

	1960	1970	Absolute Difference	Percentage Change
Total	876,050	750,903	-125,147	- 14.2%
White	622,942	458,084	-164,858	- 26.4%
Negro	250,818	287,841	+ 37,023	+ 14.7%
Other	2,290	4,978	+ 2,697	+117.7%

The Cuyahoga County Regional Planning Commission has projected that the white population will continue to decline while the Negro population will continue to increase in Cleveland and Cuyahoga County. Also, the total population of the City of Cleveland will continue to decrease. The southwestern portion of Cuyahoga County is expected to experience the greatest growth by 1990, particularly in the Strongsville area.

The following projections are made for the total population by race of Cleveland and Cuyahoga County in 1980, by applying the percentage change between 1960 and 1970 to the 1970 population.

Cuyahoga County and Cleveland Population
Projections to 1980

	1970	1980
Cuyahoga County		
Total	1,721,300	1,797,037
White	1,383,749	1,379,598
Negro	328,419	422,347
Other	9,132	25,368
City of Cleveland		
Total	750,903	644,280
White	458,084	337,150
Negro	287,841	330,153
Other	4,978	10,837

Median age projections provide insight into a population trend which is of particular importance in the area of youth employment. According to Regional Planning Commission estimates, Cuyahoga County's median age has been decreasing and this trend will continue.

Median Age *

	Year	White Male	White Female	Nonwhite Male	Nonwhite Female
1	1960	32.2	33.8	26.6	26.7
	1970	28.2	31.4	22.2	24.3
	1980	27.9	30.5	23.1	25.1

* Cuyahoga County Regional Planning Commission, Cuyahoga County 1990, December, 1969.

BIBLIOGRAPHY

1. Cuyahoga County Regional Planning Commission, Cuyahoga County 1990, Population - Housing - Employment, December, 1969.

2. U. S. Bureau of the Census, U. S. Census of Population and Housing: 1960, Cleveland SMSA, PHC (1) - 28.

3. U. S. Bureau of the Census, 1970 Census of Population, Advance Report, PC (VI) - 37.

VT 017 674
WALKER, JAMES W.;FLEMING, MARGARET
CAREER EXPLORATION--1971-72 EVALUATION.

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DESCRIPTORS - *CAREER EDUCATION; PILOT
PROGRAMS; *PROGRAM EVALUATION; COMPARATIVE
ANALYSIS; *INNER CITY; *CAREER OPPORTUNITIES;
SECONDARY GRADES; CAREER PLANNING;
EDUCATIONAL PROGRAMS; *PROGRAM DESCRIPTIONS
IDENTIFIERS - *CLEVELAND PUBLIC SCHOOLS;
CAREER AWARENESS; CAREER EXPLORATION

ABSTRACT - THE CAREER EXPLORATION PROGRAM WAS
DESIGNED TO PROVIDE CHILDREN IN THE INNER-
CITY SCHOOLS WITH INFORMATION, KNOWLEDGE, AND
EXPERIENCE WHICH WOULD ENABLE THEM TO MAKE
SOUND DECISIONS CONCERNING PREPARATION FOR
JOBS. USING A CONTROL GROUP AND AN
EXPERIMENTAL GROUP IN GRADES 9 AND 10 OF TWO
SCHOOLS, THE PROGRAM FOR THE SCHOOL YEAR
1971-72 SOUGHT TO EXPOSE PARTICIPATING
STUDENTS TO A VARIETY OF OCCUPATIONAL
CLUSTERS THROUGH FIELD TRIPS, OUTSIDE
SPEAKERS, WORK SIMULATION, AND "HANDS-ON"
EXPERIENCE. FINDINGS INDICATE THAT STUDENTS
IN THE EXPERIMENTAL GROUPS HAD BETTER
ATTENDANCE RECORDS, HIGHER GRADE POINT
AVERAGES, AND MORE POSITIVE ATTITUDES TOWARD
CAREER EDUCATION. THE FOLLOWING
RECOMMENDATIONS ARE OFFERED: (1) CONTINUOUS
STAFF INSERVICE, (2) BUDGETING TO COVER PUPIL
TRANSPORTATION TO OFF-CAMPUS CAREER RELATED
ACTIVITIES, (3) EXPANSION OF THE PROGRAM TO
INCLUDE ALL GRADE 10 STUDENTS, (4)
DOCUMENTATION OF TIME SPENT ON CAREER
EDUCATION, AND (5) EXPANDED INVOLVEMENT OF
LOCAL BUSINESSES. DETAILS OF THE PROGRAM AND
CURRICULUM MATERIALS ARE APPENDED. (KH)

VT 017 674

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CAREER EXPLORATION

1971-72 EVALUATION

Fund No. 29

Prepared by:

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VT017674

Cleveland Public Schools

Division of Research & Development

September, 1972

CAREER EXPLORATION

I. INTRODUCTION

A. Needs and Rationale

The Career Exploration Program was designed to provide children from inner-city schools with information, knowledge, and experience which would generate positive thinking about jobs, careers, and future occupational opportunities. The rationale behind the Career Exploration Program is that inner-city children are grossly deficient in their knowledge about careers because of the limitations of a variety of jobs among their relatives and friends. These deficiencies are further compounded by the fact that over 59,000 students or 33 per cent of the entire student population is on public welfare and are therefore without proper work models in the home.

The role of the school has taken on an added dimension in its efforts to alter the life situation of inner-city children, in order to generate aspiration, hope, and knowledge which are vital for meaningful career planning.

The overall objective of the Career Exploration Program is to provide an in-depth information base about careers which will enable students to make sound decisions concerning preparation for jobs.

Specific objectives to be achieved are:

1. Students in the ninth grade in the experimental school will demonstrate a significantly greater knowledge of the different functional areas of business and industry than children in control schools as measured by a locally devised test.

2. Students in the ninth grade in the experimental school will demonstrate a significantly greater knowledge of the requirements of and operations involved in a wide variety of occupations than students in control schools as measured by a locally prepared instrument.

3. Students in the ninth grade in the experimental school will demonstrate a significantly greater ability to describe the relation between specific vocational education activities and "real" occupations than students in control schools as measured by a locally prepared test.

4. Students in the tenth grade in the experimental group will demonstrate a significantly greater knowledge of job cluster areas than students in control groups as measured by a locally devised test.

5. Students in the tenth grade in the experimental group will demonstrate significatly a more positive attitude toward Career Development than students in control groups as measured by the Semantic Differential.

6. Students in the tenth grade in the experimental group will be in a better position to gain the necessary experiences and understanding that will help them make more accurate decisions concerning their vocational goals than students in control groups as measured by teachers opinions, records from guidance counselors, and students' opinions.

B. Historical Background

The Career Exploration Program has just completed its second year of operation at Patrick Henry Junior High School. During that time approximately 1,600 junior high school students have been enrolled in the program. The tenth grade section at Glenville Senior High School completed its first year of operation at the close of this school year. The enrollment of the senior high school program was approximately 800 students.

C. Summary of Operation

The cost of operating the program at secondary level was approximately $47,000, which represents a per pupil expenditure of $35. When added to the normal per pupil expenditure of $893, the total per pupil expenditure for the program was $928 which represents a 3 per cent increase.

D. Questions to be Answered by Evaluation

The project evaluation sought answers to the following questions representing operational indices of attainment of the objectives.

1. To what extent were staff members able to integrate the concept of career clusters into into the ongoing curriculum?

2. To what extent were participants able to use the programmatic elements of the project to gain a positive attitude of career development?

3. Did participants at the tenth grade level have a higher grade point average and better attendance than non-participating students?

II. HIGHLIGHTS OF FINDING

A. Integration of Career Cluster Into Ongoing Curriculum

At Patrick Henry Junior High School, the career cluster concept was integrated in all subject areas. The documentation of time spent in various subjects show that during a period from April 1 to June 16, 1972 over 626 classroom hours were spent on Career Education. "Hands-on" experience was accomplished through simulation in Home Economics and Industrial Arts Laboratories. Linkage between Career Exploration and the Schools' Neighborhood Youth Corps provided an estimated 60 positions in a variety of jobs both skilled (clerk typist) and unskilled (custodian helpers).

B. Students' Attitude Toward Career Development

The "experimental" group of students at Patrick Henry Junior High had a more positive attitude toward Career Development than the "control" group of students at a non-participating junior high school. In the senior high portion of the Career Exploration Program there was no significant difference between participating and non-participating students.

C. Attendance

Attendance of participating students at Glenville Senior High School was significantly higher ($p < .05$) than a selected group of non-participating students.

D. Grade Point Average

The grade point average of the participating students at Glenville Senior High School was significantly higher ($p < .01$) than a sample group of non-participating students when compared at the ninth grade level. During the tenth grade, the grade point average of the participating students did not attain statistical significance, although it was higher than the non-participating students.

I. Implication and Recommendations

The 1971-72 program at Patrick Henry Junior High School expanded upon the career cluster concept. During the 1970-71 school year three clusters were studied. They were:

1. Health Services
2. Sales and Services
3. Manufacturing and Construction

The additional clusters undertaken by the project manager and participating ninth grade staff at Patrick Henry during the 1971-72 school year included:

1. Transportation
2. Communications
3. Steel and Metal Fabrication

Other programmatic elements such as field trips, outside speakers, etc., were received positively by the participating students.

However, the unique situation at Glenville Senior High School has proven to be untenable and should not be maintained during the upcoming school year. Problems encountered included, among other things, a massive scheduling problem. The Career Exploration students were isolated from the regular tenth graders at Glenville. This isolation and the adjustment to high school appeared to have had an effort on students' academic achievement. Although their grade point averages and attendance were better than a selected group of tenth graders, neither their grade point average nor their attendance were as high as they were in the ninth grade. The grade point average of participating students were statistical significantly higher ($p < .05$) during the ninth grade than it was during the tenth.

Grade point average during the ninth grade was 2.62, while during the tenth grade it was 2.15. Data collected for the non-participating students showed that the grade point average during the ninth grade was 1.94 and in the tenth grade it was 1.76. The participants exhibited a greater decrease (.47) in GPA than did the non-participating students (.18). Attendance of the participants decreased during the tenth grade, but the decrease was not statistically significant.

For the 1972-73 school year the following recommendations are offered:

1. Continuous systematic inservice to familiarize staff to programs goals.

2. Insertion of a line item in the budget to cover pupil transportation. It is not feasible to ask inner-city children to volunteer to work in off-campus activities and then expect them to underwrite their transportation cost.

3. Expansion of Career Education to all incoming tenth graders at Glenville Senior High School. This should remove the stigma of being enrolled in a special program.

4. Continuation of the time sheet concept to document time spent on Career Education.

5. Concerted effort between project manager and local businesses for the purpose of increased off-campus work experiences should be undertaken prior to the opening of school.

III. PROJECT DESCRIPTION

A. Procedures

The Career Exploration Program operated under two different approaches during the 1971-72 school year. The junior high school program was a continuation of the pilot project of 1970-71. The exploratory concept dealing with the integration of career information and occupation clusters into the ongoing curriculum was used. Each discipline area made curriculum changes to include three additional job clusters. Each student was exposed to a variety of strategies, i.e. field trips, assembly programs, outside speakers, work simulation, and actual "hands-on" experiences through linkage with the Schools' Neighborhood Youth Corps.

The tenth grade program was designed to give a systematic exposure of former Career Exploration Program students to certain elements of the program, i.e., career clusters, field trips, and outside speakers. Former Patrick Henry Junior High School students were assigned to a Career Exploration Program class three days a week. There were five classes each day except for Wednesday, which usually was a double class. The average class size range from 60 to 75. On the days in which there were double classes, this resulted in 120 to 150 in one class with one Occupational Advisor. This proved to be an unwieldying situation.

B. Inservice Sessions

Inservice sessions were held on a systematic basis. These sessions were used to plan teaching strategies for the upcoming units.

The occupational advisor utilized the services of the various department chairmen. Sessions were usually held after school and lasted one hour. Eighty per cent of the teachers felt that the Career Exploration Program added a new dimension to their teaching techniques.

C. Field Trips

Field trips were used extensively throughout the year. A total of 55 field trips were taken. The average field trip accommodated 35 students. The total number of students attending were 1,804.

D. Outside Speakers

The Occupational Advisor, through the effort of a local organization known as Blacks in Management, was able to secure a vast array of speakers. Outside speakers were utilized on 41 different occasions. Approximately 14,946 were in attendance at these sessions. (Please be advised that this figure represents a duplicate count, as many students attended more than one session).

IV. ANALYSIS OF FINDING

A. Evaluation Design

The evaluation was concerned primarily with assessment of experimental-control comparison in the areas of:

1. Student's attitudes to toward the programmatic elements of Career Development;

2. Student's attendance before and during project participation;

3. Student's grade point average before and during project enrollment.

Data collection consisted of the administration of a locally devised Semantic Differential, teacher questionnaire, field trip itineraries, compilation of outside speakers, and examples of curriculum changes.

B. Results

1. Students Attitude Toward the Programmatic Elements of Career Development

In order to ascertain the attitudes of students toward the programmatic elements of the project, i.e., field trips, outside speakers, exploring careers through various academic classes, etc., a group of students was randomly selected from the participating junior high school to serve as the experimental group. The control group was selected from a junior high serving the same attendance area as Patrick Henry Junior High and with comparable poverty indices. The control school had been involved in a three year program designed to expose inner-city children to job opportunities that were outside of their experiential living circumstances. Major components of the program consisted of guest speakers, production of salable items, simulation, i.e., student set up and ran a corporation, each participant role played a position within the corporate hierarchy; and community development. (See Appendix A)

A locally constructed Semantic Differential was administered in both experimental and control schools. The concepts measured were those

considered were:

1. Job Interviews
2. On-the-job Training
3. Apprenticeship
4. College
5. Technical Schools

6. Exploring Careers

7. Field Trips

8. Outside Speakers

9. Detentions

The Semantic Differential is a rating instrument prominently identified with the work of C.E. Osgood and his associates. Jum C. Nunnally states:

> "The fundamental hypothesis underlying the Semantic Differential is that certain important components of meaning can be measured by the rating of objects or ideas in respect to bipolar adjectives. Bipolar terms like "good vs. bad", "strong vs. weak", and intelligent vs. ignorant" are continua along which everyday meanings are expressed.[1])

An intrinsic value of the Semantic Differential is its adaptative use in measuring attitude about concepts of behavior which the test user wishes to measure.

Comparative analysis of the results of the Semantic Differential administered to ninth graders at both the experimental and control schools showed that the experimental group had a more positive attitude toward the concepts than the control group. Statistical analysis of the data using the t-test for independent samples revealed a statistical significant difference by the experimental group at the .01 level.

---

[1]Nunnally, Jum Tests and Measurments, Assessment and Prediction. McGraw Hill, New York, 1959.

Results of t-test Analysis

Semantic Differential

Experimental vs. Control (Ninth Grade Program)

	Experimental	Control
Means	3.90	3.55
S.D.	.28	.50
N	28	19
t	3.07*	

(*Significant at .01 level)

At the other participating school, Glenville, two groups of students were selected and administered the identical Semantic Differential as was used in the junior high school project. The participating students comprised the experimental group and non-participating tenth graders comprised the control group.

Statistical analysis of the data using the t-test for independent samples showed that there was no significant difference between the experimental and control groups.

Results of t-test Analysis

Semantic Differential

Experimental vs. Control (Tenth Grade Program)

	Experimental	Control
Means	3.75	3.59
S.D.	.59	.72
N	28	19
t	.815*	

(*This ratio not significant)

An item analysis of the categories revealed that the experimental group has a more positive attitude than the control group toward the following items:

1. On-the-job Training
2. Technical School
3. Exploring Careers
4. Field Trips

The reader must be cautioned that the attitude of the experimental group although "more positive" than the control group was not statistically significant.

2. Students Attendance Before and During Participation

Attendance of a selected group of participating students from Glenville was compared to a group of non-participating students from the same school. Two school years were used in the study; 1970-71 and 1971-72.

Statistical analysis of attendance data using the t-test for unpaired variates revealed that the experimental group attended school a significantly greater ($p < .05$) number of days than did the control group.

Attendance Data

Prior Entry Into High School

1970-71 School Year

	Experimental	Control
Means	172	158
S.D.	9.85	31.8
N	26	22
t	2.15*	

(*Statistical significant at the .05 level)

Attendance Data

During 10th Grade at Glenville

	Experimental	Control
Means	171	153
S.D.	8.55	40.05
N	26	26
t	2.23	

(Statistical significant at the .05 level)

The experimental group had a very favorable attendance pattern dating back to junior high school. The percentage of attendance achieved by the experimental group during their last year in junior high school was 96.10 per cent. This was higher than the school wide average of 92.58 per cent. During the first year of senior high school, the experimental group had a 95.30 per cent of attendance.

The attendance rate for the entire school was 87.63 per cent, compared to a low of 83.47 per cent of attendance achieved by the entire tenth grade.

Conversely, the attendance rate for the quasi-control group was 88.26 per cent during the last year of junior high school and decreased to 85.4 per cent in the tenth grade. However, it should be noted that the decrease in attendance by the non-participating students was not statistically significant. The quasi-control group however, had a higher percentage of attendance than the rate achieved by the entire tenth grade at Glenville.

3. Grade Point Averages

Final marks were compared for two school years; 1970-71 and 1971-72. Grade point averages (GPA) were computed using marks in four subjects:

English, Mathematics, Social Studies, and Industrial Arts or Home Economics. In each case the GPA for both groups were higher during junior high school than it was during the first year of senior high school.

The quasi-control group had a GPA of 1.94 during the ninth grade but decreased to 1.76 during the tenth grade. Analysis of GPA using the correlated t-test revealed that the decrease in GPA was statistically significant at the .10 level ($p < .10$)

The experimental group also had a decrease in GPA. During the ninth grade the GPA was 2.62 but decreased to 2.15 during the tenth grade. This decrease was statistically significant at the .05 level ($p < .05$) The tables below illustrate the decrease in both experimental and control groups.

Control Group

Grade Point Average

	1970-71	1971-72
Means	1.94	1.76
S.D.	.61	.95
N	26	26
t	1.09	

(Statistical significant at the .10 level)

Experimental Group

Grade Point Average

	1970-71	1971-72
Means	2,62	2,15
S.D.	.64	.75
N	26	26
t	4.27	

(Statistical significant at the .01 level)

Although the GPA of both groups decreased significantly during senior high school, the GPA of the experimental group was higher during both years under study. During the school year 1970-71, the last year of junior high school, the experimental groups GPA was statistically higher than the control group ($p < .01$). It is interesting to note that the experimental group was involved in the Career Exploration Program at Patrick Henry Junior High. The control group did not receive any exposure to Career Education. Analysis of GPA using the t-test for independant samples revealed a significant difference between experimental and control groups. The following table illustrates the difference between GPA.

Experimental vs. Control

Grade Point Averages

1970-71

	Experimental[1]	Control
Means	2.62	1.94
S.D.	.64	.61
N	26	26
t	3.88	

(Statistical significant at the .01 level)

During the tenth grade, as has been stated previously, both groups experienced a decrease in GPA. The experimental had better school marks but did not achieve a significant level over the control group.

Experimental vs. Control

Grade Point Averages

1971-72

	Experimental	Control
Means	2.15	1.76
S.D.	.75	.95
N	26	26
t	1.64*	

(*The t-ratio of 1.64 was not statistically significant)

4. Integration of Career Education into Ongoing Curriculum

In order to document the time spent on Career Education at the participating schools a time sheet was developed and put into use during the month of April. Analysis of the time sheets revealed that over 600 hours were spent on Career Education. The table below illustrates the trend at Patrick Henry Junior High School.

Estimated Time Spent on Career Education

Number of Teachers	Subject Areas								
	English	Math	Social Studies	Science	Health	Art	Home Ec.	Ind. Arts	Homeroom Activities
9	147.50								
7		71							
5			116						
4				42.50					
3					34				
1						20			
5								68	
4							55		
10									72
Total Hrs.	147.50	71	116	42.50	34	20	55	68	72

Grand Total - 626 Hours

Please note that this figure represents the amount of time spent on Career Education from April 1, 1972 to June 15, 1972. If this estimation was carried out for the entire nine month period, all things being equal, over 1,800 hours were spent on Career Education.

Other evidence of Career Education being integrated in the curriculum include:

a. Curriculum revisions to include two additional clusters, i.e., communications and transportation. One additional cluster-metal fabrication was also developed in Social Studies Department. (See Appendix B)

b. Outside speakers aided in relating the curriculum to the work a day world. The data reveal that outside speakers were utilized on 41 different occasions. Approximately 14,946 students were in attendance. This figure represents a duplicate count as many of the students attended several sessions. (See Appendix C)

c. Field trips were an important assest. A total of 55 field trips were taken. The average field trip accommodated 35 students. Over 1,804 students were involved. (See Appendix D)

d. Inservice sessions were vital to the planning and implementation of curriculum. During the 1971-72 school year 34 inservice sessions were held. (See Appendix E)

e. "Hands-on" experience, which is vital to any Career Exploration Program, was achieved through linkage with the Schools' Neighborhood Youth Corps. Approximately 60 students received work experience through this program. The following table illustrates the number of students and type of jobs.

Hands-on Experiences

Number of Students	Job Category
4	Visual Aide
8	Guidance Dept. Aide
11	Library Aide
16	Office Aide
5	Field Aide
2	Nurse Aide
4	Security Aide
1	Recreational Aide
3	Lunchroom Aide

f. Audio-visual aids were vital in helping relate career preparation to academic requirements. Over 70 films were used during the 1971-72 school year.

g. Through this program students were able to render important services to the school.

5. Staff Reactions to the Career Exploration Program

A locally prepared opinionnaire was administered to the staff at Patrick Henry Junior High School to garner their opinion on the programmatic elements of the project. The following data were collected. N=13

a. Question 2: What resource materials did you use with your class that you had not used in previous teaching? Responses were:

(1) Vocational files and employment pamphlet (17%)

(2) Resource speakers (30%)

(3) Small area businessmen as models (12%)

(4) Audio-visual aids (30%)

b. To what extent did the Career Exploration Program have impact on pupil interest. See table on the following page.

Results of Teacher Survey on CEP
Impact on Subject Areas

Subject	Great	Some	Minor	None
English	4%	4%		
Mathematics		12%		
Home Economics	16%			4%
Social Studies		4%		
Health	12%	8%		
Science	8%	16%		
Art				4%
Industrial Arts				4%
	40%	44%		12%

Total Responses - 24 (Some of the teachers taught more than one subject)

Forty per cent of the respondents felt that Career Exploration made a great impact on pupil interest in their class. Forty-four per cent felt that there was some impact and only 12 per cent felt that there was no impact. In total 88 per cent felt that the impact was either great or some. (See Appendix F)

6. Parental Involvement

Parents were involved in the program in many ways. Among them were:

1. Monitors on field trips
2. Guest speakers
3. Furnish materials from their places of employment
4. Keeping parents abreast of the program through phone calls, flyers and notices of activities going on at the school

V. CONCLUSIONS AND RECOMMENDATIONS

Analysis of the Semantic Differential reveals that students in the Career Exploration Program at the junior high school level exhibited a more positive attitude toward the major elements of a career education program than their counterpart at a similar junior high school located in the same attendance area. The project school has made a concerted effort through curriculum revisions, field trips, outside speakers, and "hands-on" work experience to achieve the goals as outlined in the proposal.

The experience with the Glenville portion of the program has proven to be unwielding due to scheduling problems and the "apparent stigma of being isolated from their age mates in a special program." The program placed an undue strain upon the facilities of the school, i.e., finding an empty classroom five periods a day, five days a week, in an already completely utilized school building. The work load of the occupational advisor was unrealistic, classes were overcrowded with a peak enrollment of 150 students on Wednesday when there was an overlap over students scheduled to attend. Field trips, speakers, and other elements of the program had to be planned to reach only a selected group who were in the CEP, other students could not attend due to the experimental nature of the program.

It is recommended that the Career Exploration Program continue for another year with the following changes and/or modifications:

1. Intensified inservice training sessions
2. More familiarity with goals and objectives of program
3. More supervisory assistance of subject area specialists
4. Subsidized pupil transportation in order to achieve greater off-campus work experience

5. Expansion of Career Exploration to all incoming tenth graders at Glenville Senior High School

6. Increased parental involvement

7. Continuation of time sheet concept in order to document time spent on Career Exploration

8. Implementation of Career Orientation Program to fill the gap between Career Motivation and Career Exploration

9. More systematic exposure of students to the 15 career clusters

APPENDICES

APPENDIX A

APPENDIX I

[illegible]

[illegible]

[illegible]

I. [illegible]

II. [illegible]

[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
	[illegible]	

[illegible]

1. [illegible]

II. [illegible]

[illegible]

1. [illegible]

   [illegible]:

   (a) [illegible]

   (b) [illegible]

   By means of [illegible] television [illegible]

   (a) [illegible]

[illegible]

[illegible]

[illegible]

APPENDIX B

[illegible]

I. [illegible]

(a) Cleveland Municipal Airport

(b) Federal Air Traffic Center (Columbus, Ohio)

(c) Military and Commercial Transportation

(d) Ports

1. Cleveland
2. Shipping Facilities

(e) U.S. Post Office (Mail Transportation - may be under field of communication).

[illegible] and [illegible] PROGRAMS

FIRST DAY

I. Students will see a movie on Open Hearth Production or other aspects of the steel industry and steel production.

EXAMPLES:

(a) Steel Making Today, available Cleveland Public Schools Visual Aids, Murray Hill.

II. Alternatively, students may tour an assembly plant.

EXAMPLE: Lordstown Chevy Assembly Plant.

SECOND DAY

I. Students will hear a Minority Recruitment Officer or Personnel Director from a local steel plant.

EXAMPLES: Jones and Laughlin, Eaton, Republic Steel.

The speaker should be instructed to discuss the range and variety of jobs available in steel production, blue and white collar, skilled and automated, men and women, apprenticeship and research, etc.

II. And/or, students will hear a speaker from the local Job Corps Apprenticeship Program.

EXAMPLE: Apprenticeship Program - Hodod and Euclid Avenue - Cleveland, Ohio - Mr. James Allen. The speaker will be instructed to acquaint students a broader [illegible] time often [illegible] nature of apprenticeship, requirements, advantages, opportunities, etc.

[illegible]

[illegible]

III. The [illegible] on [illegible], [illegible] unit, [illegible].

IV. [illegible]

[illegible]

[illegible]

[illegible]

I. [illegible]

II. [illegible]

III. [illegible] alternatives, [illegible] and [illegible] on [illegible].

EXAMPLES:

(a) Would you rather get $1,000.00 a year job you love, or a $50,000.00 a year job you really hate?

(b) Would you take a kindergarten job that is tedious or a [illegible] job that is interesting?

(c) Would you prefer a kindergarten job that involves strenuous physical labor, is a dirty job, allows very little contact and communication with others, is highly supervised and allows little personal freedom, etc.

IV. Either, students are to select an occupation from the [illegible] Occupational File, [illegible], and [illegible] why they would or would not like the job.

[illegible]

[illegible]

I. [illegible] discuss with the students who are not [illegible] for [illegible].

[illegible]

APPENDIX B

[illegible]

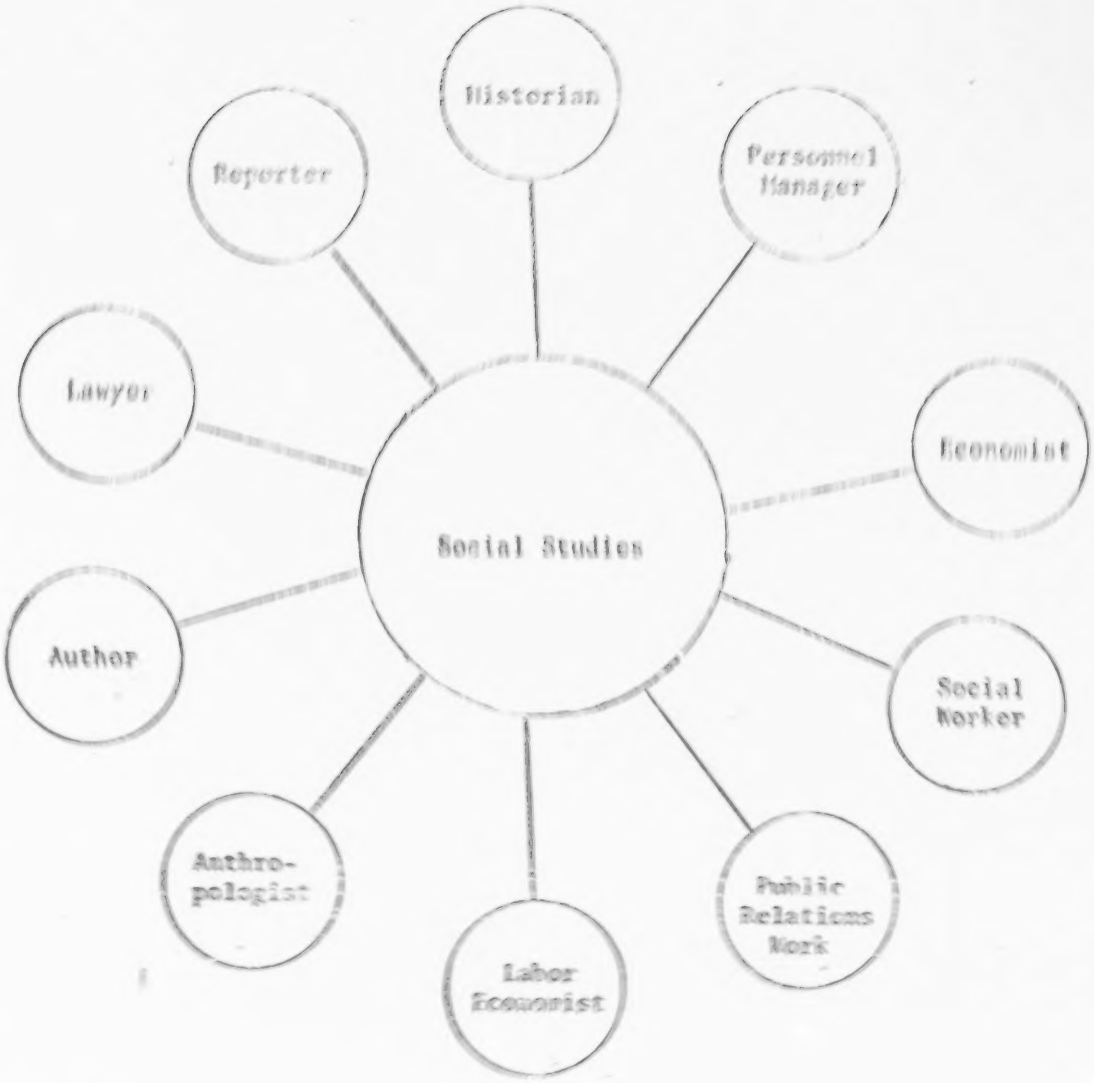
1. [illegible] assign the group to write a job interview skit involving the following:

   (a) [illegible] to do in a job interview, [illegible], receptionist, interviewer, narrator, director.

   (b) Invite staff and administrators to watch the skits.

APPENDIX B

OCCUPATIONS RELATED TO SOCIAL STUDIES



APPENDIX B

ENGLISH CURRICULUM

SCHOOL YEAR 1971-72

APPENDIX B

SYLLABUS

ON

CAREER EXPLORATIONS

WITH

EMPHASIS ON APPLICATIONS

TO

LANGUAGE

APPENDIX B

Objectives	Teacher-Pupil Activities	Vocabulary
Students will be able to discuss the advantages and disadvantages of holding a job.	The World of Work 1. Discussion: "What is work?" a. Motivation Questions 1. What is work? 2. What is a job? 3. Why do people work? 4. Why do some people not work? 5. Why should you work? b. Determining the job you want 1. What are your interests and/or hobbies? 2. Have you held jobs in your community? (a) Paper route (b) Baby sitting (c) Yard work (d) Running errands 3. Have you learned something in school you wish to pursue further?	Work Job Employment Qualifications Interview Application Blue Collar White Collar Laborer Skilled Laborer Unskilled Laborer Salary Contract Profession Vaction Military Government Occupation Television Telegraph Ticket Agent Telephone Manager Camera Man Technician

APPENDIX B

Objectives	Teacher-Pupil Activities	Vocabulary	Resource Materials
Students will be able to discern the basic structure of the job market.	Kinds of Workers 1. Students could define the following classifications: (a) White collar worker (b) Blue collar worker (c) Skilled laborer (d) Unskilled laborer 2. Use job titles on page 3 of Wanting A Job 3. Students could evaluate each job on page 3 to determine its probable classification.	Newsman Commentator Reporter Copyreader Proofreader Sportswriter Editor Editorial Airplane Train Locomotive Pilot Stewardess Radio Station Disc Jockey	A. Film explaining the different types of jobs 2. Album on job interviews and the importance of correct English usuage. 3. Role-Playing-The Interviewer & the Interviewee 4. Field Trips The Plain Dealer The Press WJW-Radio WJMO-Radio WJW-TV 5. Hopkins Airport 6. Greyhound Bus Station

APPENDIX B

Objectives	Teacher-Pupil Activities	Vocabulary	Resource Materials
	4. Students can then provide definitions for the following: (a) Salaried Workers (b) Hourly wage earners (c) Contract workers		
	The Job Market		
	1. Common job classifications. (a) Professional (b) Service (c) Military (d) Government (e) Self-employment		
	2. Students could name one job for each classification above.		Guidance Associates: Choosing Your Career (sound filmstrip)

APPENDIX B

Objectives	Teacher-Pupil Activities	Vocabulary	Resource Materials
Students will be able to select a career in which they have interest.	Survey of student's career interests. 1. Each student should pick a tentative career. 2. Each student should write an essay about his career choice (a) Examples (1) I am interested in_____ because..... (2) _____ could be fun..... (3) When I finish High school... (b) They may substitute other kinds of titles here. 3. Teachers should plan guest speakers in areas of students's interest. NOTE: The teacher can assume some areas of general interest to students i.e., teaching, secretarial or business work; military, athletic. Persons in these fields could be contacted well in advance so that they may schedule their visits during the students exploration of this unit. Everything in this unit should be devoted to careers.		

APPENDIX B

Objectives	Teacher-Pupil Activities	Vocabulary	Resource Materials
Students will be able to discuss the advantages and disadvantages of dropping out of school.	1. Filmstrips: a. Preparing for the jobs of the 70's b. Preparing for the World of Work. c. What You Should Know Before You Go To Work - Part One 2. Discussion: "Dropping out of school" NOTE: Education is the key to any career. Students need be reminded of this. A few students may be uninterested in a career at this point. The teacher should not make examples of these students, but should try to motivate them positively. A discussion about drop-outs may be useful to draw these students out since all of the activities up to this point are insistant that a drop-out is a loser. Potential drop-outs will probably ignore this information. However, the filmstrips listed below can aid the teacher by zeroing in on the subject.		

APPENDIX B

Objectives	Teacher-Pupil Activities	Vocabulary	Resource Materials
	1. Motivation Questions (a) Why do students drop out of school? (b) What happens to these students once they leave school? (c) How many drop-outs are successful in finding high paying jobs. (d) Do you know anyone who dropped out of school? What is he/she doing now? (e) How will you be able to realize your goals if <u>you</u> drop out of school?		
	2. Guest Speakers Perhaps a drop-out, or former drop-out might relate his experiences to the class. Students might secure such visitor, in addition to any that the teacher may know.		

APPENDIX B

Objectives	Teacher-Pupil Activities	Vocabulary	Resource Material
Students will be able to question others about their careers.	Guest Speakers 2. Many people from all walks of life are willing to speak to students about their careers. The teacher should secure the services for anyone who meet the following qualifications: (1) Employment in a job of his choice. (2) Approved by the principal and/or Board of Education. (3) Willingness to share his experiences freely. 3. When the visitors speak to the class, they should be introduced by the student(s) who are interested in their fields. These students can be called the hosting students 4. Prior to each visitation, the class should devise a questionnaire for use with the speaker. These can be duplicated by the educational aide, and distributed by the hosting student(s)		

Objectives	Teacher-Pupil Activities	Vocabulary	Resource Materials
	5. Persons involved in unusual occupations may be of interest to those students who are not as certain as others of their career plan.		
	6. Their roles as employees should be the main thrust of each speaker's talk. However, any personal experiences otherwise related to their lives might move interesting to students.		
	7. These visitations should be highly structured beforehand.		
	a. Hosting students should be informed of the visitation.		
	b. A suitable questionnaire should be devised.		
	c. The educational aide or teacher should re-confirm the visit with the guest.		
	d. The class should be reminded of courtesy procedures in this type of situation.		
	e. A clean-up committee should be formed to be certain the room is presentable for company. (Hosting students can do this if more than one is involved in a particular visitation.)		

Objectives	Teacher-Pupil Activities	Vocabulary	Resource Materials
	f. Break time should be re-adjusted or eliminated, and the students informed of this before hand. g. The class should be re-mineded that each student is expected to sit attentively, listen care-fully, ask pertinent questions and refrain from any behavior that would be distracting to the guest.		
	8. After each visitation all the students should write a "Thank You" letter to the guest. These need not be lenghthy, but should be sincere, and grammatically correct. (The educational aide could be responsible for correcting, returning for correction, and mailing of all letters re-lated to these visitations		
	9. If possible all the visitors should be scheduled during this unit. However, visitors always break up the monatory of the daily routine. Scheduling visits throughout the school.		

Objective	Teacher-Pupil Activities	Vocabulary	Resource Materials
	year from this point on, would be useful in this way. The choice belongs to the teacher. Some teachers do not like to have their schedule continously interrupted. Therefore, they may prefer Confining all visitors to the six weeks in which careers will be studied.		

APPENDIX F

Objectives	Teacher-Pupil Activities	Vocabulary	Resource Materials
Students will be able to report on the career of their choice.	Reporting on Careers 1. Source papers a. Each student should write about the career of his choice in the area of communication and transportation. b. Each student must have a career choice. c. Students should know the paper is the major project for the unit. d. Papers should be due at the end of the unit. 2. Researching source materials a. Library lessons (1) The librarian should teach/review usage of the card catalogue (2) The librarian should teach/review usage of the Reader's Guide to Periodical Literature. 3. The librarian should inform students choose the best materials.	Source Research Catalogue Periodical	

APPENDIX B

Objectives	Teacher-Pupil Activities	Vocabulary	Resource Material
	Class Lessons		
	1. The teacher could secure career information from library for usage in the classroom.		
	2. The teacher should be certain to check each student's progress carefully.		
	NOTE: A paper of this sort may difficult for any group of students. However, the teacher should make every effort to insure that each student is following all the directions carefully. Nothing can be more frustrating to a student than sincerely making an effort learning at the last minute he was incorrect in his approach or procedure.		
	3. The teacher should review sentence structure.		
	4. The teacher should review reading comprehension.		David A. Conlin George R. Henry Modern Grammar and Composition American Book Co

APPENDIX B

Objectives	Teacher-Pupil Activities	Vocabulary	Resource Material
Students will be able to realize how a career is chosen.	Choosing a Career NOTE: The teacher should insist that each child choose something for the purpose of securing guest speakers. However, it must be borne in mind that 9th graders may not have a clear choice in mind. To motivate them, various methods should be employed. Guidance Counselor may provide information about interesting careers. The library may be a source of career information. Dictionary of occupational titles. Occupational Library File Aptitude Testing a. Eighth graders usually take the Kuder Preference Test. Perhaps another similar test could be administered by the counselor if he does not wish to re-administer the Kuder.		

Objectives	Teacher-Pupil Activities	Vocabulary	Resource Materials
	a. Read sentence from a story previously read by students. Have students tell, in their own words, what the sentence or paragraph was about.		
	5. Teacher can now teach paraphrasing.		
	a. Read sentences unfamiliar to the students.		
	b. Have students tell, in their own words, what the sentence or paragraph was about.		
	c. Indicate that this method should be used for the source paper to avoid the following:		
	1. Plagiarism	Plagiarism	
	2. Unoriginality		
	3. Disinterest in the topic	Unoriginality	
	4. Misunderstanding	Disinterest	
	5. A poor grade		

APPENDIX B

Objectives	Teacher-Pupil Activities	Vocabulary	Resource Materials
Students will be able to understand some technique for reporting.	6. Teacher can also teach basic techniques for not-taking: a. Use of index cards (if desired) b. Abbreviations c. Value of headings and sub-headings d. Importance of related materials indicated at ends of chapters of sections etc.		
	7. Teacher should allow flexibility in lesson planning to allow time for incidental problems which may need teaching or reviewing: a. Documentation of sources b. Bibliography c. Format		

Objectives	Teacher-Pupil Activities	Vocabulary	Resource Materials
	3. Oral reporting a. Teacher should not request students to read entire reports. b. Basic information about the careeries sufficient. c. Insignificant or unusual aspects of the career should be included in an oral report. d. Oral reporting is not essential. If used, all students should be given the opportunity to report and a limit of 3-4 minutes each should be set. e. Once the written reports have been graded, oral reports can be spaced within the weeks to come allowing 4-5 reports per day until all completed.		
	4. The finished Product a. Students should strive for neatness and orignality in appearance of the source paper. b. All reports should be submitted in some type of clean folder.		

APPENDIX B

Objectives	Teacher-Pupil Activities	Vocabulary	Resource Materials
	c. Pictures, graphs, or illustrations should be included if the student chooses to do so. d. If oral reporting is used, it should be implemented after the written papers have been graded. e. Criteria for grading source papers. 1. Appearance 2. Originality 3. General Content 4. Depth of approach 5. Basic grammar 6. Accuracy of structure.		

APPENDIX B

Objectives	Teacher-Pupil Activities	Vocabulary	Resource Materials
Students will be able to practice writing business letters.	Letters 1. Business letters a. The teacher should review business letter form. b. The educational aide should secure unlined paper for writing practice letters. c. Letters to companies can be written by students to secure, information about the following: 1. Careers with company 2. Employment opportunities 3. Applications 4. Pamphlets and kits 2. Practice letters a. Students should practice writing business letters on unlined paper. b. Students should get continous practice with letter writing before they write to business. Applications 1. Job application form can be created by the teacher	Margin Unlined Pamphlets Application Marital Status Previous Resume Experience Character Reference	

Objectives	Teacher-Pupil Activities	Vocabulary	Resource Materials
	2. Application forms can be secured from various companies upon request of the teacher.		
	3. Items on the applications should be fully explained to students. Vocabulary emphasis is important here.		
	4. Student should practice completing applications neatly.		
	5. Applications may also be secured from employment agencies on the state employment service.		
	6. Job resumes could also be taught at this time.		

APPENDIX E

Objectives	Teacher-Pupil Activities	Vocabulary	Resource Material
Students will be able to develop interview skills	Interviewing 1. The definitions of an interview should be reviewed carefully. 2. Students should understand that an interview is a form of two-way communication, not one way. 3. Simulation of interview situations can be effective. a. The gum chewer b. The rambler c. The braggart d. The swinger 4. Students or the teacher may wish to practice "for real" by setting up an interview at an employment office with an authentic personnel officer. 5. A personnel officer or employment agent may consent to be a guest in the class.	Interview	

APPENDIX B

Objectives	Teacher-Pupil Activities	Vocabulary	Resource Materials
Students will be able to observe workers in a place of business.	Field Trips Any place of interest to the students related to the careers they have chosen will be worth while. Because of the field trip procedure, these trips may not actually take place until after the unit is completed. However, all trips should be planned with maximum students interest in mind.		

APPENDIX B

Objectives	Teacher-Pupil Activities	Vocabulary	Resource Materials
To introduce the various jobs available in transportation and communication	The World of Work In Transportation and Communication 1. What are some jobs that are available in these areas? a. Reporters b. Technicians c. Cameraman d. Telephone Repairman e. Newsman f. Disc Jockey g. Stewardess h. Train i. Newsman j. Commentator k. Ticket Agent After visiting various jobs sites and listening to various speakers, the students will select a career in the Communication-Transportation area and do a career scrapbook which would include: a. Qualifications & Requirements b. Educational Requirements c. Explanation of what the job requires d. Chances for Advancement e. Pictures describing the job		

APPENDIX E

OCCUPATIONS RELATED TO ENGLISH

APPENDIX B

SCIENCE CURRICULUM

SCHOOL YEAR 1971-72

APPENDIX B

Career Exploration Program

Careers in
Transportation
and
Communication

Science Department

Rodney Dominick Chairman
Henry Nash
Richard Beer
Susan Brown
Janice Turner

APPENDIX B

CAREERS IN COMMUNICATION

Ninth Grade

Introduction

In the 1970's, more than ever before, all young people must concern themselves with the complex task of planning and preparing for productive careers. Students and their parents must recognize that career decision-making is a long range process, not an act, and that it involves preparation for change as well as the making of specific decisions. Through the school guidance program, more and more attention is being given to assisting youth at all grade levels in career development by helping them develop self-understanding, by helping them increase their knowledge of educational and vocational opportunities and demands, and by helping them develop or improve their decision-making skills.

At Patrick Henry, it is the ultimate hope that introduction of Career Explorations will serve as a means of making young people aware of the wide variety of careers available in the major areas of industry and all other fields of endeavor. It is not our aim to have pupils select a career, but merely to be aware of the career available to them. This curriculum is designed to be used by junior and senior high school students, their parents, and others who have need for both general and specific career information and for suggested approaches to educational and career planning.

I. Objectives

A. Affective

1. To expose inner-city students to careers in communications.
2. To intensify and strengthen student communicative skills with emphasis on communication.
3. To strengthen student's self concepts as they relate to the fields of communication.
4. To provide students with opportunity to interact with communication personnel.
5. To imbue students with affective altitudes toward the communication field.

B. Cognitive

1. To help students gain knowledge and skill needed to be employed in the communication field.
2. To help students become knowledgeable about the positions and opportunities available in the communication profession.
3. To help students become sufficiently informed about the field of communication and thereby be in a position to make meaningful selection decisions regarding a career in communication.
4. To help students integrate cognitive learning with communicative experiences.
5. To give participants an opportunity to observe and perform limited tasks; with greater emphasis on learning and observation.

APPENDIX F

II. Careers in Communications--Revised Edition

1. Engineering Technicians
2. Ground Radio Operators
3. Teletypists
4. Railroad Clerks
5. Shipping and Receiving Clerks
6. Station Agents
7. Telegraphers
8. Telephoners
9. Towermen
10. Telephone Operators
11. Travel Agents
12. Television and Radio Technicians

III. Others--Careers in Communications--Old Edition

1. Radio Announcers
2. Radio Broadcast Technicians
3. Radio Operators, Ground
4. Radio Repairmen
5. Radio Service Technicians
6. Telegraph Messengers
7. Telegraph Operators
8. Telephone and PBX Installers and Repairmen
9. Telephone Answerers
10. Telephone Central Office Craftsmen
11. Telephone Central Office Equipment Installers
12. Telephone Linemen and Cable Splicers
13. Telephone Operators
14. Telephone Order Takers
15. Telephone Quotation--Clerks
16. Telephone Service Assistants
17. Telephone Solicitors
18. Telephoners, Railroad
19. Television Broadcasting Equipment Installers and Repairmen
20. Television Industry Inspectors
21. Television Interior Designers and Decorators
22. Television Make-Up Artists
23. Television Models
24. Television Salesmen
25. Television Service Technicians

APPENDIX B

IV. Activities

A. Getting a Job: Pupils will review topics of the following categories
   1. Contacting Job Interviewers
   2. The Agency Interviewer
   3. Words you Must Learn
   4. Making a Good Impression
   5. Selling Yourself
   6. The Positive Approach
   7. Handling Difficult Questions
   8. The Wrap-Up

B. Role Playing: (Materials listed in A.)

C. Assembly Programs

D. Research Projects--Communication

E. Field Trips

F. Guest Speakers

G. Scrapbooks--Area in Communication

H. Bulletin Boards

I. Informal Group Discussions--"Rap Sessions"

J. Reports--Selected from other activities related to communications

K. Interviews with people on the job

L. Accountability Report
   1. Prepared questionnaire
   2. Oral review of vigor points

M. Projects--Creative projects to be developed by individual pupils.

V. Content

A. List of careers in communication made available for pupils.

B. Have pupils contribute to the selection of careers.

C. Provide Reference Materials
   1. Books, pamphlets, newspapers, journals, etc.
   2. List of related vocabulary words
   3. List of selected movies

D. Library Work
   1. Methods of communication
   2. Communication in the past
   3. Communication in the future
   4. A world without communication
   5. Space Travel and Communication
      a. Areas of Research
      b. Areas of Discussion

E. Special Project
   1. The Apollo Program--pupils will be responsible for listing and describing methods of communication utilized during this program.
   2. Review and discussion of related articles pertaining to Apollo and communication.

APPENDIX B

VI. Vocational in Careers

A. Definition of Careers

1. Engineering Technicians: Are assistants to engineers and scientists and are trained in the technical aspects of their particular employment speciality.
2. Chemical Technicians: Carry out their research and testing.
3. Civil Technicians: Work in the designs and building of highways, railroads, subways, airports, bridges and waterway systems.
4. Engineer: Attempts to determine the best methods of converting natural resources into goods and services for the benefit of mankind by the practical application or use of basic scientific principles.
5. Production Engineers: Plan, supervise and evaluate production activities in whatever work setting in which they may be employed.
6. Sales engineers: Is employed to assist in the sales of specialized equipment.
7. Aeronautic Engineers: Employed mainly by the aircraft manufacturing and aerospace industries.
8. Industrial Engineers: Concerned with production processes and seek the most efficient and effective utilization of men, materials and machines.
9. Ground Radio Operators: Transmit messages between ground station personnel and flight personnel.
10. Radio Operator: Usually uses a radio-telephone.
11. Teletypist: Operates a teletype machine.
12. Railroad Clerks: Perform clerical job duties in transacting and keeping records of railroad business.
13. Station Agents: Are official representatives of the railroads who serve the public in railroad stations.
14. Railroad Dispatchers: Regulate the movement of trains by passing train orders and movement instructions received from dispatchers to train crews.
15. Towermen: Carry out the orders by setting signals and track switches to route train traffic in keeping with time schedules or special orders.
16. Telephone Operators: Aid persons using telephones services, to place calls and to make telephone connections.
17. Television and Radio Technicians: Are trained in the repair and maintenance of electrovic equipment such as TV sets home, automobile and two-way mobile radios, phonographs, tape recorders, etc.
18. Radio and TV Announcers: Present newsand live commercial messages, introduce programs, describe sporting events, act as masters of ceremonies, conduct interviews, and identify stations.
19. Broadcast Technicians: Set up, operate, and maintain the electronic equipment used to record or transmit all kinds of radio and TV programs.
20. Radio Repairmen: Repair, check and maintain radio equipment.

APPENDIX B

B. Films "Communication"

1.	Communication [illegible] Action	Color:	14 min.
2.	Communication--Story of its Development		11 min.
3.	Communication and Our Town		10 min.
4.	Communication for Civil Defense		20 min.
5.	Getting the News	Color:	15 min.
6.	Of Many Voices		30 min.
7.	So You Want To Be An Electronic Technician	Color:	11 min.
8.	Your Career as an Electronic Technician	Color:	27 min.
9.	Charting the Universe With Optical and Radio Telescopes	Color:	13 min.
10.	How TV Works		10 min.
11.	Principles of the Transistor		20 min.
12.	Sound Waves in Air		35 min.
13.	Telstar		25 min.

C. Resource

1. Encyclopedia of Careers and Vocational Guidance, Vol. 2 Copyright, 1957.
2. Vol. 2, Revised Edition of volume mentioned above.
3. Educational Resources, Inc.
   a. Work manuals, World of Work
   b. Pamphlets, Careers, Washington, D. C.
4. Careers field trips--various

APPENDIX B

TRANSPORTATION

INTRODUCTION

American transportations carries nearly 850 million people every year by train, bus and plane. There are over nine million men and women who work in domestic transportations in this country employed by airlines, barge lines, bus companies, truck companies, and railroads. They form our national lifelines, insuring a steady flow of goods and passengers over our network of rails, waterways, roads and airplanes.

The transportation industry moves everything made or used by man, from the most perishable flower grown in a tropic isle to iron ore which lies beneath the surface of the earth. There would be no America as we know her today without transportation. Transportation has a direct impact on other industries. The manufacture cars, buses, trucks, barges, boats and planes are directly linked to the success of transportations.

Few industries offer greater opportunities for career advancement than does transportation. Clearly, any young person thinking of entering transportation as a career could choose few areas of more importance. He would be contributing to the welfare of security and the country, as well as to himself. Opportunities are unlimited for careers in transportation because of the effect of Technology on the industry and perhaps more than any other major industry, it offers opportunities for the young man and woman of high school education. Throughout transportation an able young man and woman with a high school education can work his way up. The rule for the future

seems to be: start at the bottom in transportation and work your way up-while going to night school to get your college education.

Top management jobs increasingly require knowledge of finance, accounting, business management, law and a host of other objects which are learned from books. Transportation is basically a high paying field. Airline pilots are probably the highest paid occupational group in the country with masters and pilots on tow boats and tugs not far behind. Most truck drivers and bus drivers and locomotive engineers reach peak salaries of well over $1,000 a month. Even in the starting position, the pay is excellent. The transportation industry makes possible the sophistication of the American way of life where product begets product and luxuries become necessities and the man-made becomes smarter than the man himself. There is a risk in transportation and a little fear to sweeten the taste. There is the challenge of doing the impossible-finding the lost cargo, getting the load to its destination on time, rerouting the passengers where fog shuts down the airport.

The glamour comes, too from the constant emergency or threat of the rising storm which stings your face with water, the weather socking in the field, the icy roadway, the drifts that stop even a train. In short, transportation, whatever its branch, is the business for the young and the young-at-heart, and that gives it the glamour which enables the railroader or trucker or waterman or airline or bus employee to stand a bit taller than his fellowman and to have, in each day of his life, that little extra pride which separates him from the rest of humanity.

APPENDIX B

OBJECTIVES

I. To introduce the student to the many facets of transportation.

II. To expose the student to the various institutions that offers degrees in transportation.

III. To present the students with first hand experiences of the many phases of transportation using field trips.

IV. To acquaint the student with the unlimited opportunities for advancement in transportation.

V. To stress the minimal educational requirements for a beginning job in transportation.

VI. To instill an a wareness in the student of his contributions to the welfare of society and the country in the field of transportation.

APPENDIX B

JOBS AVAILABLE IN TRANSPORTATION

AVIATION

Pilots-Co Pilots
Stewardesses
Ticket Agents
Ground Crewmen
Instructors (aviation)
Aeronautical Engineers
Customer Service Representatives
Reservation Personnel
Sales and Administration Personnel
Sky Caps
Caterers
Baggage Crewmen

MOTOR BUS

Drivers
Ticket Agents
Reservation Clerks
Public Address Announcers
Red Caps
Baggage Crewman
Instructors for Training
Laborers
Truck Drivers
Dispatchers

RAILROADS

Red Caps
Porters
Engineers
Baggage Crewmen
Freight Crewman
Brakemen
Flagmen
Conductor
Dispatchers
Switch Tenders
Machinists
Repairmen
Superintendents (freight-passenger)
General Manager (transportation)
Track Supervisors
Station Masters
Firemen
Motormen
Ticket Agents
Record Keepers

Boilermakers
Blacksmiths
Cooks
Truck Drivers around Stations
Laborers at Station
Train Masters
Telegraphers
Clerk-Telephoners
Yard Masters
Electrical Workers
Sheet Metal Workers

TRUCKING

Drivers
Dispatchers
Repairmen
Book Keepers
Switchboard Operators
Executives
Freight Handlers
Dock Foremen
Secretaries
Clerks (rate, billing, file)
Cashiers
Office Managers
Terminal Managers
Customer Service Representatives

WATERWAYS

Captain
Navigators
Engineers (port, shore)
Cooks
Mate
Deck Hands
Mess Boys
Laundry Crew
Doctors
Freight Handlers
Dispatchers
Clerks (payroll, billing, file)
Salesmen
Public Relativesmen
Accountants
Boat Crew
Customer Service Representatives

VOCABULARY

1. Technology
2. Automation
3. Computerization
4. Aviation
5. Apprenticeship
6. Terminals
7. Excursions
8. Charters
9. Propeller
10. Deadheader
11. Reservation
12. Stewardess
13. Controllers
14. Dispatchers
15. Diesel Engine
16. Interstate Commerce
17. Expressway
18. Commission
19. Defensive driver
20. Layover
21. Route
22. Union
23. Schedule
24. Maintenance
25. Revenue
26. Locomotive
27. Conductor
28. Freight
29. Internal Combustion Engine
30. Horsepower
31. Reefer Car
32. Mass transportation Act
33. Couple
34. Cupola
35. Freight Yard
36. Hump
37. Piggyback Train
38. Pick-up truck
39. Pneumatic tires
40. four wheel brake
41. tractor trailer
42. Pilots
43. Armaned truck
44. Barge
45. Inland waterways
46. Navigation
47. Flat boat
48. keel boat
49. Tributaries
50. Tug boat
51. Crew
52. Pilot house
53. Vessels
54. Switchyard
55. Cargo

ACTIVITIES

Film strips

Movies

Guest speakers-Pertaining to a specific topic-Leader or particular Industries and Employees.

FIELD TRIPS

1. Airport
2. Bus Station
3. Railroad
4. Trucks-Outlets, truck driving schools
5. Pier, docks

RESOURCE CENTERS*- INFORMATION

1. Air Transport Association of America
   1000 Connecticut Avenue N.W.
   Washington, D.C.
2. National Association of Motor Bus owners
   839 Seventeenth Street, N.W.
   Washington, D.C.
3. Association of American Railroads
   Transportation Building
   Washington, D.C.
4. American Trucking Association Inc.
   1616 P Street, N.W.
   Washington, D.C.
5. American Waterways Operators Inc.
   1250 Connecticut Avenue, N.W.
   Washington, D.C.

APPENDIX B

COLLEGES AND UNIVERSITIES
OFFERING DEGREES AND/OR MAJORS
IN TRANSPORTATION

University of Alabama,
University, Alabama
University of Arizona,
Tucson, Arizona
University of Arkansas,
Fayetteville, Arkansas
Armstrong College,
Berkely, California
California State Polytechnic College,
Pomona, California
Golden Gate College,
San Francisco, California
San Francisco State College,
San Francisco, California
University of California,
Berkely, California
University of San Diego,
San Diego, California
University of Colorado,
Boulder, Colorado
University of Denver,
Denver, Colorado
University of Delaware,
Newark, Delaware

Northeastern University,
Boston, Massachusetts
Detroit Institute Of Technology,
Detroit, Michigan
Michigan State University,
East Lansing, Michigan
University of Michigan,
Ann Arbor, Michigan
Mississippi State University,
State College, Mississippi
New York University,
New York, New York
City College Of New York,
New York, New York
Rochester Institute of Technology,
Rochester, New York
Syracuse University,
Syracuse, New York
Duke University,
Dunham, North Carolina
University Of North Carolina,
Chapel Hill, North Carolina
Bowling Green State University,
Bowling Green, Ohio
Fenn College,
Cleveland, Ohio
John Carroll University,
Cleveland, Ohio
Kent State University,
Kent, Ohio
Ohio State University,
Columbus, Ohio

University of Cincinnati,
Cincinnati, Ohio
Youngstown University,
Youngstown, Ohio
Oklahoma Military Academy,
Claremore, Oklahoma
Oklahoma State University,
Stillwater, Oklahoma
University of Oklahoma,
Norman, Oklahoma
Lewis and Clark College,
Portland, Oregon
University of Oregon,
Eugene, Oregon
Carnegie Institute of Technology,
Pittsburgh, Pennsylvania
Duquesne University,
Pittsburgh, Pennsylvania
Pennsylvania State University,
University Park, Pennsylvania
University of Pennsylvania,
Philadelphia, Pennsylvania
Bryant College,
Providence, Rhode Island
Memphis State University,
Memphis, Tennessee
University of Tennessee,
Knoxville, Tennessee
University of Houston,
Houston, Texas
University of Texas,
Austin, Texas

APPENDIX B

HOME ECONOMICS CURRICULUM

SCHOOL YEAR 1971-72

APPENDIX B

HOME EC. DEPT.
E. PRATHER CHAIRMAN

THE VOICE

COMMUNICATION

The students will be able to tell the difference in a voice that is pleasing in personality and one that is unpleasant in personality.

VOCABULARY

inexpressible
artificial
tolerable
fretful
inconsiderate
pleasing
amiable
cordial
cheerful
concerned

STUDENT-TEACHER ACTIVITIES

The teacher will give the students reports on a variety of careers.

Suggested careers:

1. Airline Stewardess
2. Telephone Operator
3. Nurse
4. Dietician
5. Secretary
6. School Counselor

The teacher must impress upon the students that all of these careers are public contacts, therefore, one must be able to communicate intelligently with a pleasing voice and that the voice tell a great deal about you.

When students give reports, the teacher will have a hidden tape recorder to tape reports. The following day, the teacher will play the tape, not telling the students that it is their voices. The students will tell the teacher if the voice is lacking personality by applying the following adjectives.

Lacking Personality:

1. artificial
2. tolerable
3. fretful
4. inconsiderate

Pleasing Personality:

1. amiable
2. cordial
3. cheerful
4. concerned

APPENDIX B

COMMUNICATIONS	STUDENT-TEACHER ACTIVITIES	VOCABULARY
Behaviorial Objectives	The teacher will ask the students if they are satisfied with their voice personality. List some things that could help improve their voices with confidence. Suggestions: 1. Organize thoughts before speaking. 2. Consider the choice of words. 3. Use complete sentences. 4. Be brief in statements related to the purpose of subject matter. 5. Become aware of speech mannerisms. Have the students to bring a small mirror and let them practice talking or reading aloud in front of their mirrors. The students will ask themselves how they sound. Is the voice well-groomed? The teacher will have a speech teacher for frank criticisms. The teacher will emphasize the importance of voice practice. The teacher will call the Ohio Bell Telephone Company to invite a representative.	confidence mannerisms

COMMUNICATION

TEACHER-STUDENT ACTIVITY

Have the students draw a poster listing six ways messages are heard.

Examples:

1. Drum
2. Radio
3. Train whistle
4. Telephone
5. School Bell
6. Gong

Have the students make up six riddles using each message that is heard.

Ask students to do a bulletin board using pictures on how messages are seen and heard. Pictures that they can not find, they can draw.

The students may demonstrate the use of some everyday sign language.

Example:

1. When we say "Hi", we lift the hand.
2. Wave the hand when we say goodbye.
3. Shake the fist to show anger.
4. Shrug the shoulders when we don't know the answer.

Have the students write the signs for the following:

1. Plus
2. Minus
3. Equal
4. Division
5. Cent
6. Dollar
7. Number
8. And

The teacher will define rebus, the method of using pictures for a word.

Vocabulary

Plus	Equal	Rebus	Money Order	
Minus	Minus	Communication	Check	Address

APPENDIX E

THE ART OF SPEAKING

COMMUNICATION	TEACHER-STUDENT ACTIVITY	VOCABULARY
Behaviorial Objectives Students will be able to write money orders, checks, fill out and write letters correctly. The student will be able to converse intelligently. The students will know the different ways of communication.	The teacher will have to fill out moneys orders in class. The teacher will explain procedures expected for students to follow in filling out checks, job applications and correct letter headings. The teacher will ask the class to define communication. The teacher will ask the class what are the two most important things they do every day. 1. Talking 2. Listening The teacher will ask students to list three ways how talking is done. 1. Spoken words 2 Written words 3. Signals Ask students the following questions: 1. How do deaf people listen? 2. How do deaf and blind people listen? 3. How do people who are blind read? 4. Explain the difference between a blind person's reading material and that of a person who can see. 5. What name is used for the kind of printing used in reading material for the blind?	expressionless mechanical indifferent impatient inattentive pleasant friendly cordial cheerful interested clarity enunciation communication spoken words written words signals braille riddle message SOURCE copies of money orders Checks Job applications Letter headings

Have students draw a poster listing six ways messages are sent.
Example:
Fly now; pay later
Draw picture of an airplane.

APPENDIX B

TRANSPORTATION

BEHAVORIAL OBJECTIVES

1. The student will be able to attend to the passengers' wants by serving food and drinks; attending to staterooms.

2. The students will be a gracious hostess to the airline guests.

3. The students will be well-dedicated young ladies.

4. The students will learn when the sky girl came into being.

The student will be able to exercise self-control on duty as well as off duty, such as

conduct
cabin
smoking
food service
ventilation
passenger comfort

AIRLINE STEWARDESS

1. Teacher and student do role playing, demonstrating human endurance, warmth and when the chips are down, guts.

2. Field trips to Hopkins Airport and converse with an airline stewardess.

3. Invite supervisor of airline stewardesses to speak to class. At end, have a question and answer period.

4. Students make reports on airline stewardess explaining how it came into being. (May 3, 1930)

APPENDIX B

VOCABULARY WORDS

Air Stewardess

High Ball

Martini

Bloody Mary

Extra-curricular

Spare Time

Fringe Benefit

Cupid

Potentially

Groundings

Flight Hostess

Remuneration

Seniority

Aviation

Personality

Attractiveness

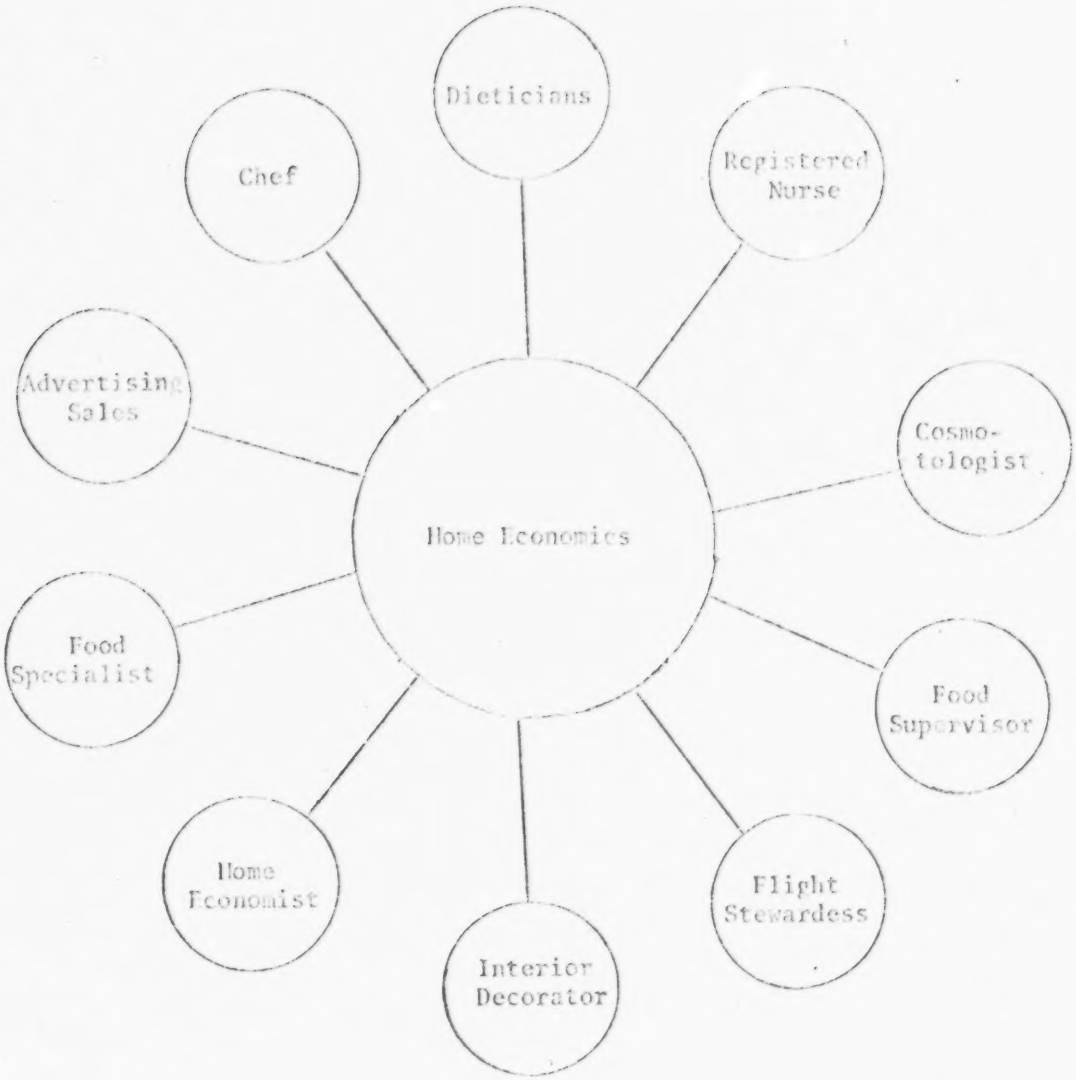
Leisure Time

Airborne

1280

APPENDIX B

OCCUPATIONS RELATED TO HOME ECONOMICS



APPENDIX B

MATHEMATICS CURRICULUM

SCHOOL YEAR 1971-72

1282

UNIT FOUR — TRANSPORTATION — MATHEMATICS DEPARTMENT

OBJECTIVES	ACTIVITIES	MATERIALS
To help students gain a knowledge of occupations involving and related to the transportation job cluster.	Have students make a list of various jobs in the transportation cluster, such as bus drivers, airline dispatcher, air traffic controllers, flight mechanics, etc.	Time schedules Booklets from local employment agencies.
To give the students the necessary requirements for various occupations in the transportation cluster.	Have the students work in groups to determine the need for many of the positions listed.	Occupational Outlook Handbook. Dictionary of Occupational Titles. Vols. I & II, Third Edition.
To help students develop a greater understanding of the various aspects of the transportation cluster and mathematics relates to them.	Plan a field trip to the bus company and the airport to see the operation of the industry and the various related jobs.	
To help students understand the qualifications for various jobs in the transportation cluster.	Invite a speaker from a local agency to speak to the class and acquint them with first hand information about various transportation job opportunities and how these jobs can be obtained.	
	Have students solve problems involving transportation by various means, such as time schedule exercises, cost of operations exercises, and employee earnings, etc.	

UNIT FIVE — COMMUNICATION — MATHEMATICS DEPARTMENT

Objectives	Activities	Materials
To provide students with information about occupations related to and involving the communication job cluster.	Have students make a list of the forms of communication media (newspaper, radio, telephone, and television) and the various jobs related to this cluster such as reporter, announcer, cameraman, etc.	Films and filmstrips Career booklets Library books
To help students understand about tests, qualifications, and special abilities needed in the communication job cluster.	Have students make a list of the kinds of occupations in this cluster and their requirements, selecting two or three for individual investigation by pupils.	Dictionary of Occupational Titles
To help the students understand the need for mathematics in the field of communication.	Show films and filmstrips of various aspects of the field of communications and the related positions.	Occupational Outlook Handbook
	Plan a field trip to a radio or a T. V. station to see the operation and talk with people in the industry to obtain a first hand knowledge of careers in this cluster.	
	Special assignment: Write a short paper on how mathematics is used in the field of communication.	

UNIT SIX — METAL FORMING AND FABRICATION — MATHEMATICS DEPARTMENT

Objectives	Activities	Materials
To provide the students with information about occupations involving the use of steel and various other forms of materials in the metal forming and fabrication industry.	Have students write to various personnel departments of the major industries for information on job possibilities in the industry, and requesting specific information about at least two positions of his or her choice.	Films and filmstrips Pamphlets from various industrial employment departments.
To help the students understand the qualifications needed for the various jobs in the metal forming and fabrication job cluster, and how mathematics plays a part in this career cluster.	Plan a field trip to Fisher Body, Ford, and Republic Steel to see the work of assembly line workers, welders, machine operators, etc. Have a local parent to come and give a talk on his position in this industry. Have the student solve problems such as the amount of steel used in an automobile or other commodities made of metals. Have students make a bulletin board display of the jobs that have been talked about and researched.	Dictionary of Occupational Titles. Occupational Outlook Handbook.

APPENDIX B

OCCUPATIONS RELATED TO MATHEMATICS

APPENDIX B

Course of Study

Ninth Grade

Industrial Arts

by

James D. Clary, Jr.

Patrick Henry Junior High School

Cleveland, Ohio

APPENDIX B

GENERAL OUTLINE

Industrial Arts

Ninth Grade

This course is designed to stimulate, motivate and develop interests within the ninth grade pupil in order that he may at will actively involve himself in preparing for a career related to the Industrial Arts areas. It would not be possible to explore the many areas related to the Industrial Arts program; however, it is possible to involve and develop basic skills and understandings as related to the industries.

Furthermore, this course of study is also designed in such a manner as to allow for integration of not only two or three cluster but many topics or clusters, thus, making the outline very flexible and allowing room for extended material.

APPENDIX B

I. Orientation

Objectives	Pupil-Teacher Activities	Teaching Materials and Information
To familiarize the students with objectives and promote interests in planning today for careers of tomorrow.	Discuss Topics: "Why Plan for Careers?", "Plan Sources for Gathering Materials".	Library
	Plan projects that may relate to course topics.	Films
	Plan resource speakers and materials.	Resource Speakers
	Invite principal and coordinator to discuss topics.	Books
	Plan and discuss field trips.	Pamphlets
		Reports
		Projects (materials)
		Magazines
To familiarize the students with being able to accept responsibility and fundamentals of budgeting.	Discuss Topic: "What Can We Do Now Towards a Successfull Future?"	
	Discuss and plan budget.	
To develop and appreciate good health and good grooming.	Organize class, assigning responsibilities.	
	Role playing first day appearances for interviews.	

APPENDIX E

II. Communications (Basic Electricity)

Objectives	Pupil-Teacher Acts	Teaching Aids
To familiarize the students with the topic.	Question-answer period to clarify definition of topic.	Library
To familiarize the students with career opportunities related to the topics.	Invite speaker to discuss topic and career opportunities.	Reports
To promote interests and develop understanding in preparing for selected career related to the topic.	Assign and assist students in basic fundamentals of topic.	Resource Speakers
	Show and discuss films and slides related to career opportunities related to the topic.	Books
	Schedule field trips.	Films
		Pamphlets
		Projects
		Charts
		Tools & Equipment
		Field trips

APPENDIX B

III. Basic Mechanics (Transportation)

Objectives	Pupil-Teacher Activities	Teaching Aids
To familiarize the students with topic.	Show film to introduce topic.	Tools & Equipment
To familiarize the students with career opportunities related to the topic.	Question-answer period to clarify definition of topic.	Library
To promote interests and develop understandings in preparing for selected careers related to the topic.	Invite resource speakers.	Resource Speakers
	Assign projects and assist students in basic fundamentals related to topic.	Films
	Schedule field trips.	Slides
		Charts
		Books
		Pamphlets
		Reports
		Field Trips

APPENDIX B

Communication

Topics (Suggested)

Safety

Electricity as Energy

Kinds of Power

Ohio's Law

Morse Code

Wires and Splices

Home Maintenance (Electrical)

Circuitry

Basic Electrical Tools

Sources of Electricity

Career Opportunities

Telegraphers

Telephoners

Towerman

Telephone Operators

Grand Radio Operators

Teletypists

Radio & TV Announcers

Telephone & PBX Installers and Repairmen

TV & Radio Service Technicians

Projects (Suggested)

Telegraph Key

Circuit Board

Repair (small appliances)

Construct Electrical Kits

1202

APPENDIX B

Films

Electrical Safety in the Home

Electricity--Principles of Safety

Electrons and Electronics--An Introduction

So You Want to be an Electronics Technician

Your Career As An Electronics Technician

So You Want to be a TV Announcer

My Pop's a Lineman

Vocabulary

1.	Coil	11.	Conducter
2.	Volts	12.	AC
3.	Battery	13.	DC
4.	Energy	14.	PBX
5.	Filament	15.	Technician
6.	Ampere	16.	Teletypist
7.	Watts	17.	Towerman
8.	Resistance	18.	Installer
9.	Transformer	19.	Announcer
10.	Magnetic	20.	Dexterity

APPENDIX B

Transportation

Topics	Career Opportunities
Safety (Auto Mechanics)	Station Agent (Railroad)
Tools & Equipment	Travel Agent
Gasoline Engines	Astronauts
Power (Transmission)	Air Traffic Controller
Trouble Shooting	Local Truck Driver
Carburation	Over-the-Road Truck Driver
Electrical System	Pilot
Transportation (Vehicles)	Taxi
Ignition System	Automobile Mechanic
Compression	Locomotive Engineer
	Bus Driver
	Chauffer

Projects (Activities)

Clean & Rebuild Small Engines

Construct Model Vehicles

APPENDIX B

Films

Engines and How They Work

Rockets and Satellites

ABC of the Jets Engine

Engine Overhaul

Engine Tune-up

Gas Turbine

Horsepower

Introduction to the Heat Engine

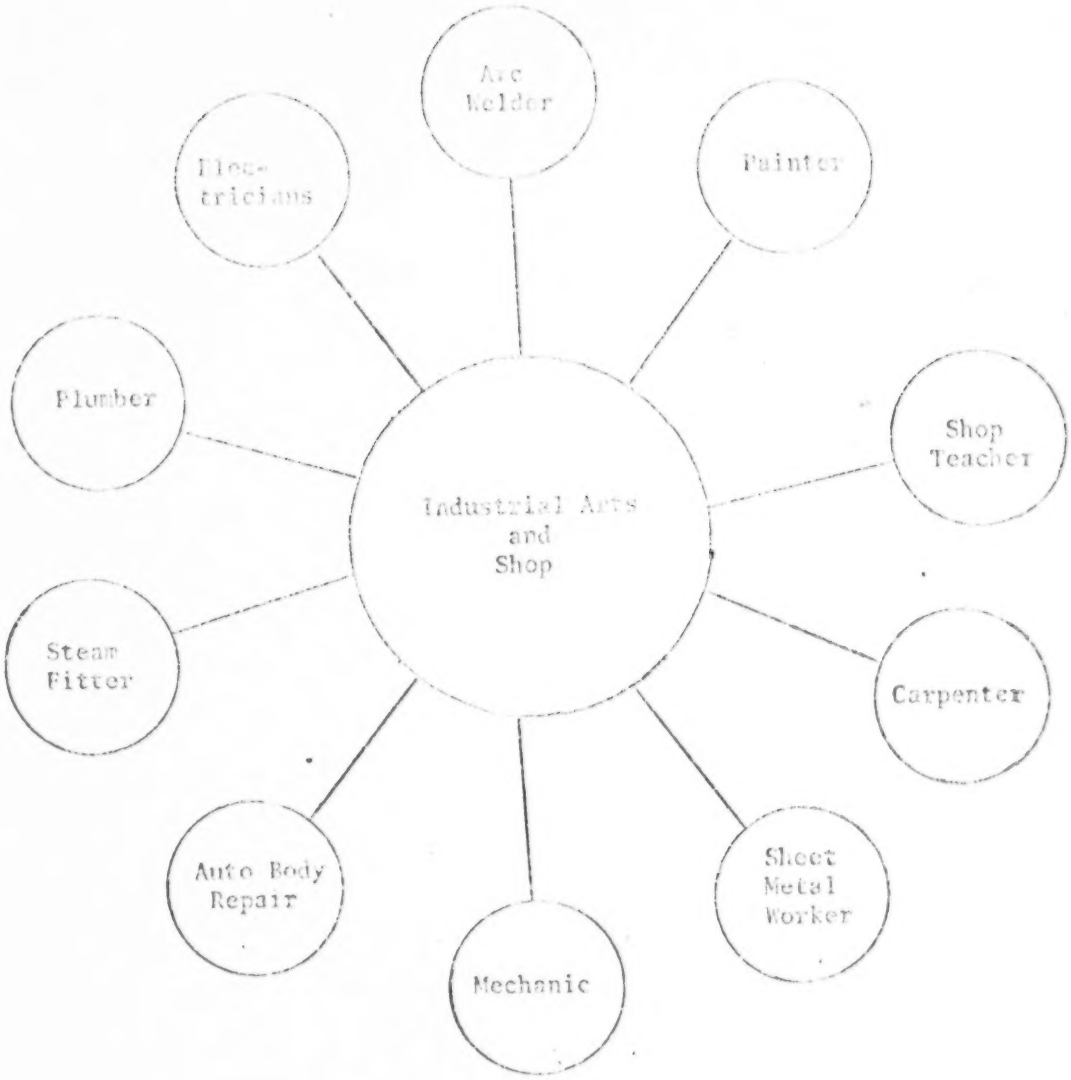
World of Henry Ford

Vocabulary

1.	Engine	11.	Carburator
2.	Motor	12.	Coolant
3.	Piston	13.	Horsepower
4.	Combustion	14.	Bearing
5.	Battery	15.	Reduction
6.	Cylinder	16.	Gears
7.	Valve	17.	Transmission
8.	Compression	18.	Airfoil
9.	RPM	19.	Choke
10.	Tension	20.	Trottle

APPENDIX E

OCCUPATIONS RELATED TO INDUSTRIAL ARTS AND SHOP



CAREER EXPLORATION PROGRAM

OUTSIDE SPEAKERS

Date of Speech	Name of Speakers	Title	No. of Pupils Attending
October 12, 1971	Mr. James Hewitt, Public Relations, Cleveland Electric Illuminating Company	Careers at CEI for Men and Women	299
October 19, 1971	Mr. Anthony Stewart, Traffic Controller, Federal Aviation Agency	Careers in Aviation	393
October 26, 1971	Miss Patricia Gains, Job Corps Mrs. Barbara Gossman, School Secretary Mrs. Myra Ulrich, School Secretary	My Career and Me	296
October 26, 1971	Mr. Sherman Thomas, Teacher Assistant, AV Mrs. Juanita Tent, School Secretary Mrs. Sylvia Nugelman, School Bookkeeper	My Career and Me	393
November 2, 1971	Mr. Anthony Stewart, Traffic Controller, FAA, film "Brother" showing blacks in all phases of aviation	Film "Brother"	686
November 5, 1971	Mr. Anthony Stewart, Traffic Controller, Federal Aviation Agency	Careers in Aviation	296
November 9, 1971	Mr. Julius West, Supt. Outreach Offices, Vocational Planning Center, CSSS	Knowledge and Career Choice	296
November 16, 1971	Mr. William Perry, Office Manager, Tremco Manufacturing Company	Industry is Where It's At	393
November 30, 1971	Mr. James Hewitt, Public Relations, Cleveland Electric Illuminating Company	Careers at CEI for Men and Women	393
November 30, 1971	Mr. William Perry, Office Manager Tremco Manufacturing Company	Industry is Where It's At	296

APPENDIX C

Date of Speech	Name of Speakers	Topic	No. of People Attending
December 7, 1971	Mr. Samuel Malone, District Manpower Supervisor, Vocational Planning Center, OSES	Services offered by OSES to the job seeker	296
December 9, 1971	Petty Officer Ben Harris, U S Navy	Careers in the Navy	121
December 14, 1971	Mr. Robert Hunter, Employment Spec. III, Vocational Planning Center, OSES	Services offered by OSES to the job seeker	393
December 15, 1971	Mrs. Carolyn Chaney, Dept. of Home Econ., Cleveland Bd. of Ed. Miss Cielyn Rose, Coord. Home Economics, Glenville High School	Careers in Home Economics Home Economics in High School and beyond	64
December 16, 1971	Petty Officer Ben Harris, U S Navy	Careers in the Navy	111
January 10, 1972	Mr. Henry Young, Dept. Chairman, Ind. Art, Glenville High School	Industrial Art and the Future	60
January 12, 1972	Officers Eugene Withers and Edgar Bailes, Community Relations Division, CPD	Careers in Law Enforcement	67
January 13, 1972	Petty Officer Ben Harris, U S Navy	Careers in the Navy	122
January 13, 1972	Mr. Henry Young, Dept. Chairman, Ind. Art, Glenville High School	Industrial Art and the Future	60
January 18, 1972	Miss Jacqueline Sheppard and Mr. Joseph Malone, Counselors, Cuyahoga Community College	Career Choices at Tri C	60
January 19, 1972	Officers Eugene Withers and Edgar Bailes, Community Relations Division, CPD	Careers in Law Enforcement	110
January 20, 1972	Petty Officer Ben Harris, U S Navy	Careers in the Navy	70
January 25, 1972	Mrs. Helen Jefferson, Dietetics Health Services, Cuyahoga Community College	Career Choices at Tri C	185

APPENDIX C

Date of Speech	Name of Speakers	Topic	No. of Pupils Attending
January 26, 1972	Sgt. Edward Johnson, Officers Eugene Withers and Edgar Bailes, Community Relations Division, CPD	Careers in Law Enforcement	82
January 28, 1972	Mr. Bertram Gardner, Cleveland Trust Bank, Vice-President Urban Relations	Let's Get it all Together	6[illegible]9
February 1, 1972	Mr. Sidney Thompson, Community Service Office, Cleveland Post Office, Main Branch	Civil Service and the P O	3[illegible]3
February 1, 1972	Mr. Walt Walker, Cosmotologist and Miss Mary Roberts, model	Careers for Men in Fashions and Cosmotology	2[illegible]6
February 11, 1972	Petty Officer Ben Harris, U S Navy	Careers in the Navy	8[illegible]
February 29, 1972	Mr. Paul Rousseau, Director Urban Relations, Mt. Sinai Hospital Mr. Arthur Pride, Assistant Director, Housekeeping, Mt. Sinai Hospital	Health Careers	2[illegible]6 2[illegible]3
March 7, 1972	Mr. Ulysses Glen, Dept. of Black Affairs, Cuyahoga Community College	The Black Worker and the Reconstruction Period	3[illegible]3
March 7, 1972	Petty Officer Ben Harris, U S Navy EM 2 Richard Stepteau, U S Navy	The Navy is for Men and Women	2[illegible]6
March 24, 1972	Mr. Harrison Allan Jr., Engineer, Lewis Research Center, NASA	Careers in the Space Program	1[illegible]3
March 28, 1972	Mr. Julius West, Supt. Outreach Offices, Vocational Planning Center, CCSS	Knowledge and Career Choice	3[illegible]3
March 28, 1972	Mr. George McBride, Apprenticeship Director, Jones & Laughlin Steel Co. Mr. Robert Jones, Personnel Management Division, Jones & Laughlin Steel Co.	Careers in Steel - Now and in	2[illegible]6

APPENDIX C

Date Of Speech	Name of Speakers	Topic	No. of Pupils Attending
April 11, 1972	Mr. Don Holt, East Ohio Gas Company Mr. Paul Rousseau, Mt. Sinai Hospital Mr. Ernie Greene, Case-Western Reserve Mr. Cleveland Brooks, Central National Bank	Ways to Make it in the World of Work	180
April 12, 1972	Mr. Cecil Durkes, Mr. Marlin Roberts, and Mr. Wilson Rogers - three black owners of McDonald's franchises. Mr. Ray Gofield, McDonald's Field Representative from Columbus	Careers in the Mass Selling and preparation of food.	195
April 18, 1972	Mr. James White, U S Department of Labor, Bureau of Apprenticeship Training Mr. P. E. Edmondson, Apprenticeship Information Center, OSES	Industry, Construction and Apprenticeship Programs	200
April 25, 1972	Mr. William O. Walker, Editor, Call & Post	Careers in Publishing	250
April 25, 1972	Mrs. Francis McCreary, Staff Assistant, University Hospital	What the Employer Looks For	75
May 2, 1972	Mr. Ken Hawkins, General Manager, WJMO	Opportunities in Broadcasting	200
May 9, 1972	Miss Dorothy Sunderland, University Hospital	Health Careers	250
May 9, 1972	Mr. William Jamison, Network Coordinator, NBC	Employment and Mass Media	225

APPENDIX C

APPENDIX C

[illegible]

Date of [illegible]	[illegible]	No. of [illegible]
[illegible] 12, 1972	Cleveland	20
[illegible] 12, 1972	[illegible]	[illegible]
[illegible] 12, [illegible]	[illegible]	[illegible]
[illegible] 12, [illegible]	[illegible]	[illegible]
[illegible] 12, 1972	[illegible]	10
[illegible] 7, 1972	[illegible]	[illegible]
[illegible] 7, [illegible]	[illegible]	[illegible]
[illegible] 7, [illegible]	[illegible]	[illegible]
[illegible] 7, [illegible]	[illegible]	[illegible]
[illegible] 26, [illegible]	[illegible]	[illegible]
[illegible] 1, [illegible]	[illegible]	3
[illegible] 1, 1972	[illegible]	[illegible]
[illegible] 1, 1972	[illegible]	[illegible]
[illegible] 1, [illegible]	[illegible]	[illegible]
[illegible] 1, [illegible]	[illegible]	[illegible]
[illegible] 1, [illegible]	[illegible]	[illegible]
[illegible] 1, [illegible]	[illegible]	[illegible]
[illegible] 1, 1972	Cleveland [illegible]	[illegible]
[illegible] 26, 1972	Cleveland [illegible]	[illegible]
[illegible] 26, 1972	Cleveland [illegible]	[illegible]
April 11, 1972	Cleveland	12
April 11, 1972	Cooper School of Art	[illegible]
April 11, 1972	Cooper School of Art	[illegible]
April 11, 1972	Clev. Plant	[illegible]
April 11, 1972	Clev. Plant	10
April 11, 1972	Clev. Plant	41
April 11, 1972	Clev. Plant	39
April 11, 1972	Ft. Hood Hospital	38
Nov 9, 1972	Clev Land Main Order	30
Nov 11, 1972	Cleveland Field Worker	[illegible]
Nov 12, 1972	Cleveland Main Land r	[illegible]
Nov 14, 1972	Cleveland Press	[illegible]
Nov 15, 1972	[illegible]	[illegible]
Nov 17, 1972	[illegible]	100
Nov 22, 1972	Cleveland Press	38
Nov [illegible], 1972	[illegible]	[illegible]
Nov [illegible], 1972	[illegible]	11
Nov 24, 1972	Ft. Hood Hospital	10
Nov 21, 1972	Cleveland Press	20

Total number of [illegible] - 3[illegible]
Total number of [illegible] - 1[illegible]

APPENDIX C

SPEAKERS WHO PARTICIPATED IN THE

CAREER EXPLORATION PROGRAM AT GLENVILLE HIGH SCHOOL

Name	Title	Representing	Topic	Number Attending
Edmondson, Perry	Supervisor of Apprenticeship	Apprenticeship Information Center	Apprenticeship requirements, preparation, testing, and pay	Two meetings total 400+ students.
Kuhfeld, Harold	Apprenticeship Coordinator, Bricklaying	Max Hayes Joint Apprenticeship Training.	Futures in the Bricklaying Trade	372 students
Friedson, William	Apprenticeship Coordinator, Carpenters	Max Hayes Joint Apprenticeship Training	Bricklaying as a Career	400+ Students
Bianchi, Bud	Instructor, Iron-working	Max Hayes Joint Apprenticeship Training	The Iron-Worker	Two meetings total 400+ students
Dorner, Charles	Director of Educational Training	Building Trades Employers	The Construction Engineer	392 students
Egan, Mary Lou	Supervisor	Ohio Bell Telephone Co.	Career Opportunities	400+ students
Brown, Baraba	Physical Therapist	University Hospital	Careers in Physical Therapy	400+ students
Tonn, Randall	Public Relations Director	Lutheran Medical Center	Health Careers	382 Students
Hazem, John	Administrative Assistant	St. Vincent Charity Hospital	Health Careers	174 students
Hill, Robert	Administrator	Forest City Hospital	Health Careers	327 students

APPENDIX D

FIELD TRIP RESULTS

NOTE:

At the beginning of the year students completed a survey qu naire which indicated their interests and future plans.

The information accumulated by this survey was used to selc field trips and to pick the students who expressed an interest i area covered by the field trip.

Area Visited	Number Assigned	Number Attended	Reaction
Lakeside Hospital #1	35	24	Very enthusiastic, other students abou saw and heard about
Lakeside Hospital #2	38	32	Same as for group #1
Lakeside Hospital #3	38	30	Still expressed int not to the extent s the first trip.
Chevrolet Plant #1	54	40	Noise and odors cau complaints. Excit punch presses.
Chevrolet Plant #2	52	42	One girl fainted fr odor. Boys had bee some small parts; t were eger to talk a they were produced.
Chevrolet Plant #3	45	37	Interest and discus still strong.
Ohio Bell Tele. #1	22	14	Showed a keen inter particularly in the the Information Ope
Ohio Bell Tele. #2	21	14	This group was pass didn't even talk mu the trip at all.
Ohio Bell Tele. #3	21	8	Were interested in long distance equip had to be called s to leave.
Strowder's Funeral Home #1	19	14	Asked many intelli Mr. Strowder seemed their interest.
Strowder's Funeral Home #2	23	18	Showed particular i embalming technique

[illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

APPENDIX F

7. [illegible] the total curriculum for your subject area, what per cent of your [illegible] do you feel you have accomplished?

Check one:

[illegible]	---	86%	8%
[illegible]	50%	75%	100%

8. To what extent did the Career Exploration Program have impact on pupil interest in:

	Great	Some	Minor	None
- English	4%	5%		
- mathematics		12%		
- home economics	16%			5%
- social studies		5%		
- industrial arts				5%
- health	12%	8%		
- science	8%	16%		
- art				4%
	40%	46%		14%

9. [illegible] describe one project planned and completed by your class that was initiated by interest in the Career Exploration Program.

(a) [illegible] indepth study into the qualifications, available opportunities and [illegible] scale of a newscaster - 5%
(b) [illegible] special class bulletin board of various jobs requiring the subject of mathematics - 5%
(c) [illegible]dents made scrapbooks on 20 vocations of interest to them - 8%
(d) [illegible]ld trip to Illuminating Co. with demonstration of preparing food, [illegible]dents also prepared food - 5%
(e) [illegible]dents made scrapbook on health careers - 5%
(f) [illegible]eer assembly, career scrapbook, pupils gave reports on chosen [illegible]eers - 5%
(g) [illegible]ling out job applications - 17%
(h) [illegible]dents wrote about various careers dealing with health or science - 10%
(i) [illegible]side speakers - 5%
(j) [illegible]ld care units - 15%
(k) [illegible]ld trips - 5%
(l) [illegible]earch projects on different careers - 15%

6. How were parents involved?

(A) Participated on field trips - 15%
(B) Guest speakers - 27%
(C) Parents not involved - 20%
(D) Invited to enjoy the prepared party food - 6%
(E) Furnished materials (booklets, notices, etc.) from their area of employment - 6%
(F) Outside speakers - 6%
(G) Parents were made aware of program by phone calls, flyers, field trips, etc. - 20%

7. Did participation in the Career Exploration Program add any new dimensions to your teaching techniques?

[80%] Yes [20%] No

If the answer is yes, briefly state what that dimension was.

(A) Important for the teacher to utilize as many of the students environmental resources to show him that it is a part of the learning process. Makes learning easier for student and teaching much more enjoyable - 10%
(B) The study made in quit engin or airplanes - 10%
(C) Field Trips - 10%
(D) Community resources - 10%
(E) To be educated about various jobs - 10%
(F) Broaden curriculum by bringing to light a part of the Health Program which I was neglecting (careers) - 10%
(G) More awareness of different careers available to youth - 30%
(H) The program allowed for greater student involvement - 10%

3. Use this space for suggestions of ideas and how you wish to teach.

(A) Program very enlightening to students - 25%
(B) Would like to see this program used in the 7th & 8th grade - 16%
(C) A "semi-on-the-job" training program to add relevance to program - 9%
(D) A Career Week or Month when everybody could focus his attention on a career at the same time, scrapbook, essay contest, rather than individual class approach, the entire ninth graders could do bulletin boards and focus their attention on careers in all classes - 9%
(E) More direction needed from the State Department of Education - 16%
(F) Encourage students when needed - 16%
(G) Slides of the students activities - 9%

Please indicate the level and number of years of teaching

		Grade Level	
☐	1 to 3 years 40%		
☐	4 to 7 years 20%	Kindergarten	☐
☐	8 to 12 years 13%	Primary	☐
☐	12 to 16 years 20%	Elementary	☐
☐	16 to 20 years	High School 100%	☐
☐	over 20 years 7%	Administrative	☐

APPENDIX G

FILM-STRIPS VIEWED IN

THE CAREER EXPLORATION CLASSES

Title	Subject	Source
Failure A Step In Growth	Using your failure as a guide in future planning	A. V.
Four Who Quit	Depicts four students and the fallacies in their reasons for quitting.	A. V.
Why Work At All	Shows how work can lead to a more full life.	A. V.
Know How and Your Future	Illustrates the kinds of training required for various kinds of jobs.	A. V.
A Job That Is Going Somewhere	Several kinds of jobs with futures are shown.	A. V.
Jobs of The '70's	New jobs that had been and are being developed.	A. V.
Liking Your Job and Your Life	#1 Construction Worker #2 Factory Worker #3 Communications Worker #4 T.V. Repair Man	A. V.
Four Trancee	#1 Advanced Vocational Education #2 Apprenticeship #3 Upgrading #4 On The Job Training	A. V.
Ohio Bell Careers	#1 Secretary #2 Draftsman #3 Tool & Die Maker #4 Key Punch Operator	A. V.
Nursing Careers	All areas of nursing are covered.	A. V.
Health Careers #1, #2, and #3.	Covers technicians related to the health careers	A. V.

APPENDIX G

FILM-STRIPS VIEWED IN

THE CAREER EXPLORATION CLASSES continued

Title	Subject	Source
Trouble At Work	#1 Hazing #2 Failure to communicate #3 Absenteeism #4 Lack of ambition	A. V.
You're More Than a Score	College testing programs	A. V.
Going To College Even Though You Are An Average Student	Colleges which accept "C" students	A. V.
Western College For Women	Offerings of this school	Glenville Guidance Department
Otterbein College	" " "	" "
Villanova University	" " "	" "
Toledo University	" " "	" "
Western Reserve University	" " "	" "
North Western University, School of Science and Engineering	" " "	" "
New York University, School of Commerce	" " "	" "
New York University, School of Science and Engineering	" " "	" "

APPENDIX G

FILMS VIEWED IN

THE CAREER EXPLORATION CLASSES

Title	Subject	Source
American Crisis	Problems when getting a job	A. V.
Worth Waiting For	Problems of seeking work when not properly prepared,	A. V.
You Can Go A Long Way	Necessity of completing high school	A. V.
No Reason to Stay	Gives good reasons to stay in school	A. V.
Getting Yourself together	Preparation before going out to look for a job	Modern Talking Pictures
---	---	---
Career Games	Planning careers	Modern
Planning Your Career	Outlines steps to follow	A. V.
Personal Qualities For Job Success	What is expected of you when you get the job	A. V.
Job Interview--Three Young Women	You are asked, "Which one would you hire?"	A. V.
Job Interview--Three Young Men	" " "	A. V.
---	---	---
Jobs For Women	Designed to show employment possibilities for women	A. V.
---	---	---
New Horizons in Vocations	Jobs that require less than College training	A. V.
Jobs and Their Environments	A sixteen-year-old enters the tough world of work	A. V.
Jobs In The World Of Work	People give their opinions about work	A. V.
---	---	---
Studio Teacher	About the operation of a T.V. studio	A. V.

APPENDIX G

FILMS VIEWED BY

THE CAREER EXPLORATION CLASSES continued

Title	Subject	Source
Communications--Story of Its Development	History since Marconi	A. V.
Transportation by Air	Stresses the many kinds of workers who are involved in air transportation	A. V.
Transportation By Water	The role that water transportation plays in the socio-economic life of our country	A. V.
Cabinet Making	Emphasizes the pride that cabinet makers take in their work	A. V.
Wood Plastics--A New Dimension	Many possible jobs are seen	A. V.
What's So Special About Paper?	Opportunities in the paper industry	Modern Talking Pictures
So You Want To Be A Tool & Die Maker	Training required for the Tool & Die trade	A. V.
Industrial Worker	Develops an Understanding of the importance of the Industrial Worker	A. V.
Building Trades--The House Builder	Covers all trades involved in the construction of a house	A. V.
The Cement Worker	Cement worker Apprenticeship	Cement Workers Union
Bricklaying	Bricklaying Apprenticeship	Mr. Harold Kuhfeld of Max Hayes
Construction Engineers	A young man's experiences while serving his apprenticeship	Apprenticeship Information Center
Fire Bird III	Jobs in the development of	A. V.

APPENDIX G-1

FILM VIEWING

THE CAREER EXPLORATION CLASSES continued

Title	Subject	Source
Up From Clay	From clay model to a finished automobile	A. V.
Jet Story	Planning and building of jet airplanes	A. V.
Seven Guideposts to Good Design	Work of industrial designers	A. V.
Craftsmanship In Clay Throwing	Shows the skills required in the pottery trade	A. V.
Creative Ceramics--Decoration	Illustrates the basic techniques used to enhance the potters work	A. V.
Creative Ceramics--Glazing	The artistry of a potter	A. V.
Metal Sculpture	Artistry in metal	Modern Talking Pictures
A Is For Architecture	Building Designs	Cleveland Public Library
Architecture--West	Drawing and Planning a home	Cleveland Public Library
Architecture--Mexico.	House and landscape planning	Cleveland Public Library
Baseball Rookie	The work that goes into developing a baseball player	A. V.
Name of The Game Is Baseball	Techniques of playing various positions	A. V.
Cameras & Careers	Illustrates career opportunities in portrait, news, industrial and business photography	A. V.
Ansel Adams--Photographer	Work of a photographer	Modern Talking Pictures

APPENDIX G

FILMS VIEWED BY

THE CAREER EXPLORATION CLASSES continued

Title	Subject	Source
Photography--Anatomy of Camera and Film	Basic elements of the trade	A. V.
Market in Motion	People who work in the stock market	Modern Talking Picture
Quicker Than You Think	Working with a computer	A. V.
Help Wanted--Secretary	What is looked for in hiring a secretary	A. V.
Taking The Order	Techniques of a good waiter or waitress	A. V.
Mr. Bus Boy	How to work up to a head waiters position	A. V.
Alaska-- New Frontiers	Careers in Alaska	A. V.
Ant-Arctic Frontier	Scientific jobs	A. V.
Arctic Mission	Government jobs on the DEW line	A. V.
The American Cop	Kinds of work done by the police	Cleveland Public Library
Police Unit 2A26	About the police force	A. V.
Beauty For A Career	The practical advantages of this vocation	A. V.
Careers In Mathematics	Shows jobs involving mathematics	A. V.
Challenge Of Journalism	Journalist checks on politics and politicians	A. V.

APPENDIX G

FILMS VIEWED BY

THE CAREER EXPLORATION CLASSES continued

Title	Subject	Source
Scientists At Work	Careers in science	A. V.
Job Of A Chemist	Careers in Chemistry	Modern Talking Pictures
American Doctor	The experiences of a doctor	Modern Talking Pictures
Doctors To The Stone Age	History of doctors	A. V.
You Can Be A Doctor	The growing shortage of Black physicians	A. V.
Optometry--Career Guidance	Advice to follow	Modern Talking Pictures
Dentistry Through The Ages	Dental care	A. V.
What About Tomorrow	Group of students discuss dentristry with a dentist	Modern Talking Pictures
Summer Of Decision	A college student finds his answer to the career decision	A. V.
Henry Plans Ahead	Young man decides to pick dentristy as his career	Modern Talking Pictures

Career Education Program
Personnel Time Allocation

Name of Program_____

Name of Teacher_____

Month_____

(Please enter daily amount of time spent in various subject areas to Career Education)

Date	Lang. Arts / Spec.	Arith. / Math	Social Studies	Science	Phys. Educ.	Health	Art	Music	Other*	Total
M April 3										
T April 4										
W April 5										
TH April 6										
F April 7										
TOTAL										
M April 10										
T April 11										
W April 12										
TH April 13										
F April 14										
TOTAL										
M April 17										
T April 18										
W April 19										
TH April 20										
F April 21										
TOTAL										
M April 24										
T April 25										
W April 26										
TH April 27										
F April 28										
TOTAL										

*Other Include:
A. Assembly Programs
B. Physical Education
C. Complete Students
D. Special Career Education Projects
E. [illegible]

APPENDIX I

Name of Teacher	Employee No.	Pay No.	Hours Spent Per Week on Career Education								
			Work Ed.	Career Well.	Bus. Ed.	Ind. Ed.	Rel. Edu.	Health	Ag.	Home Ec.	Other

Total No. of Hours _____

I hereby certify that to the best of my knowledge the above number of hours represent an accurate estimate.

_____
Teacher-In-Charge

1318

VT 017 711
PRIORE, RONALD J.
THE IMPACT OF A CAREER ORIENTATION PROGRAM ON JUNIOR HIGH SCHOOL STUDENTS IN CINCINNATI, OHIO.

CINCINNATI UNIV., OHIO.
OHIO STATE DEPT. OF EDUCATION, COLUMBUS.
MF AVAILABLE IN VT-ERIC SET.
PUB DATE - 01JUN72 67P.

DESCRIPTORS - *CAREER EDUCATION; SECONDARY GRADES; RESEARCH REVIEWS; *OCCUPATIONAL ASPIRATION; TEACHER ATTITUDES; WORK ATTITUDES; STATISTICAL STUDIES; *JUNIOR HIGH SCHOOL STUDENTS; *PROGRAM DESCRIPTIONS
IDENTIFIERS - CAREER AWARENESS

ABSTRACT - THE OHIO DEPARTMENT OF EDUCATION'S DIVISION OF VOCATIONAL EDUCATION, IN COLLABORATION WITH FIVE PARTICIPATING SCHOOL DISTRICTS, HAS PLANNED A CONCENTRATED "CAREERS ORIENTATION PROGRAM" TO EXPOSE JUNIOR HIGH SCHOOL STUDENTS TO THE WORLD OF WORK. THIS DOCUMENT EXPLAINS THE EDUCATIONAL AND RESEARCH OBJECTIVES OF THE PROGRAM, DESCRIBES THE ACTIVITIES CONNECTED WITH THE PROGRAM, ENUMERATES TECHNIQUES FOR EVALUATION, AND FORECASTS THE PROJECT'S CONTRIBUTION TO THE PROGRAM. THE DOCUMENT IS DIVIDED INTO FOUR ANALYTICAL CATEGORIES: (1) STUDENT KNOWLEDGE OF THE WORLD OF WORK, (2) OCCUPATIONAL EXPECTATIONS, (3) REFERENCE GROUP PATTERNS, AND (4) TEACHER ATTITUDES. THE MAJOR FINDINGS IN EACH CATEGORY ARE SUMMARIZED, FOLLOWED BY TABLES FROM WHICH SUMMARY STATEMENTS ARE DRAWN. (DL)

VT 017 711

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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COVER PAGE

Title of Project:	The Impact of a Career Orientation Program on Junior High School Students in Cincinnati, Ohio
Project Organization:	University of Cincinnati
Initiator:	Ronald J. Priore Program Director Institute for Metropolitan Studies 513-475-5047
Project Director:	Same as Initiator
Transmitted by:	Dr. Robert Wessel Vice Provost Graduate Studies University of Cincinnait 513-475-2872
Duration of Activity:	April 1, 1971 - June 1, 1972
Purpose of Grant:	Research and Training Programs
Use of Funds:	Research in Vocational Education
Total State Funds Expended:	$29,563.00
Date Transmitted:	June 1, 1972

VT047774

ABSTRACT

A major problem of American education concerns the articulation of secondary school programs to the occupational system of the society. At the present time far more students are enrolled in college preparatory programs than will go to, or complete, college. Far less students are enrolled in courses which will provide a good background for the types of employment they will eventually indulge. The Career Orientation Program of the Cincinnati Public Schools, sponsored by the Ohio Office of Education's Division of Vocational Education, is inteded to broaden student knowledge of the world of work through specialized teaching programs. The questions addressed in the evaluation of this program are three.

1) To what extent has student knowledge of the world of work increased?
2) To what extent have student attitudes toward the world of work been modified?
3) What factors are associated with observable changes or lack of change in student knowledge or attitudes?

Five junior high schools participating in the program were treated as experimental schools, two non-participating junior highs were selected as control schools. Questionnaires containing instrumentation designed to measure student knowledge and attitudes toward occupations were administered near the beginning of the program and at the end of the school year. Questionnaires were also administered to teachers in experimental and control schools.

Analyses of the data provide many suggestive implications for future program modifications. For instance, students in the experimental (Program) schools have acquired more knowledge about occupations than have the students in the control (non-Program) schools. But the program appears to benefit girl students more than it does boy students, and it appears to benefit seventh graders in certain ways more than it does eighth graders. And there are observable differences to be found among the five participating schools.

Occupational aspirations of students do not as yet appear to be significantly modified by the program. But many factors related to this phenomenon have been analyzed. Both the mother and the father serve as very important sources of anchorage of student attitudes about occupational attitudes. Siblings and peer groups are also of importance. And the personal attitudes of teachers about the desirability of pursuing professional type careers serves to further reinforce the dominant success "prototype" of the parents and the society at large.

1. THE PROBLEM

One of the premises of education in a democracy is to broaden the range of alternatives available to an individual. From the last half of the 19th Century to the present day the primary emphasis in American secondary education has been upon academic programs. This emphasis has seriously limited the alternatives and circumscribed the life chances of a number of young people.

Because of the above ideological and historical considerations there is a need in Ohio, as there is in other states, for a new curricular perspective for vocational education. A need exists to enhance the students perceptions of the world of work.

Moreover, wherever data are compiled, evidence of a curricular-occupational structure gap appears. The proportion of students enrolled in college preparatory programs far outstrips the proportion of high school students who actually go to, or complete, college. Conversly, we must consider the number of persons who earn their living by vocational or technical means who did not benefit from secondary vocational training.

In recent years, at federal, state, and local levels increasing attention has been devoted to this problem. Monies are being legislated to develop vocational programs; school systems are thereby enabled to increase and improve their vocational education programs. Great responsibility now rests upon the shoulders of those professional educators responsible for promoting school programs which will better equip today's youth for employment in the society's labor market.

Two aspects of the educational problem are of primary significance for the research presented in this report. First, it is an important objective of the Career Orientation Program of the Ohio Department of Education's Division of Vocational Education to establish school programs which will enhance student understandings of the world of work—to provide a more realistic grasp of a range of career opportunities available in the society. Second, it is also important to grapple with the difficult problem of student attitudes and motivations concerning the world of work. Specifically,

to arrive at accurate understandings concerning student attitudes toward occupations other than the "professional, technical and kindred" occupations so highly and universally espoused in the society.

The problem of matching school curricula to the occupational needs of the society is much more complex than it would at first appear. It is not so simple a matter as offering given proportions of vocational courses in the schools which will match the vocational needs of the society. There is the intervening factor of student attitudes and related motivation--of interest in such programs and the willingness to enroll in them. There is evidence that a large number of students and parents believe that vocational type courses are a good thing--for someone else's children. One crucial problem lies in the domain of student motivation; of student, teacher, and parental attitudes toward specific occupations. This assumption is supported by research of the past thirty or so years which clearly demonstrates that attitudes of individuals are anchored in the norms of the social groups to which they belong.[1]

School programs designed to expose students to improved understandings of the range of occupational choices open to them must ultimately cope with the pervasive normative influences extant in the home, among peers, and in the society at large. The current nature of these forces is reflected in data from a study conducted in the Detroit Metropolitan area where it was found that 72 percent of the parents expected their children to go through college and take up professional and allied occupations. Only 14 percent of these same parents were so employed.[2]

The role of the teacher in the Career Orientation Program is of great importance. On the one hand, a good many teachers function as advocates and conveyors of the culture's "success prototype" doctrine. This doctrine urges all children to "make something of themselves"...to aspire for narrow

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[1]For instance, see Sherif and Sherif, Reference Groups, New York: Harper and Rowe, Publishers, 1964. Theodore M. Newcomb, Social Psychology, New York: The Dryden Press, 1950. Robert K. Merton and Alice S. Kitt, "Contributions to the Theory of Reference Group Behavior" in Robert K. Merton and Paul E. Lazarsfeld, Studies in the Scope and Method of The American Soldier, Glencoe: The Free Press, 1950.

[2]R. V. Smith, et. al., "Community Support for the Public Schools in a Large Metropolitan Area." Mimeograph. Project No. 2557, U.S. Office of Education.

and limited occupational goals. "In this land of great opportunity anyone can get ahead if they try hard enough"--so work hard, go to college and become a doctor, a lawyer, an engineer, or some other professional type person. And if you don't make it, it's "your own fault."[3] The hard fact that our society currently accommodates only 14 percent of the population in such roles does not deter the admonition for all to so aspire. On the other hand many teachers approach the topic of occupational careers from a much broader perspective. The definitional range of "success" is herein extended to include being a productive tool and die maker, a truly skilled auto mechanic, or a self-respecting machine operator.

One of the factors which may partially account for the degree of success encountered in the Career Orientation Program may well be the teachers themselves. How broad is their knowledge of career opportunities? What are their feelings about the"success prototype"? How do they perceive their role as teacher vis-a-vis student career counseling and teaching?

If teachers are not attitudinally prepared to promote the viability of careers other than professional, technical or kindred, then the impact of the program may be impaired. It is important to know the extent to which teachers are attitudinally prepared to support the objectives of the Career Orientation Program.

In brief, if school systems are to be adjusted to better meet the needs of the society's occupational structure and to better meet the ultimate needs of individual students, intelligently planned programs must be promoted. Pupils must have considerable exposure to information about career opportunities--their level of knowledge about careers must be increased. And as this proceeds, it is important to acquire factual knowledge about student attitudes, including the relative influence of home, peers, and teachers in the process of career selection.

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[3]See Robert K. Merton, Social Structure and Social Theory, Ch. VI, New York: The Free Press, 1968.

2. CAREER ORIENTATION PROGRAM OBJECTIVES

One approach which educators can pursue is to promote a concerted program designed to expose pupils to a more realistic and broad range of career opportunities. There is evidence to indicate that the current exposure of our youth to knowledge of the world of work is extremely limited.[4] Children are restricted in their range of personal contacts with people of various occupational categories. They are limited by the narrow images offered in the mass media--television in particular. They are limited in the presentations of the world of work as reflected in the books of publishers designed for children. If schools are not aware of the problem and do not develop programs to cope with it, where else will the problem be handled?

The Ohio Department of Education's Division of Vocational Education, in collaboration with five participating school districts, has planned a concentrated "Careers Orientation Program" to expose junior high school students to the world of work. The plan of the program and the materials to be used were settled upon after extensive committee work and review of related programs and research in other sections of the nation. For instance, information was obtained from related programs in Atlanta, Georgia,

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[4] M. H. DeFleur, "Children's Knowledge of Occupational Roles and Prestige," Psychological Reports, 1963, 13. p. 760

[5] Gene Bottoms and Kenneth B. Matheny. A Guide for the Development, Implementation, and Adminstration of Exemplary Programs and Projects in Vocational Education, Atlanta, Georgia, 1969. (Prepared under grant number OEG-0-9-207008-2779 (085), U.S. Office of Education.

Pittsburgh, Pennsylvania,[6] the state of Connecticut,[7] Carrollton, Georgia,[8] Los Angeles and Beverly Hills, California,[9] and from other randomly selected midwestern schools.

The educational objectives of this program were determined to be as follows:

1. To develop a knowledge of the world of work; i.e., to increase student understanding of the breadth and variety of occupational opportunities in our society.

2. To identify career needs of pupils in the 7th and 8th grades; i.e., to determine the personal occupational objectives of these students.

3. Develop guidelines for the teaching staff to supplement regular curricula.

4. To increase career counseling and guidance procedures.

5. To integrate into the regular academic curricula, at each grade level, career exposure.

6. To further expose pupils to careers by use of:

   a. field trips
   b. resource people
   c. demonstrations
   d. workshops
   e. discussion groups
   f. displays
   g. projects
   h. films
   i. books, pamphlets, etc.

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[6] Ann M. Martin, A Multimedia Approach to Communicating Occupational Information to Noncollege Youth: Interim Technical Report. Pittsburgh Graduate School Library, Report Number BR-5-0162.

[7] Raymond C. Doane, "Project Guidance Practices Leading to Career Orientation and Instruction for Selected Secondary School Students of Connecticut." Division of Vocational Education, Connecticut State Department of Education. 1970 (mimeo)

[8] Bruce Hargrove, et. al., "Suggested Model for the Full-Time Counselor Who Conducts and Coordinates and Exploratory Program in Grades 7-9," West Georgia College, Carrollton, Georgia, 1968.

[9] Ralph Turner, The Social Context of Ambition, San Francisco, Chandler Publishing Company, 1964.

7. To aid students to better understand their abilities and sharpen their interest in the job-world.

8. To create favorable attitudes toward occupations other than professional, technical, and kindred pursuits.

Campbell, Gamble, Dater, Merry, and Porter Junior High Schools in Cincinnati have been working closely with the Ohio Department of Education's Division of Vocational Education to create innovative programs to achieve the above objectives. Field trips, displays, projects, to mention but a few activities, are integrated throughout the school year.

In brief, the programs that are to be evaluated will involve some 2,600 7th and 8th grade pupils and approximately 150 teachers in Cincinnati. The participating teachers represent the fields of English, Business and Vocational Education, Social Studies, Mathematics, Science, Home Economics, Physical Education, Music, Industrial Arts, Fine Arts, Foreign Language, and Library Science.

Research Objectives

If maximum benefits are to be derived from the Occupational Careers Program, if it is to be improved upon, it is important that the program be scientifically evaluated. The research design must seek answers to many questions, but the most basic ones are these;

1. To what extent have students acquired additional knowledge of the world of work?

2. To what extent has the program resulted in favorable and adaptive attitudes to the world of work?

3. What factors are associated with increased knowledge or changed attitudes toward various types of careers?

Owing to the nature of the program itself it will be an easier matter to provide basic measures of the first two research objectives. To rigorously test the third objective will be more difficult. In fact, if this objective were to be pursued in depth it would be necessary to do so in another setting (e.g., a field experiment). However, considerable information concerning factors associated with change can be provided by this

study. This information should be of considerable importance in providing guidance for future research of the field experiment variety. This is a logical progression.

To determine the extent to which the occupational Career Orientation Program is achieving its major objectives, answers to the following questions have been pursued.

1. To what extent has student (and teacher) knowledge of careers increased during the program? Has such knowledge increased in range (i.e., produced familiarity with a greater number of occupations): has it increased in depth (i.e., in heightened appreciations of various jobs)?

2. To what extent has the program produced changes in student (and teacher) attitudes about careers? More specifically:

   a) changes in aspirational levels

   b) changes in attitudes towards occupations other than those to which pupils personally aspire (i.e., increased respect for occupations previously not esteemed).

3. What factors are associated with change?

   a) To what extent do teachers serve as reference points for learning and for attitudinal anchorage?

   b) To what extent do family members serve as reference groups in learning about careers and in attitude anchorage or change?

   c) To what extent do peers serve as reference groups in learning about careers and in attitude anchorage and change?

   d) To what extent are various social characteristics of pupils and/or families associated with the amount of learning which takes place and with the degree of attitude change effected?

3. DESCRIPTION OF ACTIVITIES

Seventh and eighth grade students in seven junior high schools in the Cincinnati Public Schools comprised the universe of the study. These schools vary considerably in their racial and socio-economic composition. Dater and Gamble junior highs are located in the Western Hills section of a predominantly middle class outer-city section of Cincinnati. Dater's enrollment is 1 percent Black, Gamble is totally white. Campbell Junior High is located in the Winton Terrace area which is racially mixed and consists of working and middle class families. Campbell's enrollment is 69 percent Black. Lyons Junior High is located in the Madisonville area and has a Black enrollment of 52 percent. Bloom and Porter junior highs are located in the West End (inner city) area where the adult population is 92 percent Black and with a high unemployment rate. Bloom's enrollment is 88 percent Black, Porter's enrollment is 91 percent Black.

Five of these schools (Dater, Merry, Gamble, Campbell and Porter) were designated as participants in the Career Orientation Program. Two schools (Bloom and Lyons: not included in the Career Orientation Program) were selected as "control" schools in the evaluation project. It might be noted that among the 18 junior high schools in the Cincinnati system Black students comprise 46 percent of the total enrollment. Black students in the seven schools included in this study comprise 46 percent of the total enrollment of those schools.

Student questionnaires were administered to seventh and eighth grade students in the six schools near the beginning, and again at the conclusion of the 1971-72 school year, thereby providing pretest and posttest measures. The instrumentation was designed to measure knowledge of the world of work, attitudes toward types of careers, and questions to be employed in correlational analyses (a copy of the questionnaire is included in the enclosures to this report). All student questionnaires were group-administered at each of the seven schools.

In the addition to the student questionnaire, a separate questionnaire card was administered to the seventh and eighth grade students early in the Career Orientation Program and again near the end of the school year. The purpose of this card was to provide specific information gathered in the classroom setting of the extent to which new knowledge about occupations had been derived from school classes. This information about knowledge being derived from the Career Orientation supplemented information derived from the questionnaire.

The Director of the Vocational Education Program for the Cincinnati Public Schools, Mr. Jack Ford, arranged for assistance from the principals of the seven schools in making arrangements for the field operation. Their cooperation and assistance, along with that of the seventh and eighth grade teachers was vital to the conduct of the study.

A teacher questionnaire was also administered to seventh and eighth grade teachers during January and February of 1972. It was originally intended to administer teacher questionnaires both near the beginning and the end of the school year. Several conditions inveighed against this plan, however, not the least of which was the extent to which school personnel felt the research effort was disrupting class routines and placing additional burdens upon the teachers. Moreover, there was some indication that a portion of the teachers were somewhat "threat-oriented" by the evaluation procedures and it was decided that rapport (and results) would be better if only one questionnaire was administered to the teachers.

All questionnaires (student and teacher) and the class cards were coded by trained coders at the Institute for Metropolitan Studies. Verbal materials were thereby given numeric values and transferred to punchcards and to tapes for the data processing operation. Computer work was carried out by the University of Cincinnati's Behavioral Sciences Laboratory. Tapes and cards will be archived and catalogued for future reference as needed.

4. TECHNIQUES OF EVALUATION

A Methodological Note

Although the ensuing study utilizes experimental and control groups, and pretest and posttest questionnaire administration, it may not be assumed that this is an experimental type of research design. It is actually an ex post facto design. The investigator did not have manipulative control over such factors as random assignment of subjects, or the opportunity to manipulate the treatment variables. Things had to be taken as they were and the design built around a structured and ongoing situation.

In any ex post facto research (and the majority of sociological and educational studies are ex post facto), care and caution must be exercised in interpreting the results. Findings point to relationships--they do not divulge causality. In the analyses which follow it may not be concluded that the Career Orientation Program caused given results; it is instead indicated where relationships exist between control and experimental groups, or between pretest and posttest periods. The following discussion elaborates upon some of the methodological problems encountered, and the methods of handling them.

The first problem concerns the selection of the schools involved in the study design. There was no opportunity for random selection, or a selection based upon a matching procedure in the determination of experimental and control schools. The program had been established in five schools, and there were problems extant in selecting the experimental schools, including the factor of principal and teacher interest in co-operating in the study among the non-program schools. A "best fit" principle was followed (given the situational constrairts) which resulted in the selection of Lyons and Bloom as control schools. This resulted in the selection of two schools which were available for the project and which provided only an approximate fit between populations.

The second problem, related to the first, concerns the principle of similarity between the experimental and control group subjects. The ideal experimental manipulation was impossible; that is, a random assignment of students and teachers to both the experimental and control groups. Nor was it possible to follow a matching procedure in which students could be

selected for inclusion in the study on the basis of existing school records. Such a procedure would have increased both clerical and field costs to a point far in excess of the budget. It was possible, however, to revert later to an analysis of the social characteristics of the experimental and control group populations.

The third problem concerns the match between the pretest and the posttest populations in both the experimental and control groups. Residential mobility is quite high in most of these schools, and this means that many of the subjects taking the pretest will not be around at the time when the posttest occurs. On the other hand it might be noted that the probability is very great that little major change will occur with respect to the important factor of the social characteristics of the subjects. This is to say that the students who move away tend to be replaced by students with similar backgrounds and social characteristics.

Complicating the problem of similarity of pretest and posttest populations still further is the factor of absenteeism. Absenteeism complicated the study to a greater degree than would be normally anticipated. While it was not a major problem at the pretest phase, it became a great problem at the posttest phase of the study. In many of the schools involved in the study student absenteeism during the last two or three weeks of school runs well over 50 percent. As one teacher expressed it, "We are lucky if half of our students are present during the last couple of weeks of school." As a result of this unexpectedly high absenteeism rate there was a substantial attrition in the size of the posttest population in both the experimental and control groups. Recouping of this loss was a virtual impossibility, owing to the fact that school was soon to be recessed for the summer, and owing also to the fact that absenteeism tends to be practiced by the same students. Getting back to the absentee population was a virtual impossibility.

The question therefore arises concerning the extent to which these situational constraints have produced a control group which differs in composition from the experimental group, and the extent to which the pretest population satisfactorly mat hes the posttest population. To the extent that there is dissimilarity in such important factors ad educational level or occupation of the parents, then any differences in behavior or attitude which

are revealed between the experimental and control groups (or pretest and posttest groups) would be difficult to interpret. This annoying problem has arisen to some degree. An analysis of the social characteristics of the experimental and control groups reveals that the control group population contains a higher proportion of students whose parents are of lower socio-economic status than that of the experimental groups. In many of the analyses which have been run a difference in learning and attitudes appears between the experimental and control groups. This then leaves in doubt the question as to whether the differences are attributable to the differences in background of the two groups, or whether the differences might be attributed to the effects of the program on the experimental group.

A solution to this problem has been found, however. It consists of the application of a standardization procedure.[10] This is an operation which permits one to make a statistical manipulation to assume that the distribution by educational level of parents, or occupation of father, for instance, is the same in both the experimental and control groups. An adjusted rate in learning or attitudes is thereby determined, providing the assurance that the variations in the rate is not attributable to variations in the socio-economic variables. This technique was applied in the analyses as needed. And the results of this analysis indicate that significant differences in learning and attitudes between the experimental school students and the control school students remained after these rates were standardized on education level and occupation of parents.

Instrumentation

Measurement of occupational knowledge posed a difficult problem in this design. Satisfactory career-knowledge inventories simply were not to be found. Three separate measures were therefore devised. The first was an open-ended question which asked: "List below the types of work you think you might want to do for a living when you are an adult?" While this is a dual-purpose question, it does permit an enumeration of the number of jobs (as well as the types) recognized by the students as desirable for them. Any increase in numbers of occupations so listed between the

[10] For a full discussion of this procedure see, A.J. Jaffee, Handbook of Statistical Methods for Demographers (Washington, D.C.: Government Printing Office, 1951), pp. 43-44.

beginning and end of the program could therefore be regarded as significant in the broadening of career knowledge.

Secondly, the single "Card Questionnaire" administered to students in the classroom setting asked specifically: "Have you learned about any new occupations or jobs in any of your classes this school year?" The student was then asked to list the new jobs learned about and also to place a "X" in front of the one that was the most interesting. This measurement was regarded to be a more sensitive instrument in that it was administered in the classroom, affording an opportunity to recall recent exposures. And it was addressed specifically to the topic of new occupational information. The analysis upheld the assumption that this was a more sensitive instrument.

Neither of the foregoing measures covered another desirable point, however, namely getting the subject to respond to a broad and representative range of occupations. For this reason a third method was devised which consisted of an occupational inventory based upon the following procedures. In the abridged Census occupational code (U.S. Bureau of the Census, 1960) occupational titles are grouped under the familiar eight-category Census Bureau system. We drew a representative sample of occupational titles from eight. This provided an occupational list of 61 titles. The questionnaire then asked:

> "Q. 5 The following list names many kinds of things people do to earn a living. Some of these jobs you will know about; others you will not.
>
> First, decide if you know about the kind of work that each job requires. If you don't know very much about that job just make an "X" in the box under the "Don't know" heading and move on to the next job listed.
>
> If you do know about a job decide how important that job is to society and make an "X" in one of the boxes under the headings of " very important", "fairly important", or "not very important".

This job inventory was really devised primarily to measure appreciation (i.e., student attitudes) toward various types of occupations

(i.e., how important is the job to society). By first answering whether they knew about the kind of work each job required they were also providing an additional measure of knowledge of a wide range of types of occupations.

A decided advantage of this type of job inventory is that it is a sample of all types of work as reflected in the Census classification. It therefore represents the employment structure of the nation and data from the scale can then be linked to national and local data. These occupational titles may also be broken down into their eight-category types (i.e., professional, technical and kindred; managerial, etc.) On the other hand, two major limitations are inherent in the inventory. First, it is not a very exhaustive inventory; it lists only 61 occupational titles since it was found that seventh and eighth graders experience fatigue with longer lists. Second, it relies upon the student's honesty in simply replying whether he knows about a given type of occupation. It would therefore most probably tend to over-enumerate job knowledge. In brief, it is not a thorough test of occupational knowledge...it is a very general exploration.

Analysis of the findings has revealed that the job inventory does not provide an adequate measure of job knowledge. It does, however, supplement the other measures and it does provide interesting results as a measure of occupational appreciation.

The second objective of the study was to measure occupational attitudes of students. One measure was achieved in question 1 of the student questionnaire which asked what types of work they might want to do for a living when they are adults. This question is then followed by question 1a., "Put an "X" in front of the <u>one</u> job listed above that you think you will probably have when you are an adult." This provides a measure of occupational expectation--an important variable in the study.

A second measure of occupational attitudes was obtained in the aforementioned sample inventory of occupational titles in which the

student was asked to indicate the importance to society of the occupations listed. This 3-point response scale (very important, fairly important, not very important) provides a measure of appreciation for a wide range of occupations, other than those that may have been perceived as personally suitable for the respondent.

A third measure of occupational attitudes is derived from the student questionnaire card which asks the student to list any new jobs he has learned about in the classroom, followed by the request to place an "X" in front of the job that interested him the most.

Other instrumentation was included to determine such factors as income expectations, parental background (e.g., amount of education of parents), measn-perceptions (i.e., how much education or training will be required to achieve occupational objective), and reference group questions to determine the extent of anchorage of occupational aspirations in such groups as family, peers, and teachers.

5. CONTRIBUTIONS TO EDUCATION

The problem explored in this study constitutes one of the most important of current educational problems in the nation. An improved articulation of educational programs to the occupational structure of the society has consequences of vast significance to the welfare of individuals and to the society at large. To achieve this objective means coping with a problem which is vast and extremely complex. Facts are needed which will better portray the nature of the complexities and provide understandings upon which better programs may be built. While the information provided herein is miniscule in relation to the total problem, it is quite possible that these facts will prove of immediate worth to the local program to which the analysis was directed, and the analyses should also prove suggestive for wider applications and for future research.

A. The Findings

The first analysis of the study reveals a relationship wherein students exposed to the Career Orientation Program have acquired more knowledge of the world of work than have students not exposed to the program. This indicates that the primary objective of the program is being met. The program

however, appears to influence male students differently than it does female students, and may be counterproductive for males as the year progresses. Seventh grade students also reflect greater initial benefits from the program than do eighth graders. And there is considerable variation in amount of job knowledge acquired among the different experimental schools.

The second analysis indicates little attitudinal change on the part of students in relation to personal occupational aspirations. The significant findings in this area concern the extent to which sources outside the school serve as anchorage points for these occupational attitudes. The parents play a vital role as reference points for occupational advice and reinforcement. Siblings and peers play a second most important role in this regard, and teachers and counselors are third in importance. As later analyses make clear, however, teachers and counselors are important, and harbor a potential in this regard which is greater than has been currently developed.

The third major area of findings concerns the role of teacher values in relation to teaching about the world of work. The essence of this analysis is that teachers serve as conveyors of the predominant cultural beliefs about the "success prototype". They tend to reinforce those values of the home and of the society at large which admonishes young people to make something of themselves by becoming a doctor, lawyer, architect, etc. The majority of the teachers believe it is their role to spur students to achieve such goals. But, the majority of these same teachers also estimate that only a minority of their students have the necessary intellectual (let alone financial) capacity to get through four years of college.

B. The Generalizability of the Findings.

It is of course scientifically invalid to generalize findings beyond the boundaries of a specific research universe. On the other hand, there are several properties of the present investigation which impart highly suggestive merits to the study.

First, the phenomenon which is investigated is common in American society, i.e., the gap between student occupational expectations and the availability of occupational outlets in the society. Second, the study employed a conceptual approach based upon reference group theory and upon Merton's concepts of the success prototype. The findings of the study are therefore quite in

accord with other types of investigations carried out in other parts of the nation which have employed similar conceptual orientations. More specifically, the finding that the family functions as a basic source of attitudinal anchorage for student occupational attitudes is consistent with other kinds of information about attitudinal anchorage. And the finding that the secondary group type of relationships extant in student and teacher or counselor relationships is not as strong an anchorage point for occupational attitudes of students as family or friends is again in an expected and consistent direction. Therefore, to the extent that educational program planning is oriented to changing occupational attitudes of students, the findings of this study should prove highly suggestive.

Likewise, the role of the teacher as a conserving factor, rather than as a change agent, with respect to promoting the success prototype is in the expected direction and is consistent with other investigations in other sections of the nation. These findings should also serve suggestive purposes for program planners in other settings. But any inferences drawn from this investigation and applied to other settings should be made with great care and caution.

C. Further Steps Which Might be Taken to Build on the Findings of This Study

There are many findings in the study which should prove useful for further development of the Career Orientation Program. Program planners might wish to consider program content and teacher preparation in relation to the following major points.

1. There is some indication that during the course of the year the program has a differential impact upon male and female students in which the effects appear to be somewhat counterproductive for male students.

2. There are some interesting variations among the different schools in the program with respect to amount of learning about jobs.

3. Student aspirations for professional, technical and kindred type occupations are oversubscribed and other white collar and blue collar occupations are undersubscribed. Teachers also report presentation of occupations in a similar direction. This finding suggests a content review of the types of materials offered to see if materials relevant to other white collar occupations, and blue collar occupations could receive increased stress.

4. With respect to student expectations of future career, the study

firmly establishes the importance of the family, especially of the mother as well as the father, as dominant factors in occupational attitudes. In the future, to the extent that educational programs are oriented toward occupational attitudes, the family will have to be considered as a major reality of the situation.

5. Teacher attitudes toward the world of work serve to conserve, rather than to modify, the success prototype. These attitudes reinforce the dominant cultural theme and further impede modification of student aspirations in directions other than aspiring for professional, technical or kindred type pursuits. At the same time, the observation of the majority of teachers that most of their students are not college material conflicts with their belief that it is their responsibility to spur students to aspire for jobs which will require four or more years of college. In brief, the question posed by this analysis is one concerning the extent to which in-service programs may be required for teachers if they are to play their role in a more adaptive manner with respect to teaching students about the realities of occupational selection.

6. A last implication of the findings concerns their limited nature. The project was comparatively small and limited in scope. To the extent that the findings harbor merit for the development of broader programs it would appear highly desirable to proceed with an action-research program; one in which program administrators work closely with research programs to the end of focusing and sharpening procedures and materials as the program progresses.

THE FINDINGS

The results of the study are divided into four analytical categories: student knowledge of the world of work, occupational expectations, reference group patterns, and teacher attitudes. The major findings in each category are summarized, followed by the tables from which the summary statements are drawn.

A. STUDENT KNOWLEDGE OF THE WORLD OF WORK

The first question to be answered by the study concerns the extent to which students participating in the Career Orientation Program have benefited through an increased knowledge of the world of work. As previously discussed, two types of instrument were devised to measure this factor; a full questionnaire administered in group settings, and a short-form questionnaire card administered in the classroom. Data provided by these two methods proved to be consistent and supported the following findings.

1. Students in the experimental schools have acquired more knowledge of the world of work than have students in the control schools. This holds for both the pretest and the posttest situations.

Analysis of the classroom cards reveals that in the pretest situation 61 percent of the experimental students compared with 33 percent of the control students say they have learned about new jobs in the classroom. In the posttest setting 55 percent of the experimental students and 35 percent of the control group students report learning about new jobs. (See Table 1).

Moreover, the experimental school students indicate they have learned about a larger number of new jobs than the control group students. In the pretest operation 27 percent of the experimental group students and only 6 percent of the control group students indicate they had learned about four or more new occupations in their classes. In the posttest setting 19

percent of the experimental group and 6 percent of the control group students report learning about four or more new occupations in classes. (See Table 2).

Further evidence that students in the experimental schools have acquired more knowledge about occupations than students in the control schools comes from an analysis of the questionnaires. The number of jobs listed by student--as types of work they might want to do as adults--is greater for the experimental school students than it is for the control school students. In the pretest situation 58 percent of the experimental school students 43 percent of the control school subjects listed four or more desirable occupations. In the posttest setting, 56 percent of the experimental and 37 percent of the control subjects listed four or more jobs as desirable for them. (Table 3).

2. <u>There is no increase in the number of occupations learned about between the pretest and posttest periods.</u>

At the first sight this finding would appear to be in conflict with the finding that students in the experimental schools have acquired more knowledge about occupations than students in the control schools. This is not necessarily a conflicting finding, however, for the following reasons. First, by the time the pretest instrumentation had been cleared through appropriate school channels and arrangements made for the field phase, some seven weeks of school had elapsed; i.e., exposure to the program had already begun. Second, some students (e.g., eighth graders) had experienced previous exposure to the Career Orientation Program. Third, the last two weeks of school (when the posttests were taken) proved to be a period of lessened student motivation (i.e., as illustrated by high absenteeism) and the posttest performance may have declined as a result.

There are many indications, therefore, to suggest that the initial impact of the program is greater than the impact which ensues over the remaining course of the year. There is the possibility that there is a point in time at which the program becomes counterproductive.

Analysis of the classroom cards indicates an overall decline in having learned about new occupations from 61 percent saying they have learned about new jobs in the pretest setting to 55 percent in the posttest period.

(Table 1). The same trend is shown in analysis of the number of jobs students report having learned about (Table 1) in which those students who report having learned about four or more jobs declines from 27 percent to 19 percent from the pretest to posttest periods.

Analysis of the student questionnaire concerns the number of jobs listed as desirable for them as adults. This more personalized question shows no significant decline between the pretest and the posttest periods, since 58 percent of the students list four or more desirable occupations in the pretest period and 56 percent in the posttest situation. This would seem to indicate that although there is lessened learning about new occupations in general in the classroom, this does not correlate with a decline in the number of occupations deemed personally suitable for a career. (See Table 3).

3. The program influences boys differently than it does girls.

There is consistent evidence to indicate that the Career Orientation Program has a differing effect upon male and female students. Table 4 reveals from the class card analysis that in the pretest stage 66 percent of the boys and 56 percent of the girls indicate learning about new jobs in classes. By the posttest period, however, 49 percent of the boys and 60 percent of the girls report learning about new jobs in classes. This reversal clearly indicates that while learning for boy students sharply decreases, learning for girls increases slightly between the pre and posttest periods.

A similar tendency is revealed in Table 5 in which the pretest situation shows 31 percent of the boys and 23 percent of the girls report learning about four or more new jobs in classes. But in the posttest period 19 percent of the boys and 22 percent of the girls report learning about four or more new jobs. This is a picture of decline in learning on the part of boys with the girls holding constant between the pretest and posttest periods.

Information gleaned from the questionnaire analysis indicates that with respect to numbers of jobs students perceive as desirable for them as adults, girls list more occupations as desirable in both the pretest and the

posttest settings. In the pretest period 48 percent of the boys and 63 percent of the girls list four or more jobs as desirable. In the posttest period 46 percent of the boys and 60 percent of the girls report four or more jobs as being desirable for them as adults. (Table 6).

4. The Career Orientation Program has a differential impact on seventh and eighth grade students.

To summarize the findings of this analysis seventh grade students are deriving more benefits from the program than eighth graders with respect to learning about new jobs in the classroom setting. However, eighth grade students appear to be deriving slightly more benefits in increasing the number of occupations which appear personally suitable to them (i.e., as acceptable jobs when they are adults).

Analysis of the classroom cards reveals that in the pretest situation 68 percent of the seventh graders and 55 percent of the eighth graders indicate they have been learning about new occupations. In the posttest situation, 62 percent of the seventh graders and 47 percent of the eighth grade students report they are learning about new occupations in the classroom. (Table 7).

Considering the factor of number of jobs which students perceive as desirable for them as adults, a slightly different perspective is apparent. Table 8 shows that in the pretest setting, 58 percent of the seventh graders and 56 percent of the eighth graders list four or more jobs as personally desirable for themselves. In the posttest situation, however, 48 percent of the seventh graders and 59 percent of the eighth graders report four or more jobs as personally desirable. In brief, where the number of personally suitable jobs declines for seventh grades between the pre and posttest settings, it remains constant for eighth graders.

5. Variations occur among the different schools participating in the program with respect to learning about the world of work.

Considerable variation occurs among the five experimental schools with respect to learning about the world of work. Table 9 reveals that

in the pretest situation, those students who list four or more jobs as desirable for them as adults varies from 73 percent at Porter Junior High to 44 percent at Gamble. In the posttest setting, however, some minor shifts occur and the range is from 69 percent for Porter, to 49 percent for Dater. Notable in this pretest to posttest comparison is the rise of Campbell from a fourth rank-order position to second, and a decline for Dater from a second position at pretest to fifth at posttest. Table 10 summarizes these shifts, but caution should be exercised in making interpretations since in most cases, the percentage shifts are relatively small and not significant.

Summary: The Impact of the Career Orientation Program on Knowledge of the World of Work.

The program appears to be achieving its intended objective of imparting an increased knowledge of the world of work. There are, however, some significant internal variations in the data of significance. The program appears to be more effective with seventh grade students than it is with eighth graders. It is more effective for girls than it is for boys. And there are some notable variations in the impact of the program among the different participating schools. There is also some tentative indication that while the program starts off with a strong impact, there is a decline over time to the extent that it may even be counterproductive by the end of the schoold year. This factor, however, appears to apply primarily to male students and is not as apparent for females.

TABLE 1

LEARNING ABOUT NEW JOBS IN CLASSES

(FROM CARDS)
"HAVE YOU LEARNED ABOUT ANY NEW OCCUPATIONS OR JOBS IN ANY OF YOUR CLASSES THIS SCHOOL YEAR?"

Experimental Schools	Pre Measures	Post Measures
Yes	61%	55%
No	38	45
N.A.	1	
Totals	100%	100%
No. of Cases	2,353	1,297
Control Schools		
Yes	33%	35%
No	67	63
N.A.		2
Totals	100%	100%
No. of Cases	451	520

TABLE 2

NUMBER OF NEW JOBS LEARNED ABOUT IN CLASS

(FROM CARDS)
"HAVE YOU LEARNED ABOUT ANY NEW OCCUPATIONS OR JOBS IN ANY OF YOUR CLASSES THIS SCHOOL YEAR?"

	Pre Measures	Post Measures
Experimental Schools		
3 jobs or less	33%	35%
4 or more	27%	19%
Inapp. - has not learned about any jobs	41%	45%
N.A.		1%
Totals	101%	100%
No. of cases	2,353	1,297
Control Schools		
3 jobs or less	26%	28%
4 or more	6%	6%
Inapp. - has not learned about any jobs	68%	63%
N.A.		
Totals	100%	100%
No. of cases	451	520

TABLE 3

NUMBER OF JOBS LISTED BY STUDENTS AS DESIRABLE FOR THEM AS ADULTS

"LIST BELOW THE TYPES OF WORK YOU THINK YOU MIGHT WANT TO DO FOR A LIVING WHEN YOU ARE AN ADULT."

Number of jobs listed	Pre Measures	Post Measures
Experimental Schools		
3 jobs or less	42%	45%
4 or more	58	56
Totals	100%	101%
No. of Cases	690	506
Control Schools		
3 jobs or less	57%	63%
4 or more	43	37
Totals	100%	100%
No. of Cases	228	106

TABLE 4

LEARNING ABOUT NEW JOBS IN CLASSROOM, BY SEX

(FROM CARDS)
"HAVE YOU LEARNED ABOUT ANY NEW OCCUPATIONS OR JOBS IN ANY OF YOUR CLASSES THIS SCHOOL YEAR."

	Pre Measures		Post Measures	
	Male	Female	Male	Female
Experimental Schools				
Yes	66%	56%	49%	60%
No	33	44	51	40
N.A.	1			
Totals	100%	100%	100%	100%
No. of Cases	1,162	1,184	634	663
Control Schools				
Yes	34%	31%	37%	33%
No	66	69	61	67
N.A.			2	
Totals	100%	100%	100%	100%
No. of Cases	220	225	257	263

TABLE 5

NUMBER OF NEW OCCUPATIONS LEARNED ABOUT IN CLASSROOMS, BY SEX

(FROM CARDS)
"HAVE YOU LEARNED ABOUT ANY NEW OCCUPATIONS OR JOBS IN ANY OF YOUR CLASSES THIS SCHOOL YEAR."

Number of Jobs	Pre Measures		Post Measures	
Experimental Schools	Male	Female	Male	Female
Three jobs or less	70%	77%	82%	77%
Four or more	31	23	19	22
D.K. and N.A.				1
Totals	101%	100%	101%	100%
No. of Cases	1,162	1,184	634	663
Control Schools				
Three jobs or less	96%	94%	91%	92%
Four or more	2	4	5	8
D.K. and N.A.	2	2	4	
Totals	100%	100%	100%	100%
No. of Cases	220	225	257	263

TABLE 6

NUMBER OF OCCUPATIONS LISTED BY
STUDENTS AS DESIRABLE FOR THEM AS ADULTS, BY SEX

"LIST BELOW THE TYPES OF WORK YOU THINK YOU MIGHT WANT TO DO FOR A LIVING WHEN YOU ARE AN ADULT?"

	Male		Female	
	Pre	Post	Pre	Post
Experimental Schools				
3 jobs or less	52%	52%	32%	39%
4 or more	48	46	63	60
N.A.		2	5	1
Totals	100%	100%	100%	100%
No. of Cases	344	241	344	255
Control Schools				
3 jobs or less	44%	68%	53%	49%
4 or more	56	24	43	51
N.A.		8	3	
Totals	100%	100%	99%	100%
No. of Cases	119	53	118	53

TABLE 7

NEW JOBS LEARNED ABOUT,
BY GRADE

FROM CARDS:
"HAVE YOU LEARNED ABOUT ANY NEW OCCUPATIONS OR JOBS IN ANY OF YOUR CLASSES THIS SCHOOL YEAR?

	Seventh		Eighth	
Experimental Schools	Pre	Post	Pre	Post
Yes	68%	62%	55%	47%
No	31	38	45	53
N.A.	1			
Totals	100%	100%	100%	100%
No. of Cases	1148	632	1215	656
Control Schools				
Yes	33%	39%	32%	32%
No	67	61	68	66
N.A.				1
Totals	100%	100%	100%	99%
No. of Cases	248	255	201	259

TABLE 8

NUMBER OF NEW JOBS LEARNED ABOUT IN CLASSES, BY GRADE

"LIST BELOW THE TYPES OF WORK YOU THINK YOU MIGHT WANT TO DO FOR A LIVING WHEN YOU ARE AN ADULT."	Seventh		Eighth	
Experimental Schools	Pre	Post	Pre	Post
3 jobs or less	42%	50%	44%	39%
4 or more	58	48	56	59
N.A.		2		2
Totals	100%	100%	100%	100%
No. of Cases	351	244	351	242
Control Schools				
3 jobs or less	65%	59%	48%	62%
4 or more	34	41	52	38
N.A.	1			
Totals	100%	100%	100%	100%
No. of Cases	93	44	138	55

TABLE 9

NUMBER OF JOBS LISTED BY STUDENTS AS DESIRABLE FOR THEM AS ADULTS, BY SCHOOL

"LIST BELOW THE TYPES OF WORK YOU THINK YOU MIGHT WANT TO DO FOR A LIVING WHEN YOU ARE AN ADULT."

Number of jobs listed	Pre Measures	Post Measures
Experimental Schools		
Porter		
3 or less	27%	31%
4 or more	73	69
Totals	100%	100%
No. of Cases	110	65
Merry		
3 or less	41%	44%
4 or more	59	56
Totals	100%	100%
No. of Cases	103	86
Campbell		
3 or less	50%	42%
4 or more	50	58
Totals	100%	100%
No. of Cases	145	99
Gamble		
3 or less	56%	50%
4 or more	44	50
Totals	100%	100%
No. of Cases	121	103
Dater		
3 or less	36%	51%
4 or more	64	49
Totals	100%	100%
No. of Cases	210	153

TABLE 9 (Continued)

Bloom		
3 or less	47%	69%
4 or more	53	31
Totals	100%	100%
No. of Cases	112	58
Lyons		
3 or less	51%	56%
4 or more	49	44
Totals	100%	100%
No. of Cases	114	48

TABLE 10

SHIFTS IN RANK ORDER IN PERCENTAGE OF STUDENTS LISTING FOUR OR MORE JOBS AS DESIRABLE FOR THEM, PRE AND POST TESTS, BY SCHOOL

Pretest			Posttest	
School	Percent Listing Four or More Jobs	Rank Order	School	Percent Listing Four or More Jobs
Porter	73	1	Porter	69
Dater	64	2	Campbell	58
Merry	59	3	Merry	51
Campbell	50	4	Gamble	50
Gamble	44	5	Dater	49

B. OCCUPATIONAL EXPECTATIONS OF STUDENTS

The second question to be answered by the study concerns the extent to which students participating in the Career Orientation Program have modified their attitudes about occupations. The focus of this analysis concerns the extent to which occupational aspirations of students deviate from existing opportunities of the society as reflected in the occupational structure.

It must also be recalled throughout this analysis that more than thirty years of research on attitude change has provided overwhelming evidence of a basic fact--people's attitudes are difficult to change. The Career Orientation Program objectives were not primarily directed toward attitude change, they were directed toward broadening the student's knowledge of the world of work. But the acquisition of objective knowledge of the world of work harbors a motivational, and therefore, an attitudinal component. Analysis of student expectations or attitudes about the different types of occupations therefore provides additional information of importance in future program planning.

Several general findings emerge from the analysis of occupational expectations. First, in relation to the present occupational structure of the Cincinnati Standard Metropolitan Statistical Area (SMSA), student expectations are high in the category of professional, technical and kindred; low in the categories of other white collar, and in blue collar type occupations. Second, as aspirations for professional, technical, and kindred type occupations decline, doubt about future work objectives increases. Third, occupational interests of male and female students differ. And there are observable differences in occupational expectations of students among the various schools.

1. <u>There is considerable variation between the occupational expectations of students and the occupational structure of the Cincinnati SMSA.</u>

Table 11 indicates at the posttest period, where 47 percent of the students in the experimental schools expect to enter into professional, technical and kindred type pursuits, only 15 percent of the Cincinnati SMSA

population is currently so employed. This spread of 32 percentage points between expectation and current outlets is also matched in a reverse direction by differences extant in the other white collar, and the blue collar pursuits. Where 14 percent of the students anticipate other white collar type occupations, 35 percent of the Cincinnati SMSA working population is so employed. And, where 20 percent of the students anticipate blue collar type work in the future, 48 percent of the Cincinnati area labor force is so employed.

2. As students expectations for professional, technical and kindred type pursuits decline, occupational doubt increases.

The experimental and control groups both reveal a decline in expectations for professional, technical and kindred type occupations from the pretest to the posttest situation. This decline, however, is considerably greater for the control than for the experimental groups, the former declining 9 percentage points, the control schools declining 25 percentage points. In both the experimental and control schools, doubt about future occupation increased over time for both groups. But where the control students also revealed increased interest in blue collar occupations, (from 15 to 27 percent) no parallel increase occurred among the experimental schools. In brief, changes in occupational aspirations were greater in the control than in the experimental schools. But these changes were primarily in the direction of increased doubt about the future, and in the direction of blue collar occupations. (See Table 11).

3. Interest in professional, technical and kindred, and in other white collar occupations is greater for girls than it is for boys: interest in blue collar occupations and doubt about the job future is greater for boys than it is for girls.

Table 12 demonstrates that for the experimental schools, interest in professional type occupations for girls is greater in both the pretest and the posttest setting than it is for boys. However, differences in interest between male and female students is even greater in the distributions of those selecting other white collar type occupations. In the

posttest period, for instance, 6 percent of the boys and 23 percent of the girls indicate they will probably have white collar type work as adults.

The reverse is true with respect to blue collar type occupations. In the experimental schools 30 percent of the male students in the posttest period indicated they would probably do this type of work as adults, compared with 11 percent for the female students.

It is also noteworthy that where occupational doubt increased for boys between the pretest and the posttest periods, it did not significantly do so for girls. Where 5 percent of the boy students in the experimental pretest groups said they "didn't know" (D.K. in the table) what type of occupation they would have as adults, by posttest time 18 percent said they didn't know. No variation occurred for the girls during this same period. This tendency is even more pronounced in the control group subjects, however, with doubt among the male students rising from 14 percent to 30 percent during the school year.

4. Variations occur in patterns of occupational expectations of students among the various schools.

Dater Junior High was the only school that did not indicate changes in the occupational expectations of students between the pretest and posttest periods. In contrast, Campbell, among the experimental schools, provided the greatest variations. From Table 13 it may be observed that interest in professional, technical and kindred type occupations declined from 60 percent to 42 percent between the pretest and posttest periods. This shift was accompanied by a marked increase in the don't know (i.e., doubt) category with 4 percent of the students saying they didn't know what occupation they would follow as adults during the pretest phase and with 25 percent indicating doubt at the posttest period.

Professional, technical and kindred type occupational expectations also dwindled at Merry Junior High from 58 percent at pretest time to 41 percent at posttest time. This shift was matched by an interest in other white collar pursuits (from 14 to 22 percent) and in "don't know" (from 8 to 19 percent).

5. Types of new occupations learned about in classes that most interest students.

Table 14 indicates that new occupations which most interested students in the experimental group setting were primarily professional, technical and kindred in both the pre and posttest settings. Blue collar interest however dropped during the same period from 18 percent to 10 percent.

Perhaps the most interesting feature of this table is the low interest expressed in the "other white collar category." Only 4 percent of the pretest and 3 percent of the posttest experimental students indicated interest in this type of occupation. Yet 35 percent of the employed people in the Cincinnati area are engaged in this type of occupation.

Summary: The impact of the Career Orientation Program on the Occupational Expectations of Students.

Perhaps the most outstanding fact presented in this analysis of the extent to which occupational expectations of students do not realistically match the occupational outlets provided by the society. This is particularly the case with professional, technical and kindred type occupations which are in relative "short supply" in the nation and in the Cincinnati area (i.e., 15 percent). But 47 percent of the experimental school subjects aspire for such occupations. On the other hand, where 35 percent of the labor force in the Cincinnati area is employed in "other white collar" occupations, only 14 percent of the students aspire in this direction. And where 48 percent are employed in blue collar occupations, 20 percent of the students expect to do this type of work.

Closely related to this gap between expectations and outlets is an indication, running through several tables, of increasing concern and doubt on the part of students about their occupational future. This doubt is much more apparent with male students than with female students. And it is more evident among the control students than it is with the experimental school students.

One might therefore conclude that while the program has not resulted in an observed diminution in professional-type expectations, there is some indication that there is less doubt about the future among the experimental groups' students than among the control students. In brief, it is possible that the program is providing something of a stabilizing influence with respect to the structuring of occupational objectives.

This analysis might indicate the desirability of reviewing the content of program materials employed in the schools to determine if emphasis enough is being provided to "other white collar" occupations, and to blue collar type occupations. Such a review might also consider the fact that male students are responding differently than female students, and that there are several distinctions in program impact from school to school.

TABLE 11

CAREER EXPECTATIONS OF STUDENTS

"PUT AN "X" IN FRONT OF THE ONE JOB LISTED ABOVE THAT YOU THINK YOU WILL PROBABLY HAVE WHEN YOU ARE AN ADULT."

Type of Occupation			
Experimental Schools	Pre Measures	Post Measures	Hamilton Co. Labor Force
Professional, Technical and Kindred	56%	47%	15%
Other white collar	11	14	35
Blue collar	22	20	48
Other	5	3	2
D.K.	6	16	
Totals	100%	100%	100%
No. of Cases	690	506	
Control Schools			
Professional, Technical and Kindred	56%	31%	15%
Other white collar	11	13	35
Blue collar	15	27	48
Other	6	3	2
D.K.	12	26	
Totals	100%	100%	100%
No. of Cases	228	106	

TABLE 12

CAREER EXPECTATIONS OF STUDENTS,
BY SEX

"PUT AN X IN FRONT OF THE ONE JOB
LISTED ABOVE THAT YOU THINK YOU WILL
PROBABLY HAVE WHEN YOU ARE AN ADULT."

	Male		Female	
	Pre	Post	Pre	Post
Experimental Schools				
Prof. Tech. and Kindred	50%	41%	60%	54%
Other white collar	4%	6%	17%	23%
Blue collar	32%	30%	11%	11%
Misc.	8%	6%	1%	--
D.K.	5%	18%	11%	12%
Totals	99%	101%	100%	100%
No. of cases	354	250	343	255
Control Schools				
Prof. Tech. and Kindred	55%	23%	56%	40%
Other white collar	4%	11%	18%	17%
Blue collar	22%	34%	7%	19%
Misc.	5%	2%	3%	2%
D.K.	14%	30%	16%	23%
Totals	100%	100%	100%	100%
No. of cases	119	53	118	53

TABLE 13

CAREER EXPECTATIONS OF STUDENTS,
BY SCHOOLS,

"PUT AN "X" IN FRONT OF THE ONE JOB LISTED ABOVE THAT YOU THINK YOU WILL PROBABLY HAVE WHEN YOU ARE AN ADULT."

Type of Occupation

Experimental Schools	Pre Measures	Post Measures
Porter		
Professional, Technical and Kindred	59%	49%
Other white collar	14	15
Blue collar	14	16
Other	1	1
D.K.	12	19
Totals	100%	100%
No. of Cases	110	65
Merry		
Professional, Technical and Kindred	58%	41%
Other white collar	14	22
Blue collar	18	17
Other	2	1
D.K.	8	19
Totals	100%	100%
No. of Cases	103	86
Campbell		
Professional, Technical and Kindred	60%	42%
Other white collar	7	15
Blue collar	24	17
Other	5	1
D.K.	4	25
Totals	100%	100%
No. of Cases	145	99

TABLE 13 (CONTINUED)

	Pre Measures	Post Measures
Gamble		
Professional, Technical and Kindred	54%	46%
Other white collar	12	13
Blue collar	29	24
Other	2	6
N.A.	3	11
Totals	100%	100%
No. of Cases	121	103
Dater		
Professional, Technical and Kindred	52%	55%
Other white collar	12	10
Blue collar	20	24
Other	9	3
N.A.	7	8
Totals	100%	100%
No. of Cases	210	153
Control Schools		
Bloom		
Professional, Technical and Kindred	60%	33%
Other white collar	15	14
Blue collar	8	22
Other	3	2
N.A.	14	29
Totals	100%	100%
No. of Cases	114	58
Lyons		
Professional, Technical and Kindred	53%	31%
Other white collar	10	15
Blue collar	17	27
Other	6	4
N.A.	14	23
Totals	100%	100%
No. of Cases	114	48

TABLE 14

TYPES OF NEW JOBS LEARNED ABOUT IN CLASSES

(FROM CARDS):
"WOULD YOU PLACE AN "X" IN FRONT OF THE JOB THAT INTERESTED YOU THE MOST."

Experimental Schools	Pre Measures	Post Measures
Professional, Technical, and Kindred	24%	26%
Other white collar	4	3
Blue collar	18	10
Other and D.K.	14	16
Inapp. - R has not learned any new jobs	40	45
Totals	100%	100%
No. of Cases	2,353	1,297

Control Schools		
Professional, Technical, and Kindred	12%	9%
Other white collar	1	3
Blue collar	8	9
Other and D.K.	11	17
Inapp. - R has not learned any new jobs	68	62
Totals	100%	100%
No. of Cases	451	520

C. REFERENCE GROUP PATTERNS

Interaction and communication are basic processes underlying the origin and perseveration of attitudes. It is therefore significant to determine the extent to which students talk with various people in their lives about their occupational future. Enhanced understandings of these sources of attitudinal enchorage could eventually abet the design of educational programs.

The following analysis seeks to answer three descriptive questions. To what extent do students talk about career opportunities with parents, siblings, teachers, counselors, and friends? To what extent do they perceive their own career choices as matching the perceptions of the people they talk with, thereby reinforcing their views? And how important is the advice of various people in their lives?

1. Personal talks about occupational choice occurs primarily with family members and friends; much less with teachers and counselors.

Table 15 indicates that students talk most frequently with parents about career matters, secondly with other family members and personal friends. Where 65 percent of the students report one or more discussions about careers during the past year with parents, 52 percent report such discussions with other family members, and a like proportion report discussions with friends. In contrast, 21 percent of the students report personal talks about careers with teachers, and 17 percent report talking with counselors.

The reverse side of the coin might also be noted, however. Over a third of the students (36 percent) are not talking with their parents about job opportunities, and four-fifths are not talking personally with teachers or counselors about such matters.

2. Students perceive their occupational choices to be reinforced primarily by their parents and friends; much less by teachers and counselors.

In the body of the questionnaire, after students were asked if they had had any personal talks during the past year with parents, brothers or sisters,

etc., they were then asked what kinds of jobs the parents, siblings, teachers, etc. thought they should have as an adult. The responses to these questions were then matched, during the coding procedure, with the student's own selection of the type of job he thought would be good for him as an adult. Table 16 summarizes the results of this matching operation.

In view of the preceding analysis which revealed that students discussed their career opportunities primarily with family members and friends, it comes as no surprise to learn that students perceive their occupational choices to be most reinforced by these same primary group contacts. Specifically, 41 percent of the students report their mothers in agreement with them about one or more job choices, 39 percent report their friends to be in agreement, and 35 percent say their fathers are in agreement on one or more job choices. In contrast, owing to limited personal communication with teachers and counselors, 15 percent of the students see teachers as personally supportive of their occupational choice, and 12 percent of the students see school counselors as personally supporting their occupational choice.

3. Students perceive their parents as the most important source of advice about careers: but the advice of teachers and counselors is also deemed important.

Students were also asked about the relative importance of various people in their lives as sources of advice about the kind of occupation they should follow as adults. Table 17 is consistent with the two preceding analyses in demonstrating the primacy of the family as a source of reference about career selection. Moreover, it is interesting to note the importance of the mother in such matters. Where 74 percent of the students said her advice was "very important", 69 percent felt the father's advice was "very important". In contrast with the parents, 24 percent of the students saw the teacher's advice as "very important", while 32 percent gave a similar rating to the advice of counselors.

The second most important detail to be gleaned from Table 17 is the fact that students clearly rate the advice of teachers and counselors as a second-best, or "fairly important" source. In fact, if the "very important"

and "fairly important" categories are combined, two-thirds of the students rated teacher and counselor advice as important.

It is also significant that while students report more frequent discussion with family members and friends about occupational choices, they do not equally value the advice of friends, only 19 percent believing their advice to be "very important", and 30 percent rating it "not important".

In brief, in the matter of occupational choice, students are looking to the adult world for advice--their parents first, teachers and counselors second.

Summary

The student spends approximately 4/5 of his waking hours outside the school, and much of this time is spent with family and friends. The significance of this simple fact for student decisions about occupational choice cannot be overlooked. Some of the materials presented in the collective classroom setting filter into discussion channels with family and friends. It is in these settings that the reference group process operates most strongly, leading students to eventually settle upon personal attitudes and values toward the world of work. And as these attitudes become set, the related motivational components echo back into the classroom with direct implications for the learning process.

The preceding tables have clearly and consistently indicated the great importance of the family as a reference group for students with respect to decisions about occupational selection. Students talk most frequently with their parents about occupations, their own occupational choices are best matched by parents, and parental advice is valued over all other sources of advice.

Personal friends are also a highly important source of communication about occupational choice, second only to the family as a resource for talking about occupational choice and for finding reinforcement in self perceptions about job choice.

The role of teachers and counselors in these reference group pocesses appears to be relatively small. Fewer students talk personally with their teachers and counselors about job choices than they do with their mothers, fathers, siblings, or friends. But students still view teachers and counselors as a source of job advice second only to the parents.

Since the teacher's role is not oriented primarily to discussions at the personal level of communication--on a one-to-one basis--these facts should not be surprising. Nor do these observations necessarily indicate that the classroom processes have no effect upon student attitudes. What the data do seem to imply is that whatever ultimate attitudinal effect teaching units have upon students will be the resultant of exposure to classroom learning situations coupled with the ensuing processes of selective communication with parents, siblings, and friends.

It might also be noted that the potential of teachers and counselors as sources of attitudinal modification remains relatively high. Approximately 1/3 of the students do not discuss career matters with their parents. And only 2/5 of the students find themselves in agreement with their parents about job selection. Also, students harbor high regard for teacher and counselor advice about occupations, valuing it second only to parental advice.

Table 15

Number of Personal Talks with Others About Occupational Choice During the Past Year

(By Percent)

Personal Discussion about career with:	Number of Talks: One only	Two or three	Four or more	Had no talks	Total	No. cases
Parents	8	32	25	35	100	506
Other family members	8	25	19	49	101	506
Teachers	8	10	3	79	100	506
School counselors	8	8	1	83	100	506
Friends	5	25	22	49	100	506

Table 16

Perception of Self-Other Agreement in Occupational Choice
(By Percent)

Student perception of agreement in job choice with:	Number of Job Matches						
	1-2 matches	3 matches	No matches	Don't know	Inap... no talks	Total	No. cases
Fathers	26	9	9	14	42	100	506
Mothers	30	11	8	17	34	100	506
Teachers	11	4	2	9	73	100	506
Counselors	9	3	2	12	74	100	506
Friends	25	14	6	14	41	100	506

1423

Table 17

Perceived Importance of Various Sources of Personal Advice About Careers

(By Percent)

	Importance of Advice					
Source of Advice	Very important	Fairly important	Not important	Don't know	Totals	No. cases
Father	69	15	6	10	100	506
Mother	74	16	4	7	101	506
Siblings	25	48	17	10	100	506
Teachers	24	43	22	11	100	506
School Counselors	32	35	22	11	100	506
Friends	19	41	30	10	100	506

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D. TEACHER ATTITUDES

The ensuing analysis, derived from the teacher questionnaires, offers some highlights pertinent to the preceding analyses of pupil responses. Two general questions are pursued in this analysis. To what extent do teachers perceive the Career Orientation Program to be effective? And what attitudes do teachers hold with respect to various types of careers?

1. Teachers in the experimental schools believe the Career Orientation Program is helpful to students.

Teachers in the experimental schools believe their students are faring much better in receiving help concerning career decisions than do teachers in the control schools. Where 51 percent of the teachers in the experimental schools believe their students are receiving sufficient help in arriving at career choices, only 14 percent of the teachers in the control schools believe the same about their students (Table 18).

Moreover, when teachers in the experimental schools were asked specifically about the value of the Career Orientation Program, the following results were obtained.

"How helpful to your students is this program?"

Very helpful	16%
Fairly helpful	46
Not very helpful	11
Little or no value	3
Don't know	24
Totals	100%
No. of Cases	156

While the proportion of teachers responding that the program is "very helpful" is only 16 percent, it might be noted that only 14 percent are negatively inclined toward the program while 62 percent are to some degree affirmatively inclined toward the program.

It might also be observed that these perceptions about program effectiveness are in agreement with the student questionnaires in which students in the experimental schools report more learning about the world of work than do their counterparts in the control schools.

2. Types of careers discussed in classes stress professional and blue collar occupations; tend to omit other white collar pursuits.

In a previous analysis of student occupational expectations it was found that where 47 percent of the students anticipated professional, technical or kindred type pursuits, 14 percent expected to get into other white collar type occupations, and 20 percent anticipated blue collar type occupations.

When teachers were asked what types of careers were discussed in class or presented in work units, 28 percent mentioned professional, technical or kindred, only 6 percent mentioned other white collar type occupations, and 23 percent indicated that blue collar type jobs were discussed (Table 19). The significant factor in both of these analyses, however, is the comparative distribution of these same occupation types in the population. This situation is summarized in the following table.

Distributions of Occupations in Hamilton County,
Career Expectations of Students, and Careers Discussed in Class

Occupational Categories	Distribution: Hamilton Co.	Student Expectations	Discussed in Classes
Professional, technical and kindred,	15%	47%	28%
Other white collar	35	14	6
Blue collar	48	20	23
Miscellaneous (other)	2	3	5
Inappropriate (Didn't discuss careers in class)		16	38
	100%	100%	100%

It may therefore be seen that student expectations of professional type employment is well out of proportion to society's outlets. To a lesser

extent teaching units and discussions are also out of proportion in the same direction, but to a lesser extent than student expectations. On the other hand, student expectations of other white collar type employment are far less than what the occupational structure offers, and class presentations are still further out of proportion to the reality.

3. A majority of the teachers believe it is important to spur their students to strive for professional type careers, but a majority of the teachers also believe that most of their students are not college material.

Table 20 shows that 4/5 of the teachers believe it is either "important" or "very important" to try to motivate their students to strive for high occupational objectives, such as becoming a doctor, lawyer, architect, etc.

At another point in the questionnaire teachers were queried concerning the intellectual ability of their students to make it through four years of college. Two thirds of the teachers believe that less than 40 percent of their students are college material. Only 9 percent believe that 60 percent or more of their students could make it through college. And 28 percent of the teachers believe that 4/5 of their students are not college material. (Table 21).

Further insights into this situation are provided in Table 22 which shows that nearly 2/3 (58 percent) of the students of these teachers expect to go to college. And college expectations rise slightly from the pretest to the posttest period, from 52 percent to 58 percent.

These results are in good part interpretable in light of the work of Robert K. Merton who some 25 years ago provided a conceptual analysis of American society as a social system which sets forth the universal value of occupational and financial achievement.* Society urges all to strive for high occupational and financial goals, although the actual outlets for achievement are limited.

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*Robert K. Merton, Social Theory and Social Structure, New York: The Free Press, 1968. Ch. VI, pp. 185-215.

The "American Dream", or the "success prototype" in Merton's view, are reflected in the preceding findings. Previous research has revealed that parents of all socio-economic (and racial) levels tend to expect their children to go to college and prepare themselves for professional type careers. This value is further reflected in the expectations of the students in this study wherein 58 percent expect to go to college, and 47 percent expect to end up in professional, technical or kindred type pursuits. Table 20 therefore indicates the extent to which teachers subscribe to the same societal norm by assuming their role is to spur children in this same direction. Teachers, therefore, are reinforcing the success prototype value with the result that far more students are aspiring for occupational outlets than are available in the society.

The paradox, however, is the observation that only 9 percent of the teachers believe that a firm majority (60 percent) of their students have the intellectual ability to get through college. This is an instance of a not uncommon phenomenon, the existence of "logic tight compartments" in the value system. It poses, however, an interesting educational problem.

4. A majority of the teachers believe that the primary responsibility for lack of occupational failure rests more with society than with the individual.

An important facet of Merton's "success prototype" notion is the social belief that if a person does not make it to the top or achieve the prescribed high occupational objectives it is his own fault. The assumption is that society is not to be blamed for failure, since everyone has had an equal chance to get ahead.

The implications of this value for social equilibrium are potentially great, for if individuals were to blame the system rather than themselves for frustrated ambitions, general social malaise could result.

In the past few years public attention has increasingly been drawn to the functioning of "the system" in relation to a wide range of social problems. It would appear that the doctrine of sole individual responsibility is being

increasingly questioned, and the manner in which our established social institutions are functioning is under increasing scrutiny. In view of these facts, teachers were asked a question concerning the extent to which failure to achieve occupational security was the fault of the individual as opposed to being the fault of society.

Table 23 indicates that slightly over 1/3 of the teachers see failure as an outgrowth of personal failure, over 1/2 (52 percent) see failure as primarily attributable to society.

In summary, the attitudinal posture of teachers therefore appears to be one which says--strive to get ahead, but I don't believe most of you will make it--and if you don't, it's not fully your fault.

TABLE 18

TEACHER PERCEPTIONS OF HELP BEING RENDERED STUDENTS BY THE SCHOOLS IN ARRIVING AT OCCUPATIONAL CHOICES

"IN GENERAL, DO YOU FEEL THAT STUDENTS IN YOUR SCHOOL RECEIVE SUFFICIENT HELP IN ARRIVING AT DECISIONS ABOUT THE KINDS OF CAREERS THEY MIGHT EVENTUALLY GO INTO."

	Experimental Schools	Control Schools
Yes	51%	14%
No	36%	77%
D.K.	13%	9%
Totals	100%	100%
No. of cases	156	43

TABLE 19

TYPES OF CAREERS DISCUSSED IN CLASS

"WOULD YOU LIST THE KINDS OF CAREERS YOU DISCUSSED OR PRESENTED UNITS ABOUT? FIRST JOB LISTED."

Experimental Schools

Professional, Technical, and Kindred	28%
Other white collar	6
Blue collar	23
Miscellaneous	5
N.A.	4
Inapp.	34
Totals	100%
No. of Cases	156

Control Schools

Professional, Technical, and Kindred	37%
Other white collar	5
Blue collar	12
Miscellaneous	2
N.A.	5
Inapp.	39
Totals	100%
No. of Cases	43

TABLE 20

TEACHERS ATTITUDES TOWARD MOTIVATING STUDENTS TOWARD PROFESSIONAL, TECHNICAL, OR KINDRED TYPE CAREERS

"SOME PEOPLE FEEL THAT ONE OF THE MOST IMPORTANT THINGS A TEACHER CAN DO IS MOTIVATE STUDENTS TO MAKE SOMETHING OF THEMSELVES. OTHER PEOPLE FEEL THIS IS NOT IMPORTANT. HOW IMPORTANT DO YOU FEEL IT IS FOR TEACHERS TO TRY TO SPUR THEIR STUDENTS TO STRIVE FOR HIGHER OCCUPATIONAL OBJECTIVES, SUCH AS BECOMING A DOCTOR, LAWYER, ARCHITECT, SCIENTIST, TEACHER, ETC..."

Experimental Schools

Very important	31%
Fairly important	48
Not very important	18
Quite unimportant	1
N.A.	2
Totals	100%
No. of Cases	156

Control Schools

Very important	56%
Fairly important	23
Not very important	19
Quite unimportant	2
N.A.	
Totals	100%
No. of Cases	43

TABLE 21

TEACHERS PERCEPTION OF STUDENT COLLEGE CAPABILITIES, BY SCHOOL

"THINKING ABOUT THE STUDENTS IN YOUR CLASSES WHAT PROPORTION WOULD YOU ESTIMATE ARE "COLLEGE MATERIAL" THAT IS INTELLECTUALLY CAPABLE OF GETTING THROUGH FOUR YEARS OF COLLEGE."

Experimental Schools	
Less than 20%	28%
20-40	38
40-60 or over	28
N.A.	6
Totals	100%
No. of Cases	156

Control Schools	
Less than 20%	37%
20-40	33
40-60 or more	28
N.A.	2
Totals	100%
No. of Cases	43

TABLE 22

STUDENT EDUCATIONAL EXPECTATIONS WITH RESPECT TO JOB ATTAINMENT

"HOW MUCH AND WHAT TYPE OF EDUCATION OR TRAINING DO YOU THINK IT WILL TAKE TO GET THE KIND OF JOB YOU CHECKED AS MOST PROBABLY FOR YOU?"

Experimental Schools	Pre Measures	Post Measures
Go to college	52%	58%
Go to technical or vocational school after graduating	21	21
Finish high school	18	18
Won't finish high school	2	1
D.K. and N.A.	7	2
Totals	100%	100%
No. of Cases	690	506

Control Schools		
Go to college	49%	51%
Go to technical or vocational school after graduating	14	19
Finish high school	19	25
Won't finish high school	1	5
D.K. and N.A.	17	
Totals	100%	100%
No. of Cases	228	106

TABLE 23

SELF BLAME VS. SOCIETAL BLAME FOR UNEMPLOYMENT

"THINKING ABOUT THE UNEMPLOYED OR MARGINALLY EMPLOYED PEOPLE IN OUR SOCIETY, WOULD YOU SAY THEIR CIRCUMSTANCES ARE PRIMARILY THEIR OWN FAULT, OR THE FAULT OF THE WAY THE SOCIAL SYSTEM WORKS."

Experimental Schools

1. All or most (over 50%) didn't try hard enough, didn't want to get ahead.	37%
2. All or most didn't have realistic opportunities to get good jobs.	52
N.A.	11
Totals	100%
No. of Cases	156

Control Schools

1. All or most (50%) didn't try hard enough, didn't want to get ahead.	28%
2. All or most didn't have realistic opportunities to get good jobs.	65
N.A.	7
Totals	100%
No. of Cases	43

Personnel and Facilities:

Principal Investigator:	Ronald J. Priore, Study Director, Institute for Metropolitan Studies, University of Cincinnati.
Education:	B.S. in history, 1965, Loyola University of Chicago. Ed. M. Urban Education (Teacher Corps) University of Cincinnati, 1968. Doctoral Student, College of Education, University of Cincinnati. (Doctorate expected Summer, 1973.)
Teaching Experience:	Elementary and Secondary experience, Chicago, Ill. Fourth, fifth, sixth, seventh, and eighth grades. 1963-66.
	Teacher Corps Intern - Cincinnati, Ohio. Teacher and visiting teacher, Fred W. Heinold Jr. High School, Cincinnati, Ohio. 1966-68. Teaching assistant , University of Cincinnati, 1968-1970.
	Consultant, United States Office of Education, National Center for Educational Research and Development, Applied Research Branch, 1971.
Senior Research Consultant	Ralph V. Smith, Ph.D., Research Professor of Sociology and Director, Institute for Metropolitan Studies, University of Cincinnati.
Research Consultant:	Alfred D. Garvin, Ph.D., Asst. Professor of Education, and Coordinator of Graduate Programs in Educational Research.

The research was conducted through the Institute for Metropolitan Studies of the University of Cincinnati. This is a multidisciplinary social research center dedicated to studies of community problems, and to studies of urban education. The full time research staff consists of nine persons with thirty-eight people assisting on a part-time basis. Most of the studies conducted are of the survey research variety, and staff members are experienced and trained in the various skills and techniques essential to such operations.

Full facilities for social research are housed adjoining the campus in an office building. Data processing is carried out by the University's Behavioral Sciences Laboratory. Upon completion of all studies, data are archived and made available for future reference.

Project or Program Expenditures

Title of Project or Program: The Impact of a Career Orientation Program Upon Junior High School Students in Cincinnati, Ohio.

Project or Program Organization: The Institute for Metropolitan Studies of the University of Cincinnati.

Project or Program Beginning and Ending Dates: April 1, 1971 to June 30, 1972

Category of Expenditures	197 - 197	
	STATE FUNDS	LOCAL FUNDS
1. Personnel (position titles; percent of time on project and yearly salary; for consultants, number of days and rate).	13,606.35	7,375.17
2. Employee Benefits (itemize benefits such as social security, retirement, group insurance, etc.)	96.98	
3. Travel (in and out-of-state for regular and consultant personnel; fares and/or mileage at allowable rate; number of days per diem and rate).	189.14	
4. Supplies and Materials (describe)	400.00	
5. Communications (itemize postage, telephone, etc.)		51.20
6. Services: a. Duplication and Reproduction b. Statistical c. Testing d. Other	13,035.53	2,172.81
7. Final Report-(twenty five copies)	45.00	22.39
8. Equipment (rental; small, essential items may be purchased if less expensive)		
9. Other	2,190.00	
10. Total	29,563.00	9,621.57

APPENDED ITEMS

"The Impact of a Career Orientation Program Upon Junior High School Students in Cincinnati, Ohio"

VTD17711

OCCUPATIONAL STATUS AND EDUCATIONAL LEVELS OF
PARENTS IN EXPERIMENTAL AND CONTROL SCHOOLS,
PRETEST AND POSTTEST SAMPLES.

TABLE

FATHER'S EDUCATION.

"DID YOUR FATHER?"

Experimental Schools	Pre	Post
Go to college	17%	21%
Tech. school	7%	9
Finish high school	32%	32
Didn't finish high school	26%	24
D.K. and N.A.	18%	14
Totals	100%	100%
No. of Cases	671	486

Control Schools		
Go to college	14%	16%
Tech. school	4%	7
Finish high school	18%	42
Didn't finish high school	36%	18
D.K. and N.A.	28%	17
Totals	100%	100%
No. of Cases	202	106

TABLE

MOTHER'S EDUCATION

"DID YOUR MOTHER?"

Experimental Schools	Pre	Post
Go to college	15%	16%
Tech. school	6	6
Finish high school	37	41
Didn't finish high school	28	27
D.K. and N.A.	14	10
Totals	100%	100%
No. of Cases	697	505

Control Schools		
Go to college	14%	14%
Tech. school	3	8
Finish high school	27	39
Didn't finish high school	30	25
D.K. and N.A.	26	14
Totals	100%	100%
No. of Cases	243	106

TABLE

OCCUPATION OF FATHER

"WHAT IS YOUR FATHER'S OCCUPATION? (IF NOT PRESENTLY EMPLOYED, LIST LAST JOB HE HELD). PLEASE BE AS SPECIFIC AS POSSIBLE."

Experimental Schools	Pre	Post
Prof. Tech and Kindred	9%	8%
Other white collar	11	13
Blue collar	42	40
Misc. and N.A.	38	39
Totals	100%	100%
No. of Cases	693	486

Control Schools		
Prof. Tech and Kindred	7%	4%
Other white collar	5	5
Blue collar	30	27
Misc. and N.A.	59	64
Totals	101%	100%
No. of Cases	132	106

VOCATIONAL INTEREST SURVEY

FALL, 1971

Institute for Metropolitan Studies
University of Cincinnati
Pr # 712

For: The Ohio State Department of Education, Division of Vocational Education, and The Cincinnati Public Schools

This Questionnaire is part of a study being carried out by the University of Cincinnati. We are interested in how boys and girls your age feel about a number of things—your ideas about your future, your school, and things that interest you.

This is NOT a test—you won't be graded in any way. We are only interested in how you feel and your ideas on things.

Please PRINT the following information about yourself:

Name _____ Grade _____

School _____

1. List below the types of work you think you might want to do for a living when you are an adult.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

1a. Put an "X" in front of the one job listed above that you think you will probably have when you are an adult.

2. What will you have to do to get into the kind of job you checked as the one you will probably have? (Be as specific as you can.)

_____

_____

_____

_____

3. How much and what type of education or training do you think it will take to get the kind of job you checked as most probable for you? Will you have to:

- ▱ Go to college
- ▱ Go to a technical or vocational school after graduating from high school
- ▱ Finish high school
- ▱ Won't finish high school

4. On the scale below, CIRCLE the total number of years of education you think it will take to get the kind of a job you checked as the one you will probably have.

	High School					College or Technical School							
Years:	8	9	10	11	12	13	14	15	16	17	18	19	20

5. The following list names many kinds of things people do to earn a living. Some of these jobs you will know about; others you will not.

First, decide if you know about the kind of work that each job requires. If you don't know very much about that job just make an "X" in the box under the "Don't Know" heading and move on to the next job listed.

IF you do know about a job, decide how important that job is to society and make an "X" in one of the boxes under the heading of "very important," "fairly important," or "not very important."

		I do know about this job and it is:		
	Don't Know	Very Important	Fairly Important	Not Very Important
Physician	☐	☐	☐	☐
Manager of an Insurance Office	☐	☐	☐	☐
Stocks and bonds salesman	☐	☐	☐	☐
Bill collector	☐	☐	☐	☐
Carpenter	☐	☐	☐	☐
Auto mechanic	☐	☐	☐	☐
Private detective	☐	☐	☐	☐
Farm foreman	☐	☐	☐	☐
Accountant	☐	☐	☐	☐
Production Manager in an Automobile factory	☐	☐	☐	☐
Bus dispatcher	☐	☐	☐	☐
Electrician	☐	☐	☐	☐
Sheet metal worker	☐	☐	☐	☐
Hod carrier	☐	☐	☐	☐
First Mate on an ocean going ship	☐	☐	☐	☐
Railway mail clerk	☐	☐	☐	☐
Plumber	☐	☐	☐	☐

	Don't Know	I do know about this job and it is: Very Important	Fairly Important	Not Very Important
Riverboat man	☐	☐	☐	☐
Barber or hairdresser	☐	☐	☐	☐
Carpet Installer	☐	☐	☐	☐
Agricultural extension agent	☐	☐	☐	☐
Oral Hygienist	☐	☐	☐	☐
Clothing salesman	☐	☐	☐	☐
Telegraph operator	☐	☐	☐	☐
Dyer in a rug factory	☐	☐	☐	☐
Airplane baggage man	☐	☐	☐	☐
Quality Control Technician in a factory	☐	☐	☐	☐
Jewelry salesman	☐	☐	☐	☐
Postal clerk	☐	☐	☐	☐
Furrier	☐	☐	☐	☐
Stock boy in a grocery store	☐	☐	☐	☐
Forest Ranger	☐	☐	☐	☐
Toy salesman	☐	☐	☐	☐
Oiler for a Railroad	☐	☐	☐	☐
Car washer	☐	☐	☐	☐
Telephone lineman	☐	☐	☐	☐
Textile spinner	☐	☐	☐	☐
Janitor	☐	☐	☐	☐
Lumberjack	☐	☐	☐	☐
Traffic Court Judge	☐	☐	☐	☐
Door to door magazine salesman	☐	☐	☐	☐
Air conditioning installer	☐	☐	☐	☐

	Don't Know	I do know about this job and it is: Very Important	Fairly Important	Not Very Important
Sawmill operator	▱	▱	▱	▱
Librarian	▱	▱	▱	▱
Airline mechanic	▱	▱	▱	▱
Stonemason	▱	▱	▱	▱
Elementary School Teacher	▱	▱	▱	▱
Office machine operator	▱	▱	▱	▱
Hotel maid	▱	▱	▱	▱
Photo engraver	▱	▱	▱	▱
Boat repairman	▱	▱	▱	▱
Telephone operator	▱	▱	▱	▱
Metal roller in a foundry	▱	▱	▱	▱
Dairy products worker	▱	▱	▱	▱
Bank teller	▱	▱	▱	▱
Structural metal worker	▱	▱	▱	▱
Cigar maker	▱	▱	▱	▱
Enlisted man in the Army	▱	▱	▱	▱
Leather craftsman	▱	▱	▱	▱
Elevator operator	▱	▱	▱	▱
Boiler maker	▱	▱	▱	▱

6. During the past year have you and your parents (or guardian) had any talks about the kinds of jobs that might be good for you when you are an adult?

☐ Yes ☐ No ⟶ SKIP TO QUESTION # 7.

(IF "YES")

6a. About how many such talks have you had during the past year?

☐ one only ☐ two or three ☐ four or more

6b. Were these talks mostly with:

☐ Your father ☐ Your mother ☐ About equal; father and mother

6c. And what kinds of jobs does your father think you should have when you are an adult? And what kinds of jobs does your mother think you should have?

	Father's choices	Mother's choices
First choice	_____	_____
Second choice	_____	_____
Third choice	_____	_____

7. During the past year have you had any personal talks with any other members of your family (other than your parents) about the kinds of jobs that might be good for you when you are an adult?

☐ Yes ☐ No ⟶ SKIP TO QUESTION # 8.

(IF "YES")

7a. With what other members of your family did you have these talks?

☐ Brother ☐ Sister ☐ Grandfather ☐ Grandmother

☐ Uncle ☐ Aunt ☐ Cousin

7b. All told, about how many such talks with family members other than your parents have you had during the past year?

☐ One only ☐ two or three ☐ four or more

8. During the past year have you had a personal talk with any of your teachers about the kinds of job that might be good for you when you are an adult?

☐ Yes ☐ No ⟶ SKIP TO QUESTION # 9.

(IF "YES")

8a. With how many teachers have you had such talks? ____

8b. All told, how many such talks have you had with teachers.

☐ one only ☐ two or three ☐ four or more

8c. What kinds of jobs do you think this (these) teacher/s think you should have as an adult?

First choice _____

Second choice _____

Third choice _____

9. During the past year have you had a personal talk with a school counselor about the kinds of jobs that might be good for you when you are an adult?

☐ Yes ☐ No ⟶ SKIP TO QUESTION # 10.

(IF "YES")

9a. All told, how many talks have you had with a counselor?

☐ one only ☐ two or three ☐ four or more

9b. What kinds of jobs did this counselor think you should have as an adult?

First choice _____

Second choice _____

Third choice _____

10. During the past year have you and any of your personal friends (other than family members) had any discussions about the kinds of jobs that might be good for you when you are an adult?

☐ Yes ☐ No → SKIP TO QUESTION # 11.

(IF "YES")

10a. Are these friends:

☐ Classmates or other friends here at this school.

☐ Other friends who do not attend this school.

10b. About how many such talks have you had with these friends during the past year?

☐ one only ☐ two or three ☐ four or more

Summing up their ideas, what kinds of jobs do you think your friends think would be good for you when you are an adult?

First choice _____

Second choice _____

Third choice _____

11. During the next few years you will be coming closer to the time when you will be deciding what kind of a job you will seek when you are an adult. As you try to make this decision, how important will be the advice of:

	Very important	Fairly important	Not important
A. Your father	☐	☐	☐
B. Your mother	☐	☐	☐
C. A brother or sister	☐	☐	☐
D. A teacher	☐	☐	☐
E. A school counselor	☐	☐	☐
F. My friends	☐	☐	☐
G. Other _____ specify	☐	☐	☐

12. Which of the following statements best describes your feelings about school?

- ☐ I like school very much
- ☐ I like school fairly well
- ☐ I don't like school very much
- ☐ I don't like school; I would prefer not to attend

13. Some boys and girls in your present class will be much more successful in their vocations than others. Try to imagine that the line below represents this range of success, from least successful to most successful.

Place an X in the slot on this line indicating where you think YOU will rank in occupational success compared to your present classmates.

Least Successful — Most Successful

/ / / / / / / / /

14. When you are an adult, how much money will you need to earn to satisfy you?

- ☐ much more than my parents
- ☐ somewhat more than my parents
- ☐ about the same as my parents
- ☐ I would be satisfied with less than they earn

15. How old were you at your last birthday?

____ years

16. Girl ☐ Boy ☐

17. Where were you born?

_____ city _____ state

18. How long have you lived in Cincinnati?

____ years

19. Did your father:

- ☐ Go to college
- ☐ Go to a technical or vocational school after graduating from high school
- ☐ Finish high school
- ☐ Didn't finish high school

20. Did your mother:

- ☐ Go to college
- ☐ Go to a technical or vocational school after graduating from high school
- ☐ Finish high school
- ☐ Didn't finish high school

21. Does your mother work outside the home?

☐ Yes ☐ No ⟶ SKIP TO QUESTION # 22.

(IF "YES")

21a. What kind of work does she do? (Please be as specific as possible.)

_____

22. What is your father's occupation? (If not presently employed, list last job he held). Please be as specific as possible.

_____

PR# 712
Jan. 1972

Curriculum planning, the expenditure of funds, and the future welfare of children is bound up in the kinds of information that is available. The ideas and feelings of teachers constitute valuable information. Your full and honest responses are needed —and will be used.

This project is being conducted by the University of Cincinnati's Institute for Metropolitan Studies and is sponsored by the Ohio Department of Education, Vocational Education Division, with the cooperation of the Cincinnati Public Schools. Your personal answers are confidential. Responses will be aggregated for statistical purposes only.

Your assistance is genuinely appreciated.

1. School _____

2. Subject(s) taught _____

3. Total number of years teaching _____

4. Sex: ☐ Male ☐ Female

5. In general, do you feel the students in your school receive sufficient help in arriving at decisions about what kind of careers they might eventually get into?

☐ Yes ☐ No

IMS

INSTITUTE FOR METROPOLITAN STUDIES
UNIVERSITY OF CINCINNATI

6. Some people feel that one of the most important things a teacher can do is motivate his/her students to make something of themselves and to get ahead. Other people feel this is not so important. How important do you feel it is for teachers to try to spur their students to strive for higher occupational objectives, such as becoming a doctor, lawyer, architect, scientist, teacher, etc.

☐ Very Important ☐ Fairly Important ☐ Not Very Important ☐ Quite Unimportant

7. Thinking about the students in your classes, what proportion would you estimate are "college material," that is, intellectually capable of getting through four years of college?

☐ Less than 20% ☐ 20-40% ☐ 40-60% ☐ 60-80% ☐ Over 80%

8. Students face a difficult problem in learning about the world of work and arriving at a decision concerning what careers they might possibly follow. Some people feel that most of the responsibility for helping students in this problem lies with the parents. Others believe major responsibility should rest with school counselors. Still others believe major responsibility should rest with the classroom teachers.

Assuming you had 100 percentage points to divide among parents, teachers and counselors to express degrees of responsibility, how would you distribute these points?

Parents _____ %

Teachers _____ %

Counselors _____ %

Total 100% (Please be sure your points total 100%)

9. Thus far, have you had an opportunity to discuss career opportunities in any of your classes this year?

☐ YES ☐ NO → SKIP TO Q. #10.

IF "YES"

9a. Would you list the kinds of careers you discussed or presented units about?

_____ _____

_____ _____

_____ _____

_____ _____

10. Thinking about the unemployed or marginally employed people in our society, would you say their circumstances are primarily their own fault, or the fault of the way the social system operates?

☐ All or most (over 50 percent) didn't try hard enough, didn't want to get ahead.

☐ All or most didn't have realistic opportunities to get good jobs.

11. During the past year have you had any <u>personal</u> talks with any of your students about the kinds of careers that might be good for them as adults?

☐ YES ☐ NO → SKIP TO Q. #12.

IF "YES"

11a. With approximately how many students have you had such talks?

_____ students.

11b. All told, about how many such talks have you had? ___ talks.

11c. Would you give some examples of the kinds of jobs you talked about with these students?

_____ _____

_____ _____

_____ _____

_____ _____

12. If you were a teenager and "had it to do over again," what types of occupation would most interest you? (List as many as you wish.)

_____ _____

_____ _____

_____ _____

_____ _____

12a. Would you now place an "X" in front of the one occupation that you think you would be most interested in pursuing.

13. What percentage of adults in the Cincinnati labor force would you estimate to be employed in occupations classified as "professional, technical or kindred"; that is such occupations as law, medicine, architecture, teaching, social work, airline pilots, clergymen, reporters, etc.?

☐ less than 10% ☐ 10-15% ☐ 15-20% ☐ 20-25%

☐ 25-30% ☐ 30-35% ☐ more than 35%

14. Do you have a career-orientation program at your school—that is, a specifically designed program to widen student knowledge of the world of work?

☐ YES ☐ NO

IF "YES"

14a. How helpful to your students is this program?

☐ Very helpful ☐ Fairly helpful ☐ Not Very Helpful

☐ Little or no value ☐ Don't Know

14b. What suggestions would you offer for improving the program?

_____

_____

_____

_____

_____

Name _____ Grade _____

School _____ ☐ Boy ☐ Girl

Have you learned about any new occupations or jobs in any of your classes this school year?

☐ YES ☐ NO

IF "YES"

Would you please list the new jobs you have learned about

_____ _____

_____ _____

_____ _____

Would you place an "X" in front of the job that interested you the most.

INSTITUTE FOR METROPOLITAN STUDIES, UNIVERSITY OF CINCINNATI

VT 017 712
BEHMAN, SARA, AND OTHERS
PRODUCTIVITY CHANGE FOR CARPENTERS AND OTHER OCCUPATIONS IN THE BUILDING OF SINGLE-FAMILY DWELLINGS AND RELATED POLICY ISSUES.

CALIFORNIA UNIV., BERKELEY. INST. OF INDUSTRIAL RELATIONS.
MANPOWER ADMINISTRATION (DOL), WASHINGTON, D.C.
MF AVAILABLE IN VT-ERIC SET.
PUB DATE - APR71 222P.

DESCRIPTORS - *PRODUCTIVITY; *CARPENTERS; *BUILDING TRADES; *LABOR ECONOMICS; *CONSTRUCTION COSTS; ESTIMATED COSTS; HOUSING; EMPLOYMENT PATTERNS; WORKING HOURS; MANPOWER NEEDS; LABOR STANDARDS; COMPARATIVE ANALYSIS

ABSTRACT - THE PURPOSE OF THIS STUDY WAS TO DEVELOP AVERAGE PHYSICAL LABOR PRODUCTIVITY ESTIMATES FOR BUILDING TRADES OCCUPATIONS INVOLVED IN THE CONSTRUCTION OF SINGLE-FAMILY DWELLINGS IN 1930 AND IN 1965. FROM THESE ESTIMATES THE RATE OF CHANGE IN PRODUCTIVITY WAS COMPUTED FOR THE OCCUPATIONS AND THE RESULTS WERE USED TO EXAMINE THE INFLUENCE OF NEW BUILDING TECHNIQUES ON EMPLOYMENT OF CARPENTERS AND THE EFFECT OF PRODUCTIVITY CHANGE ON BUILDING OCCUPATIONS EMPLOYMENT FORECASTS. TO EXAMINE ACTUAL BUILDING PRACTICES IN THE TWO PERIODS, TYPICAL HOUSES OF EACH PERIOD WERE DESIGNED AND CONSTRUCTION COSTS ESTIMATED. FINDINGS SUGGEST THAT LABOR PRODUCTIVITY OF CARPENTERS AND OTHER BUILDING TRADES WORKERS HAS INCREASED DUE TO CHANGES IN BUILDING METHODS AND INDUSTRY ORGANIZATION, CONTRIBUTING TO UNEMPLOYMENT IN THIS TRADE FIELD. HOWEVER, INCREASED PRODUCTIVITY DID NOT OFFSET INCREASED LABOR AND MATERIAL COSTS. DETAILED CHANGES IN BUILDING METHODS AND THEIR IMPACT ON THE BUILDING TRADES, WITH PRODUCTIVITY CHANGES BY CRAFT OR LABOR GROUP, SHOULD AID THOSE PREPARING TRAINING PROGRAMS IN THE OCCUPATIONS STUDIED. IMPLICATIONS FOR MANPOWER FORCASTING ARE DERIVED. (MF)

VT 017 712

PRODUCTIVITY CHANGE FOR CARPENTERS AND OTHER OCCUPATIONS IN THE BUILDING OF SINGLE-FAMILY DWELLINGS AND RELATED POLICY ISSUES

by

Sara Behman

Center for Labor Research and Education
Institute of Industrial Relations
University of California
Berkeley, California

1403

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EDUCATION & WELFARE
NATIONAL INSTITUTE OF
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PRODUCTIVITY CHANGE FOR CARPENTERS AND OTHER OCCUPATIONS IN THE BUILDING OF SINGLE-FAMILY DWELLINGS AND RELATED POLICY ISSUES

by

Sara Behman

with

Max DeGialluly, Erwin Dreessen, and Clyde Johnson

Center for Labor Research and Education
Institute of Industrial Relations
University of California
Berkeley, California

April 1971

PREFACE

The purpose of this study was to develop, for the first time to my knowledge, average physical labor productivity estimates for as many building trades occupations as our financial resources would permit. The result was the derivation of these data for carpenters and a group of related occupations involved in the on-site building of single-family dwellings in 1930 and 1965. Although the analysis is restricted to Alameda County, California, I believe the results are applicable to other areas where wood is a major building material and where merchant builders dominate the market.

Having derived the physical labor productivity estimates, it was possible to compute the rate of change in productivity for the individual occupations and to use the results to examine three issues that originally motivated the undertaking of this research, i.e.,

1. How and to what extent have new building techniques influenced the employment of carpenters over the 35 years?

2. What is the impact of productivity change on forecasting labor requirements in the selected building occupations?

3. What, if any, has been the inflationary bias of wage rate increases in these occupations?

This study received its initial impetus from the late C. R. Bartalini, former Secretary of the Bay Counties District Council of Carpenters and former President of the California

State Council of Carpenters, who sought answers to the above questions, "No matter what the answers are."

In order to accomplish the goals of this research, I designed the project in such a way that the results would emerge from an intensive examination of actual building practices in the two periods. This meant that typical houses of each period were designed, specified in detail, and then estimated with respect to the use of labor and material.

The raw data needed to complete the research design were developed under my supervision by three assistants, Max DeGialluly, Erwin Dreessen, and Clyde Johnson. Mr. DeGialluly, a graduate student, conducted the extensive building permit survey required, derived the characteristics of the typical houses, reviewed the trade literature from 1930 forward, conducted interviews, and photographed the houses selected for study. Clyde Johnson, former Business Agent of Local 550 in Oakland and a journeyman carpenter, assisted in the building permit survey. Most of his time, however, was devoted to developing detailed specifications of the typical houses, searching for data sources and finding needed estimators' handbooks and price lists (which was especially difficult for 1930), and preparing cost estimates of the detailed typical houses. The grant supporting Mr. Johnson's services expired before this tedious assignment was completed. Erwin Dreessen, a graduate student, was trained by Mr. Johnson, and he completed the final cost estimates of all the houses. His final estimates appear in Tables 2-13, Table 16 and the Appendix A Tables.

(It should be mentioned that the tables in Appendix A as well as those in Appendix B represent but a summary of far more detailed work.) In addition, Mr. Dreessen is responsible for the detailed descriptions that appear in Chapter II, Sections 2-5, and in Chapter III, pages 74 to 80. I am indebted to Mr. Dreessen for his meticulous reading of an earlier draft of this study.

I prepared the original working outline of this research in January 1966. Following that time, I supervised the work of the staff in the preparation of the basic data on the sample houses. In addition, I determined the scope of other research, conducted interviews with a host of persons knowledgeable in the field, and periodically spoke to carpenter and contractor groups where I learned a great deal from the "give and take" involved.

The final detailed estimates of the houses were completed by Mr. Dreessen in August 1969. The length of time between the first research proposal and the final cost and manhours' estimates was a function of three constraints: (1) the graduate students worked only part-time; (2) the time-consuming nature of the work involved in estimating costs for the detailed house specifications; and, (3) the enormous number of manhours required to conduct the building permit survey and to analyze the resultant data. In fact the body of data collected from the building survey would by itself have provided the basis for a fascinating report.

After August 1969, I was able to start work on the monograph. If any major research appeared on this subject after the fall of 1969,

it will thus not appear in the bibliography. The first reading copy of this study was completed in January 1970. Unfortunately, the time between the first reading copy and this final manuscript was interrupted by circumstances beyond my control. To the many persons who awaited these results I am deeply appreciative of the patience they showed. In particular, I owe a debt of thanks to Joan Lewis, Senior Administrative Assistant of the Institute of Industrial Relations, who bore the brunt of carrying out the administrative detail related to the project.

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SUMMARY AND CONCLUSIONS

1. General Comments

Has physical labor productivity of carpenters and other building occupations increased in the construction of single-family dwellings between 1930 and 1965 -- the former a year when cut-and-fit methods and small builders predominated, the latter a year when prefabricated components and merchant builders predominated? Based on original research in this paper, the answer to this question is, "Yes." Specifically, for a crew of carpenters and allied occupations working on the construction site, average physical labor productivity grew at a rate of 3.2 per cent per annum over these 35 years.

This finding is applied to three policy issues: unemployment, manpower forecasting, and the effect of money wage rate increases on the price of single-family dwellings.

Unemployment. The research findings suggest that although total output produced, in terms of square feet of living area, increased more than sixfold between 1930 and 1965, the number of carpenters needed for the larger volume of output in 1965 was 55 per cent of the number that would have been needed if building methods and the organization of the industry had not changed. A hypothesis suggested is that supply adjustments to changing labor requirements are sufficiently sticky so that unemployment in this trade is augmented above the level that results from the seasonal and casual characteristics of the on-site building industry.

Manpower forecasting. The rising productivity suggests that manpower forecasts that do not take this fact into account will overestimate projected labor requirements.

Effect of money wage rate increases on house prices. The rising productivity did not offset entirely the growth in money wage rates over the 35 years, so that unit labor cost grew at an annual rate of 1.5 per cent. However, when the composite of inputs is considered, rising unit labor cost was responsible for seven per cent of the constant annual compounded rate of change in the unit price of the house which was almost 3.0 per cent per annum.

The major results sketched above appear in Chapters III and IV.

This monograph is really a collection of four essays because each Chapter can stand alone.

Chapter I develops the rationale underlying the study and describes prior research.

Chapter II is a technical one that describes the research methodology and details the dollar cost of labor and material as well as manhours required per 1000 square feet (MSF) of living area for typical sample houses. The reader will quickly observe the complexity of the detail that was required in order to develop the productivity estimates in this paper.

Chapter III provides detail on changing methods in building and their impact on skills in the building trades. In particular, productivity changes by craft or labor group are given. This Chapter

should be helpful to persons responsible for establishing training programs in the occupations studied.

Chapter IV carries the report into the area of costs and their impact on the pricing of single-family dwellings. This Chapter should provide insights into the forces that have affected the rising price of single-family dwellings.

In Chapters III and IV, the aggregated data developed are evaluated against evidence that could be found. In various sections, therefore, the reader will find the flow of the argument slowed down because of the evaluation of the derived estimates. These sections can be readily omitted by those readers interested only in the major arguments of the paper.

2. Specific detailed findings and remarks.

Average physical labor productivity increased between 1930 and 1965 for carpenters and other building trades occupations involved in the on-site construction of single-family dwellings in Alameda County, California. For the integrated on-site crew, the group of occupations studied -- i.e., carpenter, cement finisher, lather, plasterer, linoleum layer, hard-tile setter, general building laborer, hod carrier, tile helper -- average physical productivity increased at a rate of 3.2 per cent per annum over the 35-year period. Among the dominant occupations with respect to hours worked per MSF of

living area, growth rates[1] varied, with the lowest rate that for carpenters, 1.7 per cent per annum, and the highest rate that for hod carriers, 7.4 per cent per annum. These average annual compounded rates of change in productivity compare with 6.3 for plasterers, 5.5 for lathers, and 5.2 for general building laborers. For the skilled group as a whole, productivity grew at a rate of 2.5 per cent per annum; that for the unskilled group, at a rate of 6.2 per cent per annum.

The carpenter's productivity growth rate was less than that for the other occupations studied betause (1) carpenters broadened their jurisdiction, for example, installing drywall in 1965 whereas in 1930 the plasterer and lather dominated labor time in interior-wall finishing, and (2), although changes in building methods reduced labor hours per 1000 square feet (MSF) of living area in the various operations carpenters performed, the reductions in relative terms were not as large as those for the several other occupations where tasks in some cases were even actually eliminated.

Historically, carpenters have adjusted their jurisdiction to account for changes in building methods. This finding by Robert A. Christie in his classic history of the United Brotherhood of Carpenters and Joiners of America, Empire in Wood, continues to apply to this Union in the Bay Area.

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[1]The growth rate is the same as a compound interest rate which would be derived as follows. An individual deposits some amount in a bank and leaves it there. At the end of each time period, say one year, interest is added to the principal. In succeeding periods, interest is computed on the compounded principal. Hence, interest is called "compound" for that period.

The various activities in which carpenters worked show differential rates of productivity change. Over the 35-year period, the largest rate of growth in productivity was in window installation, at 6.81 per cent per annum. In contrast, average productivity declined at a rate of 1.11 per cent per annum in tasks involved in interior walls and ceilings because the union widened its jurisdiction as mentioned above. Rates of productivity gain per annum for the other operations were 0.10 for footings, 1.12 for framing, 6.00 for exterior walls, 4.73 for doors, 3.09 for interior trim, 0.63 for floors, 1.28 for roof covering, and 5.43 for stairs.

The advance in average physical labor productivity occurred in large part from the substitution of material for on-site labor. For the integrated crew, the labor-cost--material-cost ratio was .802 in 1930 but .575 in 1965. Interestingly, the most significant trade off between material (or off-site labor) and on-site labor occurred in the two most labor intensive activities in 1930, i.e., interior walls and ceilings and stairs.

What effect did the rising productivity have on the utilization of carpenters in the on-site construction of single-family dwellings? Total output in terms of square feet of living area in Alameda County increased by a factor of 6.4 between 1930 and 1965, from 1,320,232 to 8,469,037. However, the number of carpenters needed to produce this larger output in 1965 was 55 per cent of the number that would have been required if 1930 techniques had been used. This

estimate, it should be noted, is based on the theoretical concept of full-time equivalents, or the assumption that all carpenters would have worked full time, in this case 1800 hours a year.

These results have implications for any study of unemployment not only for carpenters but I would suggest for any of the building trades. It is well known that on-site construction is subject to seasonal fluctuations that affect employment continuity. Further, on-site building, represented by discrete projects, means that building tradesmen are also subject to casual unemployment. However, the above finding regarding the labor saving that occurred with new building techniques over the 35-year period suggests that the trade may also be subject to what may be termed technological underemployment. The line of reasoning is as follows. As is suggested in several places in this study, new methods are introduced slowly and a logical inference is that supply adjustment to changing methods is slow. Meanwhile high wage rates per hour relative to other occupations that require similar educational requirements, for example those in some manufacturing industries, are sufficiently attractive to keep a basic labor supply attached to the trade, even though the number of opportunities may be gradually diminishing. The result is that opportunities available, especially in slack labor markets, must be spread over more workers so that average hours worked per annum are lower in these trades than in the steady industries where the relative hourly wage is lower. This hypothesis is consistent with evidence showing that average hours worked per annum in the building trades

are lower than those in most other industries. The implication of this hypothesis is, of course, that the building trades would consistently have a larger excess supply of labor than other industries because the technological underemployment is superimposed upon the seasonal and casual types of unemployment.

The rising productivity estimates found for each occupation mentioned above have implications for manpower forecasting. The historical data derived here show that labor requirements grew at a lesser rate than total output produced because of the impact of rising productivity. In fact, for three dominant 1930 occupations, plasterer, hod carrier, and lather, labor requirements declined between 1930 and 1965.

Using the assumption that building technology in single-family residential construction did not change from 1930 to 1940, the rate of change in labor productivity for the integrated crew is also estimated for the 25-year period 1940-1965. The result is that average physical labor productivity over the 25 years grew at a rate of 4.4 per cent per annum for the integrated on-site crew. This rate of increase compares with a growth rate of 3.0 per cent for output per manhour in the entire private economy over the same period.

The above results suggest that manpower forecasting in the building trades, at least for the craft and labor groups studied here, should not be based on the assumption of a zero rate of growth in labor productivity because such an assumption would consistently overestimate manpower requirements. Further, to assume a constant

rate of physical labor productivity growth for the various occupations is also a hazardous assumption, for as shown here the productivity growth rates have varied among the occupations and there is no reason to believe such would not be the case in the future. Indeed, to have validity, manpower forecasting in the building trades must be based on a thorough knowledge of building methods and materials. Inasmuch as training programs, which are costly, may be geared to occupational forecasts, the need for considering trends in labor productivity is absolutely essential. The evidence in this study suggests that labor requirement projections based simply on an extrapolation of product demand may have a wide margin of error.

The average physical labor productivity estimates provide basic information for assessing the influence of rising money wage rates in the several construction crafts on housing prices. As shown above, over the 35-year period, labor productivity of the integrated crew grew at a rate of 3.2 per cent per annum. For this group, however, hourly money wage rates including fringes increased by 4.7 per cent per annum. Consequently, unit labor cost in the building of single-family dwellings grew at a rate of 1.5 per cent per annum. The labor factor thus did exert an inflationary bias. The question then is: What was the ultimate impact of this factor on housing prices as compared with other inputs such as land, material, financing, and marketing costs as well as quality variation that has added amenities to single-family dwellings? The finding shown in Chapter IV is that the price of the house per unit, i.e., the price per square foot of

living area, grew at a rate of 2.98 per cent per annum between 1930 and 1965. When this annual rate of growth in the unit price is allocated among the different inputs, the labor cost component accounts for seven per cent of the annual price increase. In fact, this is the smallest share of the annual percentage rise in the price. This result suggests that policy efforts directed towards producing low-cost, single-family housing will probably not be successful if efforts are not directed at the totality of inputs. For example, although the house price per unit grew at a rate of 2.98 per cent per annum, the site value per square foot increased at the fastest rate among the inputs, 3.90 per cent per annum, to account for 23 per cent of the rate of growth in the unit price.

PRODUCTIVITY CHANGE FOR CARPENTERS AND OTHER OCCUPATIONS IN THE BUILDING OF SINGLE-FAMILY DWELLINGS AND RELATED POLICY ISSUES

Chapter I

INTRODUCTION

1. Policy Issues

This research, which deals primarily with the impact of changing methods in the building of single-family dwellings on carpentry labor and some related crafts, was motivated by three policy issues -- high unemployment rates among carpenters, forecasting of labor requirements for carpenters, and the possible inflationary bias deriving from wage increases in excess of productivity gains in the building trades.

In the Bay Area, unemployment rates of carpenters, the largest group of the building trades' craftsmen, reached high levels in the mid-sixties according to local business agents. An obvious reason for the high unemployment rates according to union officials was the substantial drop in new housing units authorized, especially in 1966. For several years before the onset of the house-building slump, however, the sentiment was growing that more than a cyclical decline in building was affecting the use of carpentry labor. Casual observation suggested that new techniques in building were both reducing the need for on-site carpentry labor and changing the skill requirements of carpenters on the job site. The first task was to provide decision makers with a quantitative estimate of the extent to which new production methods were affecting both the volume of employment for carpenters and the skill mix used in the trade in order to

provide insights into appraising whether or not the carpentry trade in the Bay Area was burdened by an excess supply of labor that did not originate from either cyclical or seasonal factors.

If new techniques have been affecting manhours required on on-site carpentry labor, then this effect should be made explicit so that the magnitude of future labor requirements in the trade can be determined. In particular, with the enactment of the Manpower Development and Training Act in 1962, Congress declared that an effective full employment policy requires a major effort to improve the functioning of the labor market and the quality and adaptability of the labor force. To carry out this policy, a major effort has gone into providing employment projections by occupations. To provide meaningful employment projections, however, requires productivity data by occupation, because by definition, changes in total manhour requirements can be decomposed into two parts, (1) changes in output (however measured) and (2) changes in the reciprocal of labor productivity. This relationship is shown in the underlying identity, i.e.,

$$MH \equiv O\ [MH/O],$$

where $\underline{MH}$ represents total manhour requirements, $\underline{O}$ represents an output measure, and $\underline{MH/O}$ is the reciprocal of labor productivity, or unit labor requirements. The identity can be rearranged as

$$O \equiv MH\ [O/MH].$$

Shown this way, it is a matter of simple manipulation to show that the annual rate of growth in output (by the compound interest formulation) equals the sum of the annual rates of growth in total manhour requirements and in labor productivity, or,

$$g_O = g_{MH} + g_{O/MH},$$

where g is the annual rate of growth. It can easily be seen that if $g_{O/MH}$ is zero, then and only then can the annual rate of growth in manhours required, g_{MH}, equal the rate of growth of output, g_O. To my knowledge no published employment projections have included explicit estimates of both total manhour requirements and labor productivity, except those recently prepared by Dunlop and Mills.[1]

To make the projections by craft to 1975, however, Dunlop and Mills use a range of estimates for real productivity increases for the construction industry because, as they point out, "There are little or no data to allow estimates of past changes in productivity by craft in construction."[2] The importance of accounting for productivity change in manpower projections can be clearly shown in the work of these authors. They show that "...man-hour requirements on standardized operations would tend to be about 30 per cent less in 1975 than currently, if the annual rate of productivity growth were 3.5 per cent rather than 0.0 per cent."[3]

In this research report, we have derived labor productivity

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[1] See J. T. Dunlop and D. Q. Mills, "Manpower in Construction: A Profile of the Industry and Projections to 1975," in The Report of the President's Committee on Urban Housing, Technical Studies, Vol. II (Washington, D.C.: U.S. Government Printing Office, 1968), pp. 263-273.

[2] Ibid., p. 265.

[3] Ibid., p. 265.

growth rates for several construction craftsmen, in particular, for the following categories: (a) carpenters; (b) plasterers, (c) unskilled on-site labor (including general building laborers, hod carriers, and tile helpers); (d) skilled on-site labor (including carpenters, cement finishers, lathers, plasterers, carpet and linoleum layers, and tile setters); and (e) all occupations dealt with in this analysis. (The all occupations category includes all of the aforementioned specific occupations.)

Besides being important for forecasting labor requirements, labor productivity growth rates are important as evidence relating the influence of annual wage rate changes to the changes in the final product price. Without productivity estimates of all the crafts involved in building a house, however, this aspect of the study is not fully satisfied in this research. In particular, for this aspect of the study to be fully satisfied, we should have the rate of labor productivity growth in the construction of single-family dwellings. In this case, productivity growth is related to unit labor costs via the following identity,

$$ULC \equiv \frac{w}{O/MH},$$

where ULC is unit labor cost, or labor cost per unit of output, required for on-site building, w is the average wage rate per hour for all occupations involved, and O/MH is output per manhour, or productivity. From this definition, it is clear that if output per manhour (labor productivity) rises by the same percentage as the wage rate per hour, then unit labor cost remains constant. Hence, the labor factor should not induce a rise in the final price of the product, in this case, a

square foot of living area in a house. If, however, the wage rate rises by a larger percentage than output per manhour, then unit labor cost would rise, and unless some offset were made in other cost factors, the final price of the house per square foot would rise. But what must be brought into the discussion when dealing with a commodity such as a house is that the price to the consumer in this instance includes not only the construction cost of the structure but also a large proportion for a scarce natural resource, land, and another not minor proportion for financing charges. These latter two costs, on one estimate,[4] can account for almost 43 per cent of the final sales price. Even if labor cost per unit of output, say per 1,000 square feet of living area constructed, can remain unchanged, the impact of land and financing costs on the final house price is of such magnitude that increases in these two factors could appear to be difficult to offset and so would be reflected in rising house prices.

For this aspect of the productivity issue, however, the productivity change of all labor needed to build a house is required, or, to say it another way, the productivity change for the residential construction industry is required because houses are built by integrated crews whose wages form a wage structure. Because of the inter-relatedness of the wage structure, it does not seem reasonable to believe that one trade could get a wage increase without triggering demands for increases

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[4]Lawrence Weinberg, Statement in Hearings Before the National Commission on Urban Problems, Los Angeles and San Francisco, June-July, 1967, National Commission on Urban Problems (Washington, D.C.: U.S. Government Printing Office, February 1968), p. 45.

in the other occupations involved in on-site house building.

In this report, we cannot give a definitive answer regarding productivity change in the building of single-family dwellings. However, by combining the craft and laborer groups mentioned above, our estimate for all occupations shows the productivity change for about one-half to two-thirds of the on-site construction involved in single-family dwellings.

2. Prior Research

Each motivation underlying this research undertaking presented a challenge because data required to quantify the issues posed were nonexistent. A survey of the literature indicated that no scholar has quantified the impact of changing building techniques on carpentry man-hours. Assertions are plentiful that techniques changed considerably in the building of houses following World War II. Especially cited are the increasing utilization of pre-assembled components which has induced specialization in carpentry and has shifted traditional relationships between on-site and off-site labor requirements. However, we found no comprehensive study of long-term changes in the employment of carpenters in single-house construction at the micro-economic level. What literature is available deals with the construction industry per se. For example, Maisel, Kelly, Grebler, and Colean and Newcomb wrote of the industry generally but did not emphasize the impact of changing construction methods on labor requirements.[5]

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[5]See Sherman J. Maisel, Housebuilding in Transition (Berkeley and Los Angeles: University of California Press, 1953); Kelly, Burnham, and Others, Design and Production of Houses (New York: McGraw-Hill, 1959); Leo Grebler, Production of New Housing (New York: Social Science Research Council, 1950); and Miles L. Colean and Robinson Newcomb, Stabilizing Construction (New York: McGraw-Hill, 1952).

Several other studies deal with labor in the construction industry, those by Haber and Levinson, Daily and Kaplan, but they do not examine changing labor requirements through time nor do they provide the type of information we believe to be a necessary first step to answer the issues posed above.[6]

As this research neared completion, new studies appeared on manpower in residential construction, in particular, the Dunlop and Mills study cited above. In this same report, Burns and Mittelbach survey the prior literature in an article entitled "Efficiency in the Housing Industry,"[7] and point out that no consistent answer has been given regarding the existence or nonexistence of productivity growth in housebuilding. "Many of the arguments shaping public opinion state unequivocally that the housebuilding industry is backward and inefficient. Evidence to the contrary is often buried in technical reports which do not receive the same attention."[8]

A major problem encountered in resolving the controversy regarding whether or not efficiency, in terms of rising productivity, has characterized housebuilding, is that productivity estimates that have been made are for the contract construction industry, of which housebuilding is

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[6]See William Haber and Harold Levinson, Labor Relations and Productivity in the Building Trades (Ann Arbor: University of Michigan Press, 1956); James Merle Daily, "Skill Utilization and Its Impact upon Apprenticeship Programs in the Home Building Industry" (unpublished Ph.D. dissertation, University of Colorado, 1964); and Lawrence Jay Kaplan, "Factors Affecting Productivity in the Homebuilding Industry" (unpublished Ph.D. dissertation, Columbia University, 1958).

[7]See The Report of the President's Committee on Urban Housing, Technical Studies, Vol. II, pp. 75-144. This article includes a comprehensive bibliography on the subject.

[8]Ibid., p. 80.

only a part. Sims correctly observes that "Generalizations about productivity changes in construction as a whole should clearly be applied with caution to the residential construction subsector."[9] In particular, residential construction represents about 40 per cent of total construction.[10] Construction products other than houses include bridges, industrial buildings, office buildings, and other types of nonresidential structures. Because available statistics do not show manhours by activity, it is not possible to obtain accurate productivity estimates for the residential sector. The necessity to obtain separate productivity estimates for residential construction (in fact, even for single-family dwellings) is supported by data published in surveys by the Bureau of Labor Statistics.[11]

According to the B.L.S. surveys, manhour requirements of carpenters per $1,000 of construction contract cost vary considerably by activity. The differences in requirements for the United States are:

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[9] Christopher A. Sims, "Efficiency in the Construction Industry," in The Report of the President's Committee on Urban Housing, Technical Studies, Vol. II, p. 157. In this paper Sims examines various productivity estimates that are extant and enumerates the deficiencies that exist in published data for the construction industry.

[10] burns and Mittelbach, op. cit., p. 81.

[11] U.S. Department of Labor, Bureau of Labor Statistics, has published the following bulletins that show manhour requirements in various types of activities per $1,000 of construction contract cost. See B.L.S. Report 299 and B.L.S. Bulletins 1299, 1331, 1340, 1390, 1402, 1404, 1441, 1490, and 1586. Bulletin 1586 is the second survey prepared for schools for the 1964-1965 reference period. In the text, therefore, two figures are shown for schools. In addition, Bulletin 1691, issued in 1971, is the second report on hospitals. Two figures are thus also shown for hospitals.

Activity	On-site Carpenter Manhours Required Per $1,000 of Contract Construction Cost	Survey Period
1. One-family residences	24.9	1962
2. Public housing	21.8	1959-60
3. College dormitories	15.8	1960-61
4. Schools	15.7 & 11.9	1959 & 1964-65
5. Federal office buildings	12.2	1959
6. Hospitals	11.7 & 9.9	1959-60 & 1965-66
7. Sewer works	6.5	1962-63
8. Highways	6.0	1961
9. Civil works	5.4	1957-60

From the above tabulation it is obvious that, of all types of construction, single-family residences consume more carpenter labor than any other type of building. (Within the single-family residence category, carpentry is also the major craft used.[12]) These data support Sim's statement that productivity estimates for all contract construction should be used with caution as a proxy for productivity estimates in residential construction. Ideally, data that could yield productivity estimates for single-family dwellings would be desirable. In this way, residential construction related to high-rise apartments would be excluded. According to interviews conducted during the progress of this research, the exclusion of high-rise apartment buildings would be desirable because the use of manpower in this activity resembles manpower used in commercial construction.

3. General Scope of This Research

The research in this report attempts to fill some of the data

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[12] See Bureau of Labor Statistics, Labor and Material Requirements for Private One-Family House Construction, Bulletin No. 1404 (Washington, D.C.: U.S. Government Printing Office, June 1964).

gaps in the construction literature, although certain limitations had to be imposed in order to make the project manageable within the constraint of our financial resources. The key question around which this entire research project focused was: How have new techniques in housebuilding affected both the demand for carpenter manhours on the construction site and the skill requirements of carpenters? If the new building technology was increasing specialization in this craft, as has been alleged, then over a sufficiently long enough time period, the resulting efficiency should be observed by rising labor productivity in this craft. This study attempts to answer this question within the limits outlined below not only for carpenters but also for several other labor classifications used on the construction site.

1. The data are restricted geographically to Alameda County, California, so that field work could be conducted at least cost. In this County, house construction is unionized, a characteristic common to most of California but not to most of the country.

2. Only single-family dwellings, not all residential construction, are included in the study. In this way, we could partly resolve the heterogeneity problem that plagues all work in construction. This limitation, however, is not overly restrictive. In California, for example, single-family dwellings have accounted, historically, for about 60 per cent of all new residential construction.[13] Further, in some postwar years this percentage was as high as 75 per cent for the

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[13] Economic Report of the Governor, 1969, Transmitted to the California Legislature March 1, 1969, p. 41.

Bay Area counties. As shown above, too, single-family residences utilize carpenter manhours more intensively than do the other types of structures analyzed by the Bureau of Labor Statistics. Even in dealing with single-family dwellings, however, the problem of heterogeneity is not completely resolved, because houses vary by size, quality, and materials used. To deal with this aspect, we selected typical houses in four building-cost ranges (costs as entered on the building permits). The method employed in selecting typical houses is explained in Chapter II. Briefly, building specifications were detailed for each typical house and then the cost of constructing the various components of each house was estimated. Estimators' handbooks, price information from various sources, and contractors' records where available were used to make the cost estimates for 12 broad categories of constructing the sample houses. These categories were footings, concrete floors, framing, exterior walls, interior walls, windows, doors, interior trim, floors, roof covering, stairs, and cabinets. These construction costs include about one-half to two-thirds of the total on-site building construction cost. The major on-site activities excluded from this analysis are those of the three subtrades -- plumbing, painting, and electrical work. A start was made on these three subcategories, but the time involved to carry out the detailed work necessary would have involved far more funds than were available for the project. Consequently, emphasis was placed on preparing detailed estimates of costs of those operations that involved the carpenter and then adding as many other labor groups and activites as was possible within our

time and budget constraints.

3. The time period selected for intensive study was the 35-year interval from 1930 to 1965. The early year was one when building of houses was in the handicraft stage, while the latter year was one in which merchant builders and tract developments dominated the market. In 1930, on the basis of a 50 per cent sample of all building permits, 265 different builders applied for 414 building permits for single-family dwellings in Alameda County. In this 50 per cent sample, all but seven of the builders built from one to five houses. The remaining seven received permits for from six to 19 houses. By 1965, on the basis of two different size samples, 19 builders in the County applied for 62 per cent of all the permits issued for single-family residences. Each of these 19 builders applied for 50 or more permits in 1965.

Although 1930 is the year selected for detailed analysis, as representative of a handicraft period in residential construction, a review of the trade literature that appeared over the years and interviews with contractors suggests that no major change occurred in residential-construction methods until after World War II. Other often quoted evidence is found in the Fortune article of August 1947.[14] In this article, "The Industry Capitalism Forgot," the authors develop the hypothesis that "...the search for reform in the housebuilding business becomes primarily a search for large-scale operations."[15] But this suggestion already had an antecedent. In 1932, the editors

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[14] Fortune, Vol. XXXVI, August 1947.

[15] Ibid., p. 66.

of Fortune made about the same proposal in a book entitled Housing America.[16] In this work, the editors of Fortune wrote about operative builders and the need to change the distribution system in materials because of the inefficiency of then prevalent methods. In fact, these authors virtually predicted the road that housing would take after World War II when the pent-up demand for houses was to be met.

By the early 1950's, Sherman Maisel[17] made the case that the construction of homes was now an industry. Industrialization, of course, was related to the coming of the merchant builder who now built houses for sale whereas before this time the common method was to build a made-to-order house on an owner's lot. According to Eichler and Kaplan, "...the sudden release of a housing demand that had been accumulating since the early thirties brought with it the most important of all the types of developers...the merchant builder."[18] In the words of these authors "...the merchant builder did not then seek to make basic technological innovations. He began to systematize mass building through standardized design, specialization of labor, and more control over subcontractors. He tried, usually, to eliminate the distributor and deal directly with manufacturers, to reduce unit costs, and to establish specifications simplifying on-site assembly."[19]

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[16] The Editors of "Fortune," Housing America (New York: Harcourt, Brace, 1932).

[17] Op. cit.

[18] Edward P. Eichler and Marshall Kaplan, The Community Builders (Berkeley and Los Angeles: University of California Press, 1967), p. 20.

[19] Ibid., pp. 51-52.

Since the available evidence supports the hypothesis that major changes in house building took place after World War II, we use this hypothesis to show annual rates of productivity growth not only for the 1930-1965 period but also for the 1940-1965 period. Hence, 1930 productivity data are also assumed to apply to 1940.[20]

The plan of the report is as follows.

Chapter II shows how typical houses were selected, describes the sample houses, and presents summary tables of detailed estimating costs for the eight sample houses.[21]

Chapter III includes the major results of the study, i.e., the data showing how skill utilization of carpenters and other labor changed between 1930 and 1965 and the productivity changes that took place. The data averages are based on the individual house data that appear in Chapter II. No benchmark data exist in published form against which our productivity and manhour estimates can be tested. In Chapter III we, therefore, also evaluate as far as possible our estimates.

Chapter IV relates the findings on labor costs shown in Chapter III to other variables that influence the final price of houses. This section sets forth a total picture of house pricing as far as possible with the resources available to us. In the main, this Chapter synthesizes

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[20] When the project was initiated, we planned to study building techniques in 1940, 1950, 1955, and 1960. Some basic work was started for these years. However, with a cut in research funds the work on the intervening years had to be stopped. The data in Appendix B, however, include some of the facts obtained about the intervening years.

[21] Detailed cost estimates for the eight sample houses appear in Appendix A.

various results and poses questions that need to be examined, especially because of the recent emphasis on producing housing for low-income families.

Chapter II

SAMPLE HOUSES USED IN THIS STUDY

1. Methodology for Determining the Typical Houses

The first step in determining how inputs in house construction changed between 1930 and 1965 was to establish descriptions of typical houses, i.e., houses representative of those built during the selected years. Specifically, a typical house was defined as a house most commonly built during the year under study. This procedure assured that the study would take account of differences in the final product constructed. Consequently, the study of changes in labor and materials' inputs has built into it the change that occurred in the quality and size of houses.

The first stage in defining typical houses was a survey of building permits for new, detached, single-family dwellings in Alameda County. This means that the survey excluded permits for remodeling and altering older edifices, as well as duplexes, row houses, and town houses. Data were gathered from each of the issuing cities in the County as well as from the Alameda County administrative office that maintains records for unincorporated areas, areas in the process of incorporation, or cities that do not maintain their own offices. Permit records were examined, therefore, for Berkeley, Oakland, San Leandro, Emeryville, Piedmont, Alameda City, Albany, Hayward, Livermore, Pleasanton, Fremont, Union City, Newark, Castro Valley, San Lorenzo, and the rural area.

Information we endeavored to get for each permit examined included the valuation entered on the permit, floor area, number of rooms, number of floors, address, permit number, builder's name, availability of a basement, type of siding, and type of roof. These details, however, were not available for all of the cities in Alameda County. Further, the 1930 data were, in general, more complete than the 1965 data. The only consistently available information that could be used to account for quality differences was the estimated building cost. Cost thus became the basic variable for distinguishing among houses within the same period on the assumption that this monetary variable reflects differences in quality and size.

All of the building characteristics detailed above were available for the city of Berkeley for 1930. We thus took a 100 per cent sample of the permits in Berkeley. The Berkeley data were examined with respect to permit valuation and square feet, with the means and variances of these two variables computed. The coefficient of variation for these two variables along with assumptions regarding the acceptable sampling error suggested taking a 50 per cent sample of building permits in the other Alameda County communities in 1930.

A different sampling strategy had to be employed for 1965, however, because the merchant builder dominated the market at this time. The survey for this year thus had two parts. We kept the 50 per cent sample for those permits where a builder

filed for one permit. However, when the records showed that one builder obtained permits for two or more houses on the same date and in the same vicinity, we took a 100 per cent sample. This procedure for the 100 per cent sample was followed because we could not decide on a satisfactory definition of "merchant builder." In this way, we were given more latitude in making the following tabulation from which persons knowledgeable in the industry can apply their own definition to the size-class that distinguishes a "merchant-builder" from a "custom-builder." The results of the survey show how the structure of the industry changed over the 35 years as small custom builders gave way to large builders. (Table 1)

The building permit survey provided the basis for determining the typical houses that are the subject of this research. The procedure by which eight houses were selected for intensive study was as follows.

For 1930, when custom building dominated the market, houses for which permits were issued in Alameda County were arrayed by building permit cost. This array was divided into quartiles. Within each building cost quartile, houses were distributed by the number of rooms, a characteristic available in the records of most of the cities. In this step, the house selected as typical possessed the median building cost within the quartile and had the number of rooms as represented by the modal group. In this initial stage, therefore, the representative

TABLE 1

Number of Builders and Houses by Size-Class of Permits Filed, Alameda County, 1930 and 1965

Size-class of permits filed	1930		1965			
	50 per cent sample		50 per cent sample		100 per cent sample	
	Number of builders	Number of houses	Number of builders	Number of houses	Number of builders	Number of houses
1 - 5	258	360	247	362	20	57
6 - 19	7	54	11	89	18	206
20 - 49	0	0	2	51	13	484
50 - 99	0	0	0	0	0	397
100 - 199	0	0	0	0	9	1,349
200 or more	0	0	0	0	4	1,070
Total number of single-family dwellings	0	828*	0	1,004*	0	3,563

Source: Building permit records, issuing offices, Alameda County.

Note: The 50 per cent sample is for builders filing for one permit.
The 100 per cent sample is for builders filing for two or more permits.

*Sample number doubled to get the total population.

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house was selected by building permit cost and number of rooms. The next step involved the imputation of additional building characteristics. These characteristics for each cost quartile were obtained from a detailed analysis of the 100 per cent Berkeley sample. From this detail, specifications such as the type of roof, type of exterior wall, floor area, existence or nonexistence of a basement were imputed to the house selected in each cost quartile. After the typical house was thus specified, we returned to the sample and selected for study four houses, one in each cost quartile, that resembled most closely the designed typical houses. Consequently, the houses studied in detail are houses that were actually constructed.

For 1965, the above procedure to find typical houses was applied except that for the two highest cost quartile houses we selected custom-built houses (those from the 50 per cent sample) and for the two lowest cost quartile houses, tract houses. In addition, the two tract houses selected for study were those for which actual builders' plans were available so that the cost estimating procedure was facilitated.

When this research started, we were warned of the inadvisability of using building permit information. As the reader has noted, however, this information was used to provide a benchmark with respect to house building costs as of the given year. It is common knowledge that the cost figures shown on building permits are estimates made by the builder which include

primarily labor and materials' costs and exclude land, overhead, and profit. Further, most building permit figures are somewhat lower than actual cost, because builders generally place the valuation figure at expected minimum cost. In 1930, as contrasted with 1965, building permit figures also included only the material and labor costs used to construct the "shell" of the house and excluded the price of small fixtures, equipment, and accessories.

The valuation figures were thus useful for our purpose only to establish a rough range for actual costs to the builder. We also assumed that the ratio between the value declared on the permit and the actual cost to the builder was constant across all houses within each of the years.

It must also be noted that the issuance of a building permit does not guarantee that the dwelling will be constructed. In Alameda County, permits are validated for six months, after which time another permit must be obtained if work on the site has not started. We thus had to assume in this study, because of the lack of other information, that the number of permits issued closely approximated the number of houses built in the selected years.

2. General Observations on Estimating the Costs of the Sample Houses

After the process of selecting four typical houses for 1930 and 1965 as described above was completed, we obtained all information available in the County Assessor's Office about the

specific houses selected. Further, we took pictures of each house. From these data and pictures, detailed floor plans for each house were drawn. As mentioned above, however, we were able to use actual builder's plans for the two 1965 tract houses selected. Further, in the estimating procedures for the two tract houses we interviewed a number of builders not only in Alameda County but also in Santa Clara and Contra Costa Counties so that the final estimates would incorporate the most widely used building practices as of 1965.

Underlying the estimating procedure followed was the principle that local building codes of the time had been respected. Consequently, if no direct information on an item was available, the issue was decided on the basis of other features of the house in question related to the item, its general characteristics, and knowledge of certain practices. Through a painstaking process, a materials' list for each house was detailed.[1]

The objective in pricing the materials was to use local prices of the time to the builder. For the tract homes, large volume purchasing was also taken into account. Each price was checked as to its source, representativeness, and reliability in general. Where several prices were available, appropriate averages were used. In most cases, this objective could be realized, although extensive research effort was required. In some cases,

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[1]The data provided in the Tables in Appendix A are a summary and aggregation of the much more detailed estimating work.

national prices had to be used, but again the same scrutinizing procedure was followed to insure consistency.

The determination of labor requirements for each house was the result of intensive research. For 1930, Walker's Building Estimator's Reference Book (6th ed., 1930) was used as a basis in almost all cases, although not without careful analysis and adaptation to the requirements of the specific houses. For 1965, many more sources could be employed, including data directly obtained from contractors and subcontractors.

Housing in the Bay Area was nonunion in 1930 and entirely unionized in 1965. Wage data for both years were available from the California Department of Industrial Relations and other sources. Wages used in this study include the basic wage rate plus negotiated fringe benefits. If wage rates changed over the course of the given year, a weighted average was taken.

For all eight houses, functionally identical parts were estimated, so that a direct comparison between them is possible. It does not follow that our estimates represent the same percentage of building costs or sales price in all eight houses; however, that percentage can be expected to be different between houses of the same year and between different years. Nothing can be said a priori about the direction in which these differences vary, nor could they be checked with the facts. Most importantly, however, the functionally identical parts are estimated so that comparisons among these parts are possible.

3. Description of the Four 1930 Houses

a. General Features

All four of the typical houses for 1930 are built with No. 2 common dry douglas fir, bought in random lengths and cut to size on the site by hand saw. All nailing is done by hand.

Variations in subflooring and wall sheathing will be noted below, but all roof sheathing is with 1 X 8 boards.

All windows are wood frame and, unless otherwise noted below, double-hung. Closet and pantry doors are included under interior doors and, indeed, are identical to them. As was usual for 1930, even closets of several feet width had just one interior type door. All doors were hung and jambs assembled on the site.

All four houses have three-coat exterior stucco, 3/4 inches thick, float finish, over metal lath.

Trench excavation took place by hand, and concrete was mixed on the site.

b. House I: First Quartile, Most Expensive House

The representative house of the highest quartile is classified by the Assessor's office as a D-7-B house.[2] It has 1,843 sq. ft. of

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[2]This is a classification on quality made by the State Board of Equalization in California. As of 1964, the State Board of Equalization defined a D-7 class house as a "good quality double wall (studded) construction built for owner by good contractor. Planned by architect to provide refinements slightly above average standard construction." A typical D-6 house is defined as: "Average quality double wall (studded) standard construction. Usually built for owner by good contractor." A D-5 construction class is defined as: "Minimum quality double wall (studded) house as permitted under uniform code but with certain interior refinements and exterior additions to 'attract' buyer. Attractive but cheap 'speculator built house'."

living space plus an attached garage of 378 sq. ft. There are three bedrooms and one bathroom. All rooms are on the same level, with the garage on a lower level.

The concrete floor of the garage has a 3-inch fill, 3 inches of concrete, and a 3/4-inch finish.

The subfloor, consisting of 1 X 8 boards, is laid diagonally. The roof is of complicated structure, with a 2/3 pitch gable and a 1/3 pitch hip.

The exterior wall sheathing of 1 X 8 boards is laid diagonally.

Interior walls and ceilings have a two-coat hardwall plaster, white finish, on 1-1/2-inch wood lath.

All rooms have base, shoe and crown molding. The dining room, living room, and halls also have picture rails. There are chair moldings in the dining and living rooms. All moldings are oak.

The kitchen has a linoleum floor. The bathroom floor is of tile as is the wall up to four ft. Select quartered oak is used for finished flooring in all other rooms.

The roof is covered with composition shingles.

All workmanship is taken to be first grade.

c. House II: Second Quartile, Second Most Expensive House

The second quartile house has three stories and is classified as D-6.5-B. The basement contains 929 sq. ft., of which 152 sq. ft. is a dirt floor. The first floor has a 324 sq. ft. garage and 975 sq.

ft. of living space. The second floor has 1,124 sq. ft. Total living space is thus 2,099 sq. ft. There are three bedrooms and 1-3/4 bathrooms.

The foundations comprise, besides the regular footings, a supporting wall of 8 by 43 feet, 11 inches thick.

The cement floors (basement and garage) have 3-inch filling, 4 inches of concrete and a 3/4-inch finish.

Subfloors are of 1 X 8 boards, laid diagonally. The house has a hip roof.

Exterior wall sheathing is with 1 X 8 boards, laid straight.

Interior walls and ceilings have 2-coat hardwall plaster, sand finish, on 1-1/2-inch wood lath; basement walls are unfinished.

All rooms have oak base, shoe, crown and picture molding.

The kitchen floor is covered with linoleum, and the bathroom floors and the shower wall with tile. All other floors have select plain oak.

The roof has 4-inch composition shingle strips.

The stairs between the first and second floor have oak treads and risers, and those to the basement, fir.

All workmanship is taken to be first grade.

d. House III: Third Quartile, Third Most Expensive House

This house contains 1,248 sq. ft. of living area, all on one level, plus a 180 sq. ft. garage and a 792 sq. ft. basement. There are two bedrooms and one bathroom. It is classified as D-6.5-B.

The concrete floors of basement and garage have a 3-inch fill, 3 inches of concrete, and a 3/4-inch finish.

The subfloor of 1 X 8 boards is laid straight. The living room has no ceiling joists. There are three gables, with a 1/2 pitch.

Boards for exterior wall sheathing are laid straight.

Interior walls and ceilings have two-coat hardwall plaster, white finish, over 1-1/2-inch wood lath, except for the garage, which has sand finish, and the basement walls, which are unfinished.

Windows include two casement and two picture windows.

All rooms have oak baseboard, shoe and picture molding. The dining room also has an oak chair rail.

The kitchen has linoleum flooring; the bathroom floor is tile. All other floors are select plain oak.

The roof is covered with wood shingles, 5-inch exposure.

The staircase (two short flights with a platform) has fir treads and risers.

All labor is taken to be of ordinary workmanship.

e. House IV: Fourth Quartile, Least Expensive House

The cheapest house has 624 sq. ft. of living area, no garage, one bedroom, and one bathroom. It is classified as D-5.5-B.

There are no concrete floors. There are two gables with a 1/2 pitch. Exterior wall sheathing is laid straight. Interior walls have two-coat lime plaster, white finish. Inside trim

includes fir base, and shoe and picture molding in all rooms. The bathroom has linoleum covered flooring, and all other areas have vertical-grain fir (grade c). The roof is covered with 4-in-1 composition shingle strips.

All labor is taken to be of ordinary workmanship.

4. Description of the Four 1965 Houses

a. General Features

Trenches for the footings are excavated with a trenching machine. The footings are reinforced with two 1/2-inch steel rods.

Concrete for the slabs is poured from a ready-mix truck. All rough lumber is of construction grade.

All exterior stucco work has three coats.

Unless otherwise noted, all interior walls and ceilings are covered with 1/2-inch drywall, taped and textured.

Unless indicated otherwise, all windows are preglazed, have aluminum frames, and are of the sliding type with one or two lights depending on the size.

All doors are prehung. Further quality specifications are given below for each house individually.

Interior door trim is included under "doors" in the tables. Aside from window trim, only oak baseboard is installed in all houses, unless otherwise indicated.

b. House I: Most Expensive of the Two Custom Houses

The highest quartile house is classified as D-7-B by the assessor's office. It has 1,636 sq. ft. of living space on the first floor. In the basement, there are 338 sq. ft. of living space, a 418 sq. ft. garage, and 124 sq. ft. of storage space. There is thus a total of 1,974 sq. ft. of living space. This house includes three bedrooms and 1-3/4 bathrooms.

The front section of the house is built on a concrete slab. The rear section has six concrete piers supporting a girder and floor joists laid across. Subflooring is with 2 X 6 tongue-and-groove. The rafters and 2 X 6 redwood tongue-and-groove ceiling of the front section overhang five feet beyond the front wall. The rear section roof sheathing is of 3/4-inch plywood.

Exterior walls of the front section have 30-pound felt and 5/8-inch grooved redwood plywood. The rear section is in three-coat stucco.

The interior walls of the living room are insulated with 3-inch fiberglass batts and covered with 1/2-inch drywall with 1/4-inch select cherry prefinished plywood paneling glued on.

Windows include 10 floor-to-ceiling solid glass and two aluminum louvered windows.

Exterior doors are solid core birch, interior doors hollow core birch, and wardrobe doors include four sliding and one folding door. The garage door is of the overhead type, redwood, 1/2-inch X 8-inch shiplap.

Interior trim includes a picture mold in the living room.

The basement living room has 12 X 12 vinyl asbestos tile, the kitchen and bathrooms vinyl linoleum. The main living room floor is in clear oak and all other rooms are in select oak strip.

The flat roof has 4-ply 15 lb. paper and tar and gravel.

Kitchen cabinets (19 lin. ft. base, 10 lin. ft. wall, 38 sq. ft. counter top) are hardwood grade. There are three drawer units in the wardrobe closets, a linen closet, and two bathroom vanities.

Frame lumber for this custom-built house is taken to be bought in random lengths and cut on site with power saws. No nailguns are used. The stucco is hand-applied.

First grade workmanship is assumed throughout.

c. House II: Least Expensive of the Two Custom Houses

This is a D-6.5-B house with two stories; however, the front section of the lower floor is totally unfinished. The finished lower floor contains 848 sq. ft., the upper floor, excluding the carport, 1,302 sq. ft. There are three bedrooms and 1-3/4 bathrooms.

Seven piers support a girder across which joists are laid. Subfloors are 1-1/8-inch plywood. The roof has two gables with 1/4 pitch. Roof sheathing is with 5/8-inch plywood.

The lower exterior wall has three-coat stucco, the upper section 1 X 10 vertical redwood siding.

Part of the interior wall of the living room is covered with 1/4-inch birch prefinished plywood (27 lin. ft.).

Windows include one picture window. Exterior doors are solid core mahogany and interior doors hollow core mahogany. Wardrobe doors include two sliding and three folding doors.

Floors of the basement and upper floor bathroom are covered with vinyl asbestos tile. The kitchen has vinyl linoleum. All other rooms have select oak strip.

The roof is covered with heavy wood shakes.

Kitchen cabinets (15 lin. ft. base, 12 lin. ft. wall, 30 sq. ft. counter top) are hardwood grade. There are two wardrobe closet drawer units and five Ponderosa pine shelves.

The two staircases (one inside, one outside) have fir treads.

Methods of operation for this custom-built house are the same as those for the previous house in the highest quartile.

d. House III: Most Expensive of the Two Tract Houses

This one-story house, classified D-6.5-C, has 1,679 sq. ft. of living area, and a garage of 469 sq. ft. There are four bedrooms and 1-3/4 bathrooms.

Fifty small concrete piers support the girders. The subfloor is 1-1/8-inch tongue-and-groove plywood. The roof has three hips and two gables with 1/4 pitch. Roof sheathing is spaced, with 1 X 8 boards.

The interior wall between the garage and living room has

5/8-inch drywall. All outer walls are insulated with 2-1/4-inch foil-backed fiberglass.

There are two glass sliding doors. All wood doors are mahogany, solid core for the exterior and hollow core for the interior and closet doors. There is one folding and one pocket door. The garage door is of the overhead type, redwood 1/2 X 8-inch shiplap.

The family room, the kitchen and the two bathroom floors are covered with vinyl linoleum. The foyer has a slate floor. All other rooms have an oak strip floor, clear grade in the living and dining room and select grade in bedrooms and hall. All hardwood floors also have wall-to-wall carpets.

There are five picture windows, and two windows with obscure glass.

The roof is covered with heavy wood shakes.

Kitchen cabinets are of hardwood grade (13-ft, 3-inch base, 19-ft. wall, 7-ft. oven), and the plastic counter top, 15 sq. ft. There are two paint grade bathroom vanities (6 ft. and 5 ft.) and 5 mahogany shelves.

Because this is a tract-built house, all customary labor-saving techniques are assumed to have been used, i.e., all rough lumber is precut, nailguns are used throughout, and stucco is gun-applied.

e. House IV: Least Expensive of the Two Tract Houses

This is a one-story house, classified D-6-B. It has only

1,136 sq. ft. of living space, plus a 396 sq. ft. garage, with 3 bedrooms and 1-3/4 bathrooms.

The foundation structure is like that of the previous house: 34 small concrete piers support the girders. Subflooring is with 1-1/8-inch plywood. There are two gables with a 1/4 pitch. Roof sheathing is with 5/8-inch plywood.

Outer walls are insulated with 1-1/2-inch foil-backed fiberglass.

There is one glass sliding door and one slat louver closet door. All other doors are hardboard with hollow core, including the sliding wardrobe doors (of which one is a pocket door). The garage door is of the overhead type, 3/8-inch plywood.

The bathrooms, kitchen, and dinette have linoleum floors. Floors in the remainder of the house are of No. 1 common oak strip.

The roof is covered with composition shingles.

Kitchen cabinets are paint grade (11-ft. base, 14-ft. wall, 26.5 sq. ft. counter top). There are two bathroom vanities (each 2 ft., 6 inches) with plastic tops and five mahogany shelves.

Operating techniques in this tract-built home are similar to those described in the preceding tract house.

5. Summary Data for Construction Costs and Labor Requirements for the Eight Sample Houses.[3]

Following the estimating procedures described in Section 2,

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[3]Detailed cost estimates of each house and detailed labor requirements appear in Appendix A.

cost estimates and labor requirements were obtained for each house. Details for each sample house described on the preceding pages appear in Appendix A. In this section, the major results are summarized for all houses, and only the most significant findings that emerged are discussed briefly. The results shown here provide the basis for the averages computed in accordance with the discussion at the end of this Chapter. It is these averages that are used in the following Chapters to discuss the basic changes that occurred in on-site building skill requirements between 1930 and 1965.

a. Selected Detail for the 1930 Sample Houses

Tables 2 through 7 are derived from the basic data for 1930 houses as shown in Appendix A. In each case, data for the individual houses are shown under column headings I, II, III, and IV, which refer to the houses representative of the cost quartiles as discussed above.

Table 2 shows how hours per MSF of living area were divided among the 11 major operations for which cost and labor hours estimates were made for both skilled and unskilled labor. The data from Table 2 are used in Table 3, which shows the percentage distribution of hours among the various activities. Table 4 provides refined data for hours required for various suboperations either per MBF (1000 board feet) or MSF (1000 square feet).

Table 5 introduces actual dollar costs of materials used and labor time per MSF of living area for 11 major categories.

In Table 6 the material and labor costs are combined to show total costs per MSF for the same 11 major operations.

Table 7 shows the hours used in each skill category both for the entire house and per 1000 square feet (MSF) of living area. The conversion to MSF of living area is essential for both inter-year and intra-year comparisons.

Certain noteworthy aspects of 1930 building practices, as evidenced in Tables 2-7, are noted below.

From both the labor hours' estimates and the cost data it appears that footings are subject to diseconomies of size and/or quality. The percentage of total unskilled labor time spent on this operation in the smallest house (House IV) is two to four times as high as in the other houses. The percentage skilled time is also higher, but less so. By cost (which in this case is labor cost only), the percentage spent on footings is 1.4 to 6 times higher. This result is partly caused by the fact that House IV has 1-1/2-ft.-high forms, versus 1/2 or 1 ft. for the others. Even though House II has a retaining wall, House IV's share is still dominant.

Data for framing operations are remarkably similar for all classes of houses. Only House I uses substantially more carpenter hours per MSF of living area (31 hours more than House II, the next highest). In terms of percentage of total cost, however, House IV again stands out several points above the others; this is due to the cost of materials, which, on a per MSF basis, is

TABLE 2

Hours per MSF of Living Area, 1930

	I		II		III		IV	
	Unskilled	Skilled	Unskilled	Skilled	Unskilled	Skilled	Unskilled	Skilled
Footings	8.0	4.2	19.5	18.5	17.5	10.7	25.0	21.1
Concrete floors	21.9	3.1	59.7	7.9	60.1	11.7	0	0
Framing	46.0	170.4	37.8	139.4	42.5	128.9	40.4	119.4
Exterior walls	76.3	152.1	64.0	125.6	67.7	119.3	62.3	113.8
Interior walls and ceilings	47.5	120.2	45.0	123.9	44.0	109.3	43.6	114.6
Windows	0	43.4	0	30.5	0	42.1	0	44.9
Doors	0	56.4	0	51.9	0	28.8	0	30.0
Interior trim	6.3	39.9	6.4	43.2	4.6	25.2	6.2	34.3
Floors	28.4	93.4	19.7	65.0	11.2	50.3	6.4	19.1
Roof cover	0	24.8	0	8.9	0	34.4	0	15.5
Stairs	0	0	0	18.1	0	17.6	0	0
Total	234.4	707.9	252.2	632.9	247.7	578.4	184.0	512.7

Source: Appendix A tables.

Note: Detail may not add to total due to rounding.

TABLE 3

Percentage Distribution of Hours, per Operation, 1930

	I		II		III		IV	
	Unskilled	Skilled	Unskilled	Skilled	Unskilled	Skilled	Unskilled	Skilled
Footings	3.4	0.6	7.7	2.9	7.1	1.8	13.6	4.1
Concrete floors	9.3	0.4	23.7	1.2	24.3	2.0	00	0
Framing	19.6	24.1	15.0	22.0	17.2	22.3	22.0	23.3
Exterior walls	32.5	21.5	25.4	19.8	27.3	20.6	33.9	22.2
Interior walls and ceilings	20.3	17.0	17.8	19.6	17.8	18.9	23.7	22.3
Windows	0	6.1	0	4.8	0	7.3	0	8.8
Doors	0	8.0	0	8.2	0	5.0	0	5.8
Interior trim	2.7	5.6	2.5	6.8	1.9	4.4	3.4	6.7
Floors	12.1	13.2	7.8	10.3	4.5	8.7	3.5	3.7
Roof cover	0	3.5	0	1.4	0	5.9	0	3.0
Stairs	0	0	0	2.9	0	3.0	0	0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Appendix A tables.

Note: Detail may not add to total due to rounding.

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TABLE 4

Suboperations, Hours per MBF or MSF, 1930

	I		II		III		IV	
	Unskilled	Skilled	Unskilled	Skilled	Unskilled	Skilled	Unskilled	Skilled
Mudsill, girder, floor joists, per MBF	3.5	8.7	4.6	11.1	4.0	11.0	4.0	10.4
Subfloor, per MSF	5.6	11.2	5.6	11.2	5.5	9.0	5.6	9.0
Studs and plates, per MBF	5.0	31.0	5.0	31.0	5.0	21.0	5.0	21.0
Roof framing, per MBF	6.8	32.7	7.0	28.0	7.0	28.0	5.9	25.0
Roof sheathing, per MSF	5.7	10.9	6.7	13.3	5.6	8.0	5.0	8.0
Exterior walls, per MSF	40.2	80.1	39.5	77.6	37.2	65.6	37.2	67.9
Interior walls and ceilings, per MSF	13.3	33.7	13.9	38.2	11.2	27.8	11.1	29.2
Resilient floors, per MSF	0	26.1	0	25.8	0	25.6	0	25.0
Hardwood floors, per MSF	3.8	61.4	5.0	60.0	4.9	60.0	5.0	16.2

Source: Appendix A tables.

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TABLE 5

Material and Labor Cost, Dollars per MSF of Living Area, 1930

	I			II		
	Material	Labor		Material	Labor	
		Unskilled	Skilled		Unskilled	Skilled
Footings	0	5.64	4.79	0	14.00	20.79
Concrete floors	16.76	15.36	3.46	50.36	41.02	8.77
Framing	280.70	32.25	191.53	240.08	26.49	156.84
Exterior walls	258.83	69.15	197.43	220.63	58.19	163.73
Interior walls and ceilings	85.92	44.68	155.99	89.18	42.32	159.18
Windows	109.42	0	48.83	74.49	0	34.30
Doors	186.65	0	63.48	159.30	0	58.42
Interior trim	59.20	4.41	44.95	59.93	4.53	48.56
Floors	250.17	21.07	108.01	171.19	14.56	74.94
Roof cover	79.21	0	27.82	42.08	0	10.00
Stairs	0	0	0	12.12	0	20.37
Total	1,326.86	192.56	846.29	1,119.36	201.11	755.90

(continued)

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TABLE 5 -- continued

	III			IV		
	Material	Labor		Material	Labor	
		Unskilled	Skilled		Unskilled	Skilled
Footings	0	12.29	11.97	0	17.56	23.80
Concrete floors	57.62	42.09	13.14	0	0	0
Framing	278.27	29.88	145.08	277.90	28.36	134.45
Exterior walls	236.35	61.46	154.49	209.90	56.57	146.75
Interior walls and ceilings	85.58	41.37	142.23	80.50	40.98	147.93
Windows	113.62	0	47.32	73.67	0	50.48
Doors	142.00	0	32.47	113.23	0	33.67
Interior trim	53.50	3.21	28.41	35.26	4.37	38.67
Floors	132.38	8.30	57.48	74.18	4.52	21.75
Roof cover	53.32	0	38.76	83.52	0	17.48
Stairs	6.28	0	19.83	0	0	0
Total	1,158.92	198.60	691.18	948.16	152.36	614.98

Source: Appendix A tables.

TABLE 6

Total Cost per MSF of Living Area, by Dollar Cost and Percentage Distribution, 1930

	Absolute Numbers ($)				Percentage Distribution			
	I	II	III	IV	I	II	III	IV
Footings	10.43	34.79	24.26	41.36	0.4	1.7	1.2	2.4
Concrete floors	35.58	100.95	112.85	0	1.5	4.9	5.5	0
Framing	504.48	423.41	453.23	440.71	21.3	20.3	22.1	25.7
Exterior walls	525.41	442.55	452.30	413.22	22.2	21.3	22.1	24.1
Interior walls and ceilings	286.59	290.68	269.18	269.41	12.1	14.0	13.1	15.7
Windows	158.25	108.79	160.94	124.15	6.7	5.2	7.9	7.2
Doors	250.13	217.72	174.47	146.90	10.6	10.5	8.5	8.6
Interior trim	108.56	113.02	85.12	78.30	4.6	5.4	4.1	4.6
Floors	379.25	260.69	198.16	100.45	16.0	12.5	9.7	5.8
Roof cover	107.03	52.08	92.08	101.00	4 5	2.5	4.5	5.9
Stairs	0	32.49	26.11	0	0	1.6	1.3	0
Total	2,365.71	2,077.17	2,048.70	1,715.50	100.0	100.0	100.0	100.0

Source: Appendix A tables.

Note: Detail may not add to total due to rounding.

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TABLE 7

Hours per Skill Category, 1930

	Hours per house									Hours per MSF of living area			
	Absolute numbers				Percentage distribution								
	I	II	III	IV	I	II	III	IV	Average	I	II	III	IV
Carpenters: Total	855.4	829.0	458.8	206.6	49.2	44.6	44.5	47.5	46.5	464.1	394.9	367.6	331.1
Forms	7.8	38.8	13.3	13.2						4.2	18.5	10.7	21.1
Framing	314.0	292.6	160.9	74.5						170.4	139.4	128.9	119.4
Wall sheathing	51.3	40.0	26.7	12.3						27.8	19.1	21.4	19.7
Stucco preparation (exterior)	16.5	17.7	8.8	6.5						8.9	8.4	7.0	10.4
Plaster preparation (interior)	39.0	56.0	18.0	13.0						21.2	26.7	14.4	20.8
Windows and doors and interior trim	257.5	263.5	120.0	68.1						139.7	125.5	96.1	109.1
Hardwood floors	123.5	101.7	46.1	9.3						67.0	48.4	36.9	14.9
Shingles	45.8	18.7	43.0	9.7						24.8	8.9	34.4	15.5
Stairs	0	38.0	22.0	0						0	18.1	17.6	0
Cement Finishers	5.7	16.5	14.6	0	0.3	0.9	1.4	0	0.6	3.1	7.9	11.7	0
Latherers: Total	95.4	96.4	67.6	32.8	5.5	5.2	6.6	7.5	6.2	51.8	45.9	54.2	52.6
Stucco (exterior)	37.0	35.9	23.9	11.0						20.1	17.1	19.2	17.6
Plaster (interior)	58.4	60.5	43.7	21.8						31.7	28.8	35.0	34.9
Plasterers: Total	299.6	313.7	164.2	77.9	17.2	16.9	15.9	17.9	17.0	162.5	149.4	131.6	124.8
Stucco (exterior)	175.5	170.1	89.5	41.2						95.2	81.0	71.7	66.0
Plaster (interior)	124.1	143.6	74.7	36.7						67.3	68.4	59.9	58.8

(continued)

TABLE 7 -- continued

	Hours per house									Hours per MSF of living area			
	Absolute numbers				Percentage distribution								
	I	II	III	IV	I	II	III	IV	Average	I	II	III	IV
Linoleum layers	5.5	4.8	8.0	2.5	0.3	0.3	0.8	0.3	0.4	3.0	2.3	6.4	2.4
Tile setters	43.1	20.0	8.7	1.1	2.5	1.6	0.8	0.2	1.3	23.4	14.3	7.0	1.8
General building laborers	178.9	284.8	170.9	52.9	10.3	15.3	16.6	12.2	13.6	97.1	135.7	136.9	84.8
Hod carriers: Total	208.5	211.7	128.0	60.8	12.0	11.4	12.4	14.0	12.4	113.1	100.8	102.6	97.4
Stucco (exterior)	120.9	117.2	73.1	33.6						0	0	0	0
Plaster (interior)	87.6	94.5	54.9	27.2						0	0	0	0
Tile helpers	44.7	32.9	10.2	1.1	2.6	1.8	1.0	0.2	1.4	24.2	15.7	8.2	1.8
TOTAL:	1,736.8	1,847.8	1,031.0	434.7	100.0	100.0	100.0	100.0	100.0	942.4	885.1	826.1	696.6
Skilled total:	1,304.7	1,318.4	721.9	319.9	75.1	71.5	70.0	73.6	72.5	707.9	632.9	578.4	512.7
Unskilled total:	432.1	529.4	309.1	114.8	24.9	28.5	30.0	26.4	27.5	234.4	252.2	247.7	184.0

Source: Appendix A tables.

Note: Detail may not add to total due to rounding.

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almost identical for all houses, and thus forms a higher percentage in the cheapest house. This could again be called a diseconomy of quality and/or size.

Essentially the same can be said for exterior walls. House I alone takes substantially more skilled labor time (26.5 hours more than House II), but hours as a percentage of total time needed in House IV exceed the House I level, which for unskilled labor in particular is quite a departure -- about 6 points above the level in Houses II and III. As a result, IV's percentage of total cost stands about 2 points above the other houses.

It will be recalled that first-class workmanship was assumed in both Houses I and II. This assumption did not produce a clear dichotomy in the final data on hours per MSF of living area for framing and exterior walls. For interior walls, however, I and II stand at about 10 hours more skilled labor time than III and IV. Disparities in wall surface per MSF of living area underlie these somewhat incoherent data. From the quantity columns in Tables 1 through 4 in the Appendix these are:

Square Yards per MSF of Living Area

	I	II	III	IV
Exterior walls	212	180	202	186
Interior walls	396	360	437	436

It can be seen that House II has relatively the least amount of wall surface. More information on this is provided below, when the time of lathers and plasterers is separated. In percentages,

however, both of total labor time and of total cost for interior walls, House IV is again above the other houses.

The picture changes when we look at the data for doors. Hours per MSF, percentage of total time, total cost per MSF, and percentage of total cost all indicate a dichotomy between Houses I and II on the one hand, and Houses III and IV on the other.

The influence of quality is clearest for floors. All data indicate a consistent progression as the quality class of the house increases. Underlying this progression, among other things, is the varying grade of wood flooring (from quartered oak to fir), and the amount of tile installed.

Roof cover data do not show such a progression because of complications. House III has, contrary to what could be expected in this class of house, wood shingles, which is rather expensive in labor time. A comparison between Houses II and IV, which have the same kind of composition shingles, shows the economy of a multi-story house, with labor time on a MSF basis almost cut in half. Adding the labor time for stair building in House II, however, destroys this economy.

Table 7 shows the regrouping of the basic data per skill category. With few exceptions, carpenter hours as a percentage of total time are fairly steady around an average over the four classes of houses. The main exceptions are carpenter hours in House I, which is almost 3 points above the average percentage for all houses; tile setter and tile helper time in House I,

almost double the average; and general building laborer time, which is lower in I and IV than in II and III. The differences in laborer time can almost wholly be accounted for by the influence of the concrete floor operation which covers less square feet in House I and none in IV.

In Table 2, the decrease of skilled labor time for MSF of living area as the quality of the house decreases can be observed. The same statement is true for carpenter hours per MSF of living area as shown in Table 7, with carpenter hours at 464.1 in the best quality house (I) and 331.1 for the least expensive house (IV).

The separation of lathers' and plasterers' hours clarifies the data of exterior and interior wall operations referred to earlier. Lathers' time is a pure reflection of wall surface area, because no distinctions as to workmanship were used here. Plasterers' work, on the other hand, can be distinguished between first grade workmanship in Houses I and II and ordinary workmanship in Houses III and IV.

Finally, it must be emphasized that no substitution between skilled and unskilled labor is involved in the lower time estimates for general building laborers in Houses I and IV than in Houses II and III. The differences observed are almost solely due to differences in concrete floor coverage in the four houses.

b. Selected Detail for the 1965 Sample Houses

Tables 8 through 13 are comparable to the 1930 tables just

discussed and are derived from the basic 1965 data in Tables 5 through 8 in the Appendix. In this section the most significant aspects for the 1965 houses are discussed.

As noted above, Houses I and II for 1965 are custom-built, whereas Houses III and IV are tract houses. The two groups can also be distinguished by the fact that the custom houses have two stories, while the tract homes have all rooms on the same level. This feature gives the tract houses a disadvantage in labor time for footings when calculated per MSF of living area, despite somewhat lower unit labor inputs.[4] (See the first line of Table 8). Partly underlying the higher material cost in the tract houses (Table 11) is also, of course, the larger number of piers, which requires more concrete.

Framing displays an even clearer dichotomy between tracts and custom building. Taking an average of each type, tract houses show 62 hours less skilled and 27 hours less unskilled labor as compared with the custom houses. This labor saving may be largely ascribed to precutting (as compared to completely traditional methods -- save for power saws), and the use of nailguns. Table 11 shows that volume buying results in a net cost of materials for framing below custom building, despite cutting-fee costs. As a percentage of total framing costs, materials for the tract houses figure about 12 points above the custom houses.

Table 10 gives more detailed insight into the labor savings

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[4]This diseconomy would also be relevant to prefabricated housing.

TABLE 8

Hours per MSF of living area, 1965

	Custom-built houses				Tract-built houses			
	I		II		III		IV	
	Unskilled	Skilled	Unskilled	Skilled	Unskilled	Skilled	Unskilled	Skilled
Footings	1.8	5.4	4.6	10.9	3.5	16.1	3.4	16.5
Concrete floors	3.3	3.5	0	0	2.0	2.2	2.5	2.8
Framing	27.4	149.8	39.9	136.7	6.2	81.4	6.4	80.2
Exterior walls	9.2	28.2	7.7	44.0	10.1	29.8	7.3	21.7
Interior walls and ceilings	0	46.1	0	24.0	0	27.6	0	32.9
Windows	0	22.2	0	3.5	0	1.9	0	1.5
Doors	0	12.0	0	7.5	1.1	7.4	1.2	8.8
Interior trim	0	17.1	0	6.7	0	8.7	0	8.6
Floors	0	49.5	0	31.4	0	43.8	0	43.2
Roof cover	0	6.0	0	15.1	0	20.9	0	13.6
Stairs	0	4.1	0	8.4	0	0	0	0
Cabinets	0	4.1	0	2.8	0	2.4	0	3.5
Total	41.8	348.0	52.1	291.1	22.9	242.4	20.9	233.4

Source: Appendix A tables.

Note: Detail may not add to total due to rounding.

TABLE 9

Percentage Distribution of Hours per Operation, 1965

	Custom-built houses				Tract-built houses			
	I		II		III		IV	
	Unskilled	Skilled	Unskilled	Skilled	Unskilled	Skilled	Unskilled	Skilled
Footings	4.3	1.5	8.8	[illegible]	15.3	6.6	16.3	7.1
Concrete floors	7.9	1.0	0	0	8.7	0.9	12.0	1.2
Framing	65.5	43.9	76.6	46.9	27.1	33.6	30.6	34.4
Exterior walls	22.0	8.1	14.8	15.1	44.1	12.3	34.9	9.3
Interior walls and ceilings	0	13.2	0	8.2	0	11.4	0	14.1
Windows	0	6.4	0	1.2	0	0.8	0	0.6
Doors	0	3.4	0	2.6	4.8	3.0	5.7	3.8
Interior trim	0	4.9	0	2.3	0	3.6	0	3.7
Floors	0	14.2	0	10.8	0	18.1	0	18.5
Roof cover	0	1.7	0	5.2	0	8.6	0	5.8
Stairs	0	1.2	0	2.9	0	0	0	0
Cabinets	0	1.2	0	1.0	0	1.0	0	1.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Appendix A tables.

Note: Detail may not add to total due to rounding.

TABLE 10

Suboperations, Hours per MBF or MSF, 1965

	Custom-built houses				Tract-built houses			
	I		II		III		IV	
	Unskilled	Skilled	Unskilled	Skilled	Unskilled	Skilled	Unskilled	Skilled
Mudsill, girder, floor joists or rim joists and girders, per MBF	3.7	16.4	3.8	15.6	1.0	10.6	1.1	10.9
Subfloor, per MSF covered	3.0	11.0	3.1	9.4	0	8.0	0	8.0
Studs and plates, per MBF	6.0	30.0	6.0	20.0	2.0	11.0	2.0	11.0
Roof framing, per MBF	0	0	6.0	25.0	0	12.4	0	9.5
Roof sheathing, per MSF covered	1.3	27.1	4.9	12.2	0	10.1	0	8.4
Exterior walls, per MSF	6.6	20.1	4.6	26.3	6.5	19.3	6.5	19.3
Interior walls and ceilings, per MSF	0	14.0	0	11.1	0	10.3	0	9.7
Resilient floors, per MSF	0	20.4	0	11.7	0	19.8	0	20.1
Hardwood floors, per MSF	0	64.5	0	55.6	0	55.6	0	55.7

Source: Appendix A tables.

Note: Subfloor and roof sheathing quantities are exclusive of waste.

TABLE 11

Material and Labor Cost, Dollars per MSF of Living Area, 1965

	Custom-built houses						Tract-built houses					
	I			II			III			IV		
	Materials	Unskilled	Skilled	Materials	Unskilled	Skilled	Materials	Unskilled	Skilled	Materials	Unskilled	Skilled
ootings	13.37	7.60	29.04	16.73	19.01	59.06	25.62	14.56	87.28	25.27	14.35	89.30
oncrete floors	94.90	14.01	18.23	0	0	0	55.06	8.15	11.41	68.70	10.17	14.26
raming	917.17	114.24	809.40	1,018.85	166.30	739.35	775.51	26.07	440.19	863.03	26.58	433.08
xterior walls	245.16	46.62	155.65	441.20	38.52	240.79	137.22	52.28	166.68	100.00	38.08	121.47
nterior walls and ceilings	371.96	0	248.77	147.76	0	129.95	174.68	0	149.07	200.17	0	177.64
indows	274.74	0	120.09	130.56	0	18.84	188.08	0	10.45	99.43	0	8.32
oors	233.17	0	64.83	124.49	0	40.44	290.83	4.72	40.20	252.03	5.14	47.54
nterior trim	47.88	0	92.66	15.79	0	36.54	27.04	0	47.28	20.81	0	46.82
oors	258.86	0	272.47	171.50	0	172.21	417.42	0	240.00	153.04	0	238.60
oof cover	66.30	0	30.18	207.75	0	81.06	289.25	0	113.08	150.14	0	72.09
airs	35.94	0	21.88	55.46	0	45.21	0	0	0	0	0	--
binets	374.87	0	21.88	265.12	0	15.07	419.59	0	12.86	403.60	0	19.01
tal	2,934.32	182.47	1,885.08	2,595.21	223.83	1,578.52	2,800.30	105.78	1,318.50	2,336.22	94.32	1,268.13

urce: Appendix A tables.

TABLE 12

Total Cost per MSF of Living Area, by Dollar Cost and Percentage Distribution, 1965

	Absolute numbers ($)				Percentage distribution			
	Custom-built houses		Tract-built houses		Custom-built houses		Tract-built houses	
	I	II	III	IV	I	II	III	IV
Footings	50.01	94.80	127.46	128.92	1.0	2.2	3.0	3.5
Concrete floors	127.14	0	74.62	93.13	2.5	0	1.8	2.5
Framing	1,840.81	1,924.50	1,241.77	1,322.69	36.8	43.8	29.4	35.8
Exterior walls	447.43	720.51	356.18	259.55	8.9	16.4	8.4	7.0
Interior walls and ceilings	620.73	277.71	323.75	377.81	12.4	6.3	7.7	10.2
Windows	394.83	149.40	198.53	107.75	7.9	3.4	4.7	2.9
Doors	298.00	164.93	335.75	304.71	6.0	3.7	7.9	8.2
Interior trim	140.54	52.33	74.32	67.63	2.8	1.2	1.8	1.8
Floors	531.33	343.71	657.42	391.64	10.6	7.8	15.6	10.6
Roof cover	96.48	288.81	402.33	222.23	1.9	6.6	9.5	6.0
Stairs	57.82	100.67	0	0	1.2	2.3	0	0
Cabinets	396.75	280.19	432.45	422.61	8.0	6.4	10.2	11.4
Total	5,001.87	4,397.56	4,224.58	3,698.67	100.0	100.0	100.0	100.0

Source: Appendix A tables.

Note: Detail may not add to total due to rounding.

TABLE 13

Hours per Skill Category, 1965

	Hours per house								Hours per MSF of living area			
	Absolute numbers				Percentage distribution							
	Custom		Tract		Custom		Tract		Custom		Tract	
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Carpenters: Total	612.0	569.9	321.0	229.0	79.5	77.2	72.0	79.3	310.0	265.1	191.2	201.6
Forms and reinforcement	8.6	21.5	25.1	16.7					4.4	10.0	14.9	14.7
Framing	295.8	293.9	136.7	91.1					149.8	136.7	81.4	80.2
Wood siding (ext.) (incl. box eves)	13.4	58.2	0	0					6.8	27.1	0	0
Wood siding (int.)	26.6	8.2	0	0					13.5	3.8	0	0
Insulation	6.7	0	11.2	7.0					3.4	0	6.7	6.2
Drywall	57.7	43.5	35.1	30.4					29.2	20.2	20.9	26.8
Windows, doors, int. trim	101.4	38.1	30.4	21.5					51.4	17.7	18.1	18.9
Hardwood floors	85.8	54.2	47.8	45.7					43.5	25.2	28.5	40.2
Shingles	0	28.3	30.7	12.6					0	13.2	18.3	11.1
Cabinets install.	8.0	6.0	4.0	4.0					4.0	2.8	2.4	3.5
Stairs	8.0	18.0	0	0					4.0	8.4	0	0
Cement finishers	7.0	0	3.7	3.2	0.9	0	0.8	1.1	3.5	0	2.2	2.8
Latherers	11.7	10.1	16.4	8.1	1.5	1.4	3.7	2.8	5.9	4.7	9.8	7.1

- continued -

TABLE 13 -- continued

	Hours per house								Hours per MSF of living area			
	Absolute number				Percentage distribution							
	Custom		Tract		Custom		Tract		Custom		Tract	
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Plasterers	30.5	26.4	33.7	16.6	4.0	3.6	7.6	5.7	15.4	12.3	20.1	14.6
Carpet-linoleum-soft tile layers	11.9	13.3	15.5	3.4	1.5	1.8	3.5	1.2	6.0	6.2	9.2	3.0
Tile setters	0	0	10.3	0	0	0	2.3	0	0	0	6.1	0
Trenching machine operators	2.0	2.0	2.0	2.0	0.3	0.3	0.4	0.7	1.0	0.9	1.2	1.8
Teamsters	0	4.1	4.4	2.8	0	0.5	1.0	1.0	0	1.9	2.6	2.5
Roofers	11.9	0	0	0	1.5	0	0	0	6.0	0	0	0
General building laborers	67.3	98.9	21.6	15.4	8.7	13.4	4.8	5.3	34.1	46.0	12.9	13.6
Hod carriers	15.2	13.2	16.9	8.3	2.0	1.8	3.8	2.9	7.7	6.1	10.0	7.3
Total	769.5	737.9	445.5	288.8	100.0	100.0	100.0	100.0	389.8	343.2	265.3	254.2
Skilled total	687.0	625.8	407.0	265.1	89.3	84.8	91.4	91.8	348.0	291.1	242.4	233.4
Unskilled total	82.5	112.1	38.5	23.7	10.7	15.2	8.6	8.2	41.8	52.1	22.9	20.9

Source: Appendix A tables.

Note: Detail may not add to total due to rounding.

due to different methods of operation. All five lines in this Table dealing with framing operations show savings in the tract houses. Moderate labor saving is visible in subflooring and roof sheathing (but substantial when compared with House I's roof sheathing which involved redwood, tar and gravel). The traditional floor joist system is seen to take about 50 per cent more labor time than the piers and girders in tracts. Traditional methods of cutting and erecting stud walls take two to three times more labor time than precut methods.

Just as for 1930, disparities in the amount of exterior and interior wall surface make it more useful to look at hours per MSF of wall (Table 10). The somewhat higher figures for exterior walls in I and II (compared to the all-stucco tracts) can be seen as a result of better quality stucco work outweighing the shorter time needed to install wood siding. (But the latter has a heavy impact on material cost -- see Table 11). The added cost for interior walls is for the most part due to interior wood siding in the custom houses.

Labor time for windows in House I is very high due to the 10 solid glass windows. House II, as compared with the tract houses, shows the saving from volume work. In contrast, for doors no significant differences in labor time are evident although much less time per unit was allowed in the tract houses. Interior trim is only significantly higher in the first class house.

Time for floors presents a varied picture because of the

peculiar specifications for each house. House I has almost 3/5 of its floors covered with first grade hardwood. House II has more than half in resilient covering, thus accounting for the low labor time. House III again has 3/5 hardwood, and carpeting on top of it, while IV has hardwood on 4/5 of the floor area.

If the tract houses in our study had been built after February 1967 the floor coverings most likely would have been different, since at that time FHA dropped its requirement that hardwood floors be placed, and allowed for placement of carpets only with underlayment of particle board or masonite. If this change had occurred before 1965, then our estimates in Tables 7 and 8 in Appendix A would have been changed as follows:

Appendix Table 7 (House III)		Material Square feet	Skilled hours	Material cost	Labor cost
Deduct:	Hardwood floors	859	47.8	$158.24	$265.51
Add :	Resilient floors	87	1.8	27.50	9.36
Total	for floors would then be	--	27.6	570.11	146.82
Appendix Table 8 (House IV)					
Deduct:	Hardwood floors	820	45.7	140.22	253.47
Add :	Carpeting	820	9.1	273.00	47.32
Total	for floors would then be	--	12.5	306.63	64.90

Computed on the basis of MFS of living area, labor time for flooring would then be 16.4 hours in House III and 11.0 hours in House IV, substantially below the custom-built houses.

Roof cover figures are lowest for House I with its tar and gravel. Houses II and III have the same type of roof, but II reflects the economies of multi-story building with fewer square feet of roof area. However, when time for stairs is added in the multi-story building nothing is left of this economy.

Parallel to Table 7, Table 13 groups the basic data by the different skills. The difference between custom and tract building is clearly present in almost all labor categories.

6. Aggregation of the Detailed Estimates for 1930 and 1965

The detailed estimates for houses in different classes are interesting in and of themselves, but cannot be used *per se* to obtain answers to the question posed initially: *i.e.*, How have skill requirements and labor needs for carpenters changed between 1930 and 1965? To answer this question, the above data have been aggregated to obtain averages for each year. The computed average figures are used in the following chapters of this study in order to answer the basic questions posed in this research.

In order to obtain averages, two different procedures were followed. For 1930, the averaging process was simple. Inasmuch as the structure of the industry was dominated by custom builders in 1930, the house representative of each cost quartile was given a weight of 25 per cent. Hence, a simple arithmetic mean was computed for all relevant hours and cost data.

The 1965 averaging process, however, was complicated by the different influence of custom versus tract building. It was then

necessary to determine the weight that had to be assigned to each house estimated for 1965. Weights were derived by using the distribution of building permit valuations from the 1965 data survey.[5]

The procedure used was as follows. First, the 1004 houses in the custom-built class had to be allocated between Houses I and II for 1965. According to the building permit value, House I had a building cost of $26,000, while that selected as House II had a permit value of $21,500. The distribution of all 1004 houses was summarized as follows on the basis of the table in Appendix B.

Permit Value	Number of houses	Houses allocated to Quartile I	Houses allocated to Quartile II
Less than $13,000	94	--	94.0
$13,000 - 20,999	326	--	326.0
21,000 - 21,500	23	--	23.0
21,501 - 25,999	231	115.5	115.5
26,000 or more	330	330.0	--
Totals	1004	445.5	558.5

All houses of $21,500 or less were allocated to Quartile II and those houses of $26,000 or more were allocated to Quartile I.[6] Then, arbitrarily, the number of houses with costs between these two limits were equally divided between the two quartiles. For simplicity,

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[5] Appendix B shows the cost distribution of custom and tract houses according to the building permit survey.

[6] Technically speaking, since the weights are no longer 25 per cent, we do not have quartiles in a rigorous sense. The term as used for 1965 thus refers to four groups representative of Houses I, II, III, and IV discussed above.

the numbers have been rounded to 446 for Quartile I and 558 for Quartile II.

In order to divide the tract houses into two groups, as represented by Houses III and IV, the first of which had a permit value of $19,147 and the second, $12,000, the same reasoning as applied above was used to establish weights.

The distribution of all 3,563 houses was summarized as follows on the basis of the table in Appendix B.

Permit Value	Number of houses	Houses allocated to Quartile III	Quartile IV
Less than $12,000	499	--	499
$12,000 - 17,999	2102	1051	1051
$18,000 or more	962	962	--
Totals	3563	2013	1550

Again, as above, those houses with building permit values in the $12,000 - $17,999 range were equally divided between the two classes of houses.

By distributing the houses for 1965 according to the above method, the following weights were derived and were used to calculate the averages used in the following Chapters.[7]

Quartiles	Number of Houses	Weights
I	446	.098
II	558	.122
III	2013	.441
IV	1550	.339

[7] Obviously, any weighting method which is based on some arbitrariness can be criticized. However, a different weighting scheme used, which was not as precise as the one above yielded weights of .146, .073, .505, and .276 for Houses I through IV respectively. Annual rates of growth in productivity computed on the basis of these less scientifically computed weights were almost the same as those shown in Chapter III.

Chapter III

CHANGES IN CRAFT REQUIREMENTS IN THE BUILDING OF SINGLE-FAMILY DWELLINGS

1. Introduction

To understand how changes occurred in the use of carpenter manhours over the 35-year period, it is necessary to show how changes affected all crafts with which we dealt because of (1) substitution that occurred among the different on-site labor categories and (2) substitution between labor and materials or on-site and off-site labor.

In this Chapter, therefore, data for individual houses have been averaged as explained in Chapter II so that single figures could be used for the two years studied. Labor requirements are based on a basic output measure of 1000 square feet (MSF) of living area which takes account of the whole house and also provides a homogeneous output measure.[1] (The ratio of 1000 sq. ft. to manhours required is converted where needed to square feet per manhour in order to facilitate comparisons.) In this way, labor requirements for each year can be compared on the basis of the same standard. For example, if framing a house with 1000 square feet of living area required 120 labor hours in 1930 and 80 hours

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[1] By using square feet of living area, differences that could arise from different types of garages, or no garage, or basements and no basements are excluded. However, in the data for the individual houses, manhours needed for garages and basements are included if the house had these attributes.

in 1965, then labor time for framing decreased by 33 percent over the 35 years. It must be emphasized that when hours per MSF of living area are compared between 1930 and 1965 the resultant changes shown take account of several effects simultaneously, i.e., changes in work methods, in quality, and in the quantity of each broad operation. Furthermore, the two years differ with respect to unionization. In 1930, the construction industry in Alameda County was nonunion. In 1965, the industry, including residential construction, was entirely unionized.

In Section 2, all crafts and labor groups are examined so that the shifts that occurred among the occupational groups we studied can be understood. Insights into the changing nature of labor requirements in the several occupations are provided by focusing the discussion in this section around the operations performed in the building of single-family dwellings.

All major operations used in the building of single-family dwellings required less labor per MSF of living area in 1965 than in 1930. Reduced labor time was especially significant in operations utilizing prefabricated components. Hence, we see the substitution of off-site work (represented by materials) for on-site labor. The analysis of this aspect of the research in Section 3 reviews the labor cost -- materials' cost relationships in the two years which show the trade off that took place over the thirty five years.

In Section 4, the data on manhours per MSF of living area

are transformed into a physical labor productivity measure that relates output to a single manhour. In addition, estimates of total square feet of living area built in 1930 and 1965 are made in order to determine the magnitude of the total demand change over 35 years. These data are then used to estimate total manhours required of carpenters and other building tradesmen. Finally, annual compounded rates of growth per annum are computed for total output, total manhours required, and labor productivity, and these results are related to manpower forecasting. In addition, a rough estimate is made of the amount of labor saved because of changes in building practices.

In the remainder of this study, the concept of physical labor productivity used is average labor productivity and not marginal labor productivity, the variable that is basic in economic theory. Consequently, this study conforms to other empirical studies dealing with labor productivity where the average productivity concept can be justified if a particular production function, Cobb Douglas, is assumed. Such a production function assumes that the marginal product is a constant multiple of average product. Hence, a rise in average product means the same proportional increase in marginal product. Another argument can be made to justify use of average productivity. For the long run case, the average product is of more theoretical importance than is marginal product because: (1) in the long run under competitive conditions, price tends to minimum average cost, and

(2) in pricing, firms price products on the basis of average cost.[2]

In Section 5, we proceed under the assumption that building practices in 1940 were the same as in 1950. On this basis, labor productivity growth rates are computed for the 25 year period, 1940-1965. These rates are provided, obviously, as a rough approximation. However, intensive study of the trade literature suggested that this digression has merit with respect to the state of the arts in house building. Perhaps the two growth rates appearing in this study will stimulate additional research that will test the findings presented here.

2. Changes in Labor Requirements per MSF of Living Area, by Occupation and Operation, 1930-1965

The following discussion emphasizes changes that took place in the use of carpenters' skills and the shifts in relationships among the labor groups. Table 14 summarizes the evidence by showing the distribution of hours to build 1000 sq. feet of living area among the various occupational groups. Further, the operation in which these hours were used is given for each occupation. As seen in this table, the largest reductions in labor time per MSF of living area over the 35 years affected lathers, plasterers, laborers, tile helpers, and hod carriers. Only the labor time of

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[2] See Raymond L. Richman, comments on paper by George L. Stigler, "Economic Problems in Measuring Changes in Productivity," in Output, Input, and Productivity Measurement (Princeton, N.J.: Princeton University Press, 1961), p. 75.

TABLE 14

Hours per 1,000 Square Feet (MSF) of Living Area for Carpenters and Other Occupations, by Operations, for Single-Family Dwellings, 1930 and 1965

Occupation and Operation	Hours per MSF of living area		
	Absolute number		Percentage change
	1930	1965	1930-65
1. Carpenter - Total	393.9	215.4	-45.3
Footings (forms)	13.6	13.2	-2.9
Framing	139.5	94.4	-32.3
Exterior walls	30.7	4.0	-87.0
Wall sheathing	22.0	0	-100.0
Stucco preparation	8.7	0	-100.0
Wood siding	0	4.0	0
Interior walls and ceilings	20.8	30.8	48.1
Plaster preparation	20.8	0	-100.0
Wood paneling	0	1.8	0
Insulation	0	5.4	0
Drywall (drywall installors)	0	23.6	0
Windows	40.2	4.0	-90.1[a]
Doors	41.8	8.3	-80.1
Interior trim	35.7	12.3	-65.6
Cabinet installation	0	3.0	0
Other	35.7	9.3	-74.0[a]
Floors (hardwood floor layers)	41.8	33.5	-19.9
Roof (shinglers)	20.9	13.4	-35.9
Stairs	8.9	1.4	-84.3

- continued -

TABLE 14 -- continued

Occupation and operation	Hours per MSF of living area		
	Absolute number		Percentage change
	1930	1965	1930-65
2. Cement finishers (concrete floors)	5.7	2.3	-59.6
3. Lather	51.1	7.9	-84.5
Exterior walls (stucco)	18.5	7.9	-57.3
Interior walls (plaster)	32.6	0	-100.0
4. Plasterer	142.1	16.8	-88.2
Exterior walls (stucco)	78.5	16.8	-78.6
Interior walls (plaster)	63.6	0	-100.0
5. Linoleum layer[b] (floors)	3.5	6.4	82.9
6. Hard-tile setter (floors)	11.6	2.7	-76.7
7. General building laborer	113.5	19.3	-83.0
Footings	17.5	3.4	-80.6
Concrete floors	35.4	2.1	-94.1
Framing	41.7	12.5	-70.0
Exterior walls	9.1	0.4	-95.6
Doors	0	0.9	0
Interior trim	5.9	0	-100.0
Floors	3.9	0	-100.0
8. Hod carrier	103.5	8.4	-91.9
Exterior walls	58.5	8.4	-85.6
Interior walls	45.0	0	-100.0
9. Tile helper (floors)	12.5	0	-100.0

- continued -

TABLE 14 -- continued

Occupation and operation	Hours per MSF of living area		
	Absolute number		Percentage change
	1930	1965	1930-65
10. Skilled only (sum of lines 1-6)	607.9	255.6[c]	-57.9
11. Unskilled only (sum of lines 7-9)	229.5	27.6	-38.0
12. All occupations (sum of lines 1-9)[d]	837.4	283.2[c]	-66.2

[a]In 1930, window trim appears under Windows. In 1965, window trim is included under Interior trim. Consequently, the percentage reduction in windows is slightly overstated and that for interior trim is slightly understated. This methodology reflects the shift that occurred by 1965 when all trim around aluminum windows was performed by a finish crew doing the interior trim. Door trim, in contrast, appears under Doors in both years. To be consistent, we should have included door trim in 1965 under Interior Trim because tract builders have all trim installed by the same crew so that all of this trim is one operation. The inconsistency does not change the argument, however, for as seen in the table, hours in windows, doors, and interior trim dropped substantially.

[b]Carpet, soft-tile and linoleum layers.

[c]Total includes 4.1 hours for trenching machine operators, teamsters, and roofers.

[d]Detail by operations is shown in Table 15. This classification is referred to in the text as the integrated crew.

Note: Detail may not add to total due to rounding.

linoleum, carpet, and soft-tile layers increased over this period, a reflection of the shift to new materials. Table 15 shows in detail the distribution of hours among the operations for the integrated crew, i.e., all the occupations we studied. Added detail on changes in skill requirements is provided in Tables 16 and 17 which expand the information to include suboperations.

Qualitative accounts in the trade literature regarding changes that have taken place in on-site construction since the advent of the merchant builder and mass house production are supported by the data in Table 14. Overall, carpenter manhours per MSF of living area declined by 45.3 per cent. Significant reductions by task occurred in window and door installation, 90 and 80 per cent respectively, and in interior trim, excluding cabinets, down by 74 per cent. This substantial curtailment in hours per MSF reflects: (1) the use of aluminum windows in 1965 that could be installed at the site as contrasted with double-hung or other wood frame windows that were cut and fit on the site in 1930; (2) pre-hung doors in 1965; and (3) the abolition of much of the interior trim that could be found in 1930 homes. Reductions in window installation are impressive except when special jobs such as large solid glass placement on site is involved.

Framing activity by on-site carpenters decreased by 32.3 per cent per 1000 square feet between 1930 and 1965. The reduction in framing hours came about largely from the influence of the mass building of houses. As the detailed house data in Chapter II show,

TABLE 15

Hours per MSF of Living Area, by Operations, for the Integrated Crew, 1930 and 1965

Operation	Hours per MSF of living area		
	Absolute number		Percentage change
	1930	1965	1930-65
Footings	31.1	17.9	-42.4
Concrete floor	41.1	4.4	-89.3
Framing	181.2	106.9	-41.5
Exterior walls	195.3	37.5	-80.8
Interior walls and ceiling	162.0	30.8	-81.0
Windows	40.2	4.0	-90.1
Doors	41.8	9.2	-78.0
Interior trim	41.6	9.3	-77.6
Floors	73.3	42.6	-41.9
Roof	20.9	16.2	-22.5
Stairs	8.9	1.4	-84.3
Cabinets	0	3.0	0
All operations	837.4	283.2	-66.2

Note: Detail may not add to total due to rounding.

TABLE 16

Percentage Decreases in Labor Requirements, Framing Suboperations, 1930 - 1965

Suboperation	House I		House II		House III		House IV	
	General laborers	Carpenters	General laborers	Carpenters	General laborers	Carpenters	General laborers	Carpenters
Subfloor underlayment: Mudsill, girder, floor joists, or rim joists and girders, per MBF	-19.6	46.4	-17.4	40.5	-75.0	-3.6	-72.5	4.8
Subfloor, per MSF	-46.4	-1.8	-44.6	-16.1	-100.0	-11.1	-100.0	-11.1
Studs and plates, per MBF (wall framing)	20.0	-3.2	20.0	-35.5	-60.0	-47.6	-60.0	-47.6
Roof framing, per MBF	-100.0	-100.0	-14.3	-10.7	-100.0	-55.7	-100.0	-62.0
Roof sheathing, per MSF	-77.2	148.6	-26.9	-8.3	-100.0	26.2	-100.0	5.0

TABLE 17

Framing Suboperations, Hours per MBF or MSF, 1930 and 1965

Suboperation	1930			1965			Percentage change, totals
	General laborers	Carpenters	Total	General laborers	Carpenters	Total	
Subfloor underlayment: Mudsill, girder, floor joists or rim joists and girders, per MBF	4.3	10.9	15.2	1.6	11.9	13.5	-11.2
Subfloor, per MSF	5.6	10.1	15.6	0.7	8.5	9.2	-41.0
Studs and plates, per MBF (wall framing)	5.0	26.0	31.0	2.9	14.0	16.9	-45.5
Roof framing, per MBF	6.7	28.4	35.1	0.7	11.7	12.4	-64.7
Roof sheathing, per MSF	5.7	10.0	15.7	0.7	11.4	12.1	-22.9

carpenter requirements in framing in the Class I and II houses underwent almost no change between 1930 and 1965 but decreased about one-third in Class III and IV houses. These data support the contention that as far as carpenters are concerned, framing has not changed much in custom houses. Further, precutting, trusses, nailguns, and other modern methods in tract building have produced important but not drastic labor saving (to 1965).[3]

Detail regarding how these changes came about in framing is provided in Table 16, which shows the changes in suboperations for each class of house, and Table 17, which shows the same information but on the basis of the computed averages.

As seen in Table 17, total labor time for the subfloor underlayment (i.e., mudsill, girder, and floor joists) per 1000 board feet MBF, decreased by 11.2 per cent. This decrease came about basically from the reduction in laborer hours and a small decrease in carpenter hours in House III. (As shown above, House III represented 44.1 per cent of all houses built in 1965.) In fact, the traditional system of subfloor underlayment work took more skilled hours in 1965 than in 1930 per MBF (Table 17) even though total hours decreased. In tract houses, rim joists and girders per MBF permitted only a small change in carpenter hours (up by

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[3] A word of qualification is necessary. Although the framing methods assumed in the cost estimating procedures for custom houses (power saw and random lengths) and for tract houses (complete precut) are considered typical, they are nevertheless "pure" types with respect to labor intensity. More likely, various mixes of traditional and precut methods take place. One common mix includes the use of precut studs only; another, to use precut lumber for all operations but roof framing.

4.8 per cent in House IV and down by 3.6 per cent in House III).

Subflooring per MSF, despite the changeover to plywood and the use of nailguns in tracts, required only 11.1 per cent fewer carpenter hours in 1965 than in 1930 in Houses III and IV. Total labor time for subflooring, however, decreased by 41 per cent on the average, as laborers were virtually eliminated from the operation by 1965.

All hours per MBF for wall framing (studs and plates) decreased on the average by 45.5 per cent between 1930 and 1965 (Table 17). This reduction was due to less carpenter hours in the two tract houses built in 1965, down by 47.6 per cent in each house, and also to a reduction of 35.5 per cent in carpenter time in the Class II house, even though no precutting was involved in this latter class. In contrast, carpenter time, per MBF in the highest quality house, House I, was virtually unchanged over the 35 years despite the changeover from handsaw to powersaw.

Roof framing per MBF took 65 per cent less total labor time in 1965 than in 1930. In this case, again, laborer time was practically eliminated, while carpenter time per MBF decreased by almost 60 per cent. This difference in time reflects labor savings resulting from prefabricated trusses and precutting.

Roof sheathing per MSF, despite new methods such as the use of nailguns in tracts and plywood or spaced sheathing, required somewhat more carpenter hours in all but the Class II house (see Table 16). On the average, however, carpenter hours per MSF

increased only to 11.4 in 1965 from 10.0 in 1930 (Table 17). Again, the large reduction in hours was for laborers, so that total labor hours per MSF were down by 23 per cent between 1930 and 1965.

In all of the above activities included under framing -- i.e., subfloor underlayment, subflooring, wall framing, roof framing, and roof sheathing -- laborer time has been virtually eliminated while, on the average, for framing as a whole, carpenter hours per MSF of living area decreased by 32.3 per cent over the 35 years (Table 14).

As shown in Table 15 total labor hours (skilled and unskilled) on exterior walls declined by 80.8 per cent per MSF of living area. In particular, wall sheathing required 22 carpenter hours per MSF of living area in 1930 but none in 1965. Substantial productivity increases in exterior stucco work reduced the hours worked per MSF not only for carpenters, but also for lathers and plasterers. In 1930, lather hours per MSF spent on the stucco exterior totaled 18.5, and for the plasterer, 78.5 (see Table 14). By 1965, exterior stucco work required far less time for all categories of workers because of the substitution of wood grounds by line wire, the use of lighter asphalt papers, and the faster application of stucco itself, even when done by hand. For the carpenter, only part of the loss in hours on exterior wall work was recouped by 1965, as the use of wood siding meant, on the average, 4.0 hours per MSF of living area versus the loss of 22.0 hours per MSF of living area in 1930 for wall sheathing.

This substantial reduction in labor time required in exterior

stucco work could be traced to five major changes in the postwar period.

1. Since about 1957 contractors shifted from 15 lb. to lightweight (or black saturated) felt. Such felt is not only about 28 per cent cheaper (using 1968 prices), but also takes about half the time to apply as 15 lb. felt.

2. Stapling guns to apply wire lath were introduced in 1959. They require self-firring wire lath, which is about 2.5 per cent more expensive than simple wire lath (in 1969 prices). One company, which started using stapling machines in 1962, found that its labor time decreased from 5.9 hours to 3.7 hours per 100 sq. yd. for a reduction in time of 37 per cent for this operation.

3. Since 1959 machine plastering of the scratch and brown coats came in use. This operation requires a special cement, raising its cost 9.1 per cent over the price of the mix of common and plastic cement used before. (This implies a 4.3 per cent cost increase in plasterer's materials -- sand and cement for three coats.) A comparison of labor time on tract work between hand application (by a crew of four plasterers and two hod carriers) and gun application (by a crew of four plasterers and two hod carriers) shows that plasterer time is reduced from 13.0 to 11.7 hours per 100 sq. yd., or by 10 per cent and hod carrier time, reduced from 6.6 to 5.9 hours per 100 sq. yd., or by 9.4 per cent. These figures are for three-coat stucco of which two are gun-applied, and the finishing coat hand-applied, as is done in almost all cases.

Introduction of the plaster gun, however, was not without problems. One company reported buying one in 1958 and again in 1963. Each time the guns were discarded almost immediately because of unsatisfactory results. Finally, a new plaster gun bought in 1968 produced good results. Further, in custom work all three coats are usually applied by hand since the plaster gun setup is too complex for only one house. Typical labor time in custom work is, in addition, about 20 per cent above the time for hand application given above, because of the higher grade workmanship.

4. At least since 1968 self-firred paperback, which combines felt paper and wire lath, has been used. This product has raised lathing-material costs by about 20 per cent, but reduced labor time on tract work from 5.7 to 4.9 hours per 100 sq. yd., for a reduction of 14 per cent.

5. At least since 1968 the cement used for hand-applied brown and scratch coat has changed from half common/half plastic to plastic cement only. This raises material costs because the cost of only plastic cement is 3.8 per cent above the mix. For three coats, total plasterer materials thus are two per cent higher. However, this cement makes plaster application easier.

Labor time for <u>interior walls and ceilings</u> per MSF (Table 15) decreased 81 per cent between 1930 and 1965. This substantial drop came from the total elimination of hod carrier, lather, and plasterer time -- respectively 45.0, 32.6, and 63.6 hours per MSF in 1930 (see Table 14). In this case, carpenters widened their

jurisdiction to include drywall installation, so that carpenter hours per MSF rose from 20.8 hours per MSF in 1930, which involved time in plaster preparation such as wood grounds and building paper installation, to 23.6 hours per MSF for drywall installation. The carpenter benefited a little from interior paneling, with this activity taking 1.8 carpenter hours per MSF in 1965, and insulation requiring 5.4 manhours per MSF. Hence, while the carpenter lost 20.8 hours per MSF because of the phasing out of interior plaster, he found work in drywall, interior paneling, and insulation for a total of 30.8 hours per MSF. On balance, then, the carpenter gained an average of 10.0 hours per MSF on interior walls and ceilings. In this case it should be observed that by widening jurisdiction to drywall from an activity that was formerly the domain of another craft, carpenter manhours per MSF of living area were higher than they would have been without this new work assignment. As will be seen later, this fact plays a role in the productivity growth rate for carpenters.

The extensive use of drywall can be seen in the following data. Drywall was used in three to four per cent of all residential construction in Northern California in 1939. By 1950, it was used in 80 per cent of the houses. In 1969, it became the major interior wall material used in 98 per cent of the houses built.

Labor time for installing drywall increased gradually from 1950 to 1965, from four to five hours per MSF, or by 25 per cent. This increase in labor time was the result of a higher quality of

workmanship, including, e.g., the lining of studs. (The practice of lining studs is, however, a rare practice now.) The pace of work also slowed down to a more tolerable level as compared to the pace required when drywall was first introduced on a broad scale.

Finishing time for drywall, i.e., for taping and texturing, followed a time pattern similar to that of installation, but from 1960 forward, the trend was reversed. First, the type of cement used was improved. Second, the taping machine, earlier versions of which were already in wide use in 1955, improved sufficiently by 1960 to allow substantial labor savings. As a result, labor time for finishing in tract work increased from 3.9 to 4.9 hours per MSF from 1950 to 1955, or by 26 per cent. Hours per MSF then decreased to 2.9 by 1965, or 41 per cent below the 1955 figure. Changes in custom work are of the same magnitude with 5.8 hours per MSF required in 1950, 7.3 hours per MSF in 1955, and then 4.4 hours by 1965.

Carpenter hours per MSF of living area decreased by 20 per cent (Table 14) in hardwood floor laying. This reduction in hours, smaller than that which took place in most of the other carpenter's functions (see Table 14) reflects an offset to improved nailing and sanding machines by quality changes. In House III, for example, only a small loss of hours per MSF occurred between 1930 and 1965, from 36.9 to 28.5, because both hardwood floors and carpeting were installed. But for House IV, carpenter hours per MSF actually increased, from 14.9 in 1930 to 40.2 in 1965, because

of quality improvement with the shift from fir to oak strip floors. If hardwood floors had been eliminated from the two tract houses in 1965, then a sharper reduction in carpenter hours per MSF would have resulted.

Hardwood flooring per se, however, underwent many changes since 1930. Nailing machines although introduced by 1930, gradually improved, especially with respect to the feeding of nails. By 1950 performance of these machines reached the level prevailing today (1969). The nailing machines ultimately reduced the time required for laying and nailing from 53 to 23 hours per MSF, or by 57 per cent. Today, the machines are still pounded by hand, however, because air pressure guns have not yet proved successful. In addition, between 1930 and 1940, a more powerful sanding machine came into use -- a machine 12-inches wide, with 2-1/2 horsepower instead of an 8-inch, one-horsepower machine. This machine reduced labor time for sanding from 16 to 11 hours per MSF, or by 31 per cent. The improvement of the sanding machine had an equally large effect on finishing time. Instead of puttying each nail separately, putty is now placed over the whole surface, and then the entire surface is sanded.

Carpenter hours (i.e., shingler time) for the roof covering decreased from 20.9 hours per MSF in 1930 to 13.4 hours per MSF in 1965 (Table 14). But these data are hard to compare because the types of roof coverings were changed over the years to reflect the most commonly applied in each of the price ranges. In House I the roof cover was composition shingles in 1930 and tar and gravel roof

in 1965, so that in the latter year a roofer was used rather than a shingler. For House II, a change occurred from composition shingles to wood shakes; for House III, from wood shingles to wood shakes. Only House IV had the same kind of roof cover in both years, composition shingles.

It should be noted, however, that the application of shakes and wood or composition shingles has seen little technical change since 1930. The only exception is the practice (since about 1952) of prestocking the roof with material by means of a scissors truck. Shingler time (for shakes or wood shingles) can thus be reduced from 1.5 to 1.2 hours per 100 sq. ft. of roof area, or 20 per cent. Prestocking, however, which became unionized by teamsters, takes from 0.1 to 0.2 hours per 100 sq. ft. of roof area. For composition shingles, preloading allows a time reduction of from 0.81 to 0.64 hours per 100 sq. ft. of roof area, or a 21 per cent reduction, with preloading time of 0.08 to 0.16 hours per 100 sq. ft. of roof area. However, it is not certain that the 20 per cent labor time reduction can be attributed completely to prestocking. A reduction in quality of the work may also have taken place, leading to compensatory changes in building codes such as the requirement of 30 lb. instead of 15 lb. felt and of galvanized nails.

Nailguns have been tried in roofing but have not proved successful. Their break-even point seems to lie at an output of 900 to 950 square feet per eight-hour day.

The only craft in which hours per MSF of living area increased

between 1930 and 1965 was that of carpet, soft-tile, and linoleum layers. In this case, extensive use of carpeting and resilient floor covering materials more than offset the following changes in technology that occurred over the 35-year period. Around 1947 tackless stripping and pole stretchers, introduced in carpeting, reduced labor time by 20 per cent. The introduction of tile cutters for the installation of asphalt tile between 1940 and 1950 reduced labor requirements in this activity by 66 per cent.

From the above analysis, it is clear that the changes in home building between 1930 and 1965 had a direct influence on the skills employed by carpenters. The data in Table 14 are recapitulated in terms of percentage distribution in order to show how hours per MSF were distributed in the two years (Table 18).

The results in Table 18 have implications for training programs. The emphasis in both periods was the framing operation. Bay Area on-the-job training received by apprentices in framing supports the importance of this task among others the carpenter does. A survey of former carpenter apprentices in four of the San Francisco Bay Area counties showed that only 5.1 per cent of the 721 respondents to a questionnaire received no training at all in framing.[4] In contrast, 22.3 per cent of these former apprentices received no training in finish work. This finding, too, is not surprising inasmuch as the 1965 distribution of carpenter hours in Table 18

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[4]Special preliminary summary of results prepared by Sara Behman (Center for Labor Research and Education, Institute of Industrial Relations, University of California, Berkeley, May 1968), mimeo., 12 pp.

TABLE 18

Percentage Distribution of Carpenter Manhours per MSF of Living Area in Single-Family Dwellings, 1930 and 1965

Activity	1930	1965
Total carpenter hours	393.9	215.4
Per cent	100.0	100.0
Footings (forms and reinforcement)	3.4	6.1
Framing	35.4	43.9
Exterior walls	7.8	1.9
Wall sheathing	5.6	0
Stucco preparation	2.2	0
Wood siding	0	1.9
Interior walls and ceiling	5.3	14.3
Plaster preparation	5.3	0
Wood paneling	0	0.8
Insulation	0	2.5
Drywall	0	11.0
Windows	10.2	1.9
Doors	10.6	3.9
Interior trim	9.1	5.7
Cabinet installation	0	1.4
Floors (hardwood floor layers)	10.6	15.6
Roof (shinglers)	5.3	6.2
Stairs	2.3	0.7

Note: Detail may not add to total due to rounding.

shows that only 11.5 per cent of the time went into finish, defined here as the combination of hours in windows, doors, and interior trim.[5] In contrast, interior finish work in 1930 took 29.9 per cent of the carpenter manhours.

The above evidence bears upon a statement commonly made that carpenters today are not of the quality as carpenters of yesteryear. The evidence supports the hypothesis that the change in emphasis, i.e., installation of parts for intricate on-site fitting methods, reduced the need for heavy training in interior finish work. A t the fact that 22.3 per cent of the apprentices responding to the survey never had on-the-job training in finish work suggests such training was not given because it is limited in amount. In the Bay Area counties, apprentices must "hustle their own jobs." The degree of specialization that has occurred in the craft in recent years makes it difficult, if not impossible, to obtain all-around training. With specialization too has come the need for a high degree of speed and proficiency in a particular task. Hence, it does not seem proper to compare carpenters in the two periods. In 1930, craftsmanship related to cut and fit methods was the requirement; in 1965, proficiency in a particular task and speed became requirements. A way in which proficiency in specialized tasks and speed are achieved is through piece work, even though

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[5]In the questionnaire, respondents were asked about time spent in "finish work." The definition above may be at variance from the respondents' interpretation. Consequently, the above percentage should be considered only an approximation.

this practice is in violation of the labor-management agreement.[6]

Drywall hanging as a task has been separated from the main body of carpentry, reflecting again the distribution of time as shown in Table 18. As seen there, 11 per cent of the hours spent in building 1000 sq. ft. of living area was in drywall hanging in 1965. In the Bay Area a special labor-management agreement prevails for carpenter training in drywall installation. The period of training is for two years rather than four years required for regular apprenticeship training programs that cover all aspects of the trade.

To sum up, this section has shown: (1) fewer labor hours per MSF were required in 1965 than in 1930 for all building trades studied except carpet, soft-tile, and linoleum layers, and (2) how the shifts to new materials, new techniques, and prefabricated components created a change in the tasks performed by carpenters. These findings suggest, of course, that off-site work was substituted for on-site work. What was the extent of this substitution? In the next section this question is examined in detail for the integrated crew and for carpenters alone.

3. The Trade Off between On-Site and Off-Site Labor

Along with the reductions in labor requirements per MSF

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[6]According to comments made during the various interviews conducted. According to Barry D. Whelchel, "Informal Bargaining in Construction," Industrial Relations, 10 (Feb. 1971), pp. 105-109, piece-work has a dual effect: it enables the contractor to control labor costs but it also gives the construction worker "...more control over his work environment." Whelchel's findings are based on extensive interviews over a five-year period with contractors and workers in the San Diego construction industry.

of living area, labor costs for seven of eleven functions estimated declined relative to material costs between 1930 and 1965. In 1930, all labor costs were 80 per cent of all material costs and by 1965 were 58 per cent. This finding, documented in Table 19, suggests that, in general, materials were substituted for labor. For carpenters, however, the carpenter cost -- materials' cost ratio (using only materials with which the carpenter worked) was not as dramatic (see Table 20). The ratio of carpenter costs to the costs of materials they handled was .54 in 1930 and .51 in 1965.

For all occupations combined, the integrated crew, as shown in Table 19, earnings of labor relative to material costs dropped most significantly in the work on interior walls and ceilings and in stairs. These data are interesting for they show that the most visible trade-off between labor and materials occurred in the two most labor-intensive functions in 1930. These were the only two functions in 1930 in which all labor costs were more than double material costs. The same statement can be made for carpenters alone. As shown in Table 20, carpentry labor was used more intensively relative to materials in both interior walls and ceilings and stairs. Why, however, did the overall carpentry labor cost -- materials' cost ratio show less of a decline over the 35 years than did that of all labor costs relative to all materials costs? There are two possible answers. First, carpenters became a more dominant occupation generally by 1965, when their

TABLE 19

Labor and Material Costs, per MSF of Living Area, All Occupations by Function, 1930 and 1965

	1930 Costs				1965 Costs				1965 LC/MC minus 1930 LC/MC
	Total	Materials	Labor	LC/MC	Total	Materials	Labor	LC/MC	
Footings	$ 27.71	$ 0	$ 27.71	0	$ 116.38	$ 23.22	$ 93.16	4.012	0
Concrete floors	62.15	31.19	30.96	.993	76.94	56.87	20.07	.353	-.640
Framing	455.46	269.24	186.22	.692	1411.20	848.75	562.45	.663	-.029
Exterior walls	458.37	231.43	226.94	.981	376.81	172.27	204.54	1.187	.206
Interior walls and ceilings	278.97	85.30	193.67	2.270	365.56	199.37	166.19	.834	-1.436
Windows	138.03	92.80	45.23	.487	181.00	159.50	21.50	.135	-.352
Doors	197.31	150.30	47.01	.313	300.68	251.73	48.95	.194	-.119
Interior trim*	96.25	51.97	44.28	.852	482.90	416.54	66.36	.159	-.693
Floors	234.64	156.98	77.66	.495	516.69	282.25	234.44	.831	.336
Roof cover	88.05	64.53	23.52	.364	297.45	210.30	87.15	.414	.050
Stairs	14.65	4.60	10.05	2.185	17.95	10.29	7.66	.744	-1.441
Total	$ 2051.59	$ 1138.34	$ 913.25	.802	$ 4143.56	$ 2631.09	$1512.47	.575	-.227

*Includes cabinets in 1965.

TABLE 20

Carpenter Labor and Material Costs, per MSF of Living Area, by Function, 1930 and 1965

	1930 Costs			1965 Costs			1965 CC/MC minus 1930 CC/MC
	Materials	Labor	CC/MC	Materials	Labor	CC/MC	
Footings	$ 0	$ 15.34	0	$ 23.22	$ 71.48	3.078	0
Framing	269.24	156.98	.583	848.75	510.46	.601	.018
Exterior walls	75.60	34.54	.457	60.59	21.43	.354	-.103
Interior walls and ceilings	9.11	23.37	2.565	199.37	166.19	.833	-1.732
Windows	92.80	45.23	.487	159.50	21.50	.134	-.353
Doors	150.30	47.01	.313	251.73	45.13	.179	-.134
Interior trim*	51.97	40.15	.773	416.54	66.36	.159	-.614
Floors	104.20	47.07	.452	106.80	186.10	1.743	1.291
Roof cover	64.53	23.52	.364	203.80	74.53	.366	.002
Stairs	4.60	10.05	2.184	10.29	7.66	.744	-1.440
Total	$ 822.35	$ 443.26	.539	$ 2280.59	$ 1170.84	.513	-.026

*Includes cabinets in 1965.

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manhours accounted for 76.1 per cent[7] of the 283.2 total manhours required per MSF of living area, versus 47.0 per cent of the 837.4 total manhours per MSF of living area in 1930 in the 11 operations analyzed in this study (see Table 14). Second, for the major carpentry function, framing, the carpenter cost -- materials' cost ratio increased by .018 of a point. This virtual stability in the carpenter cost -- materials' cost ratio for framing can be traced in part to our findings that laborers' time in tract

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[7]This percentage cannot be compared with the figure found in the Bureau of Labor Statistics study, Bulletin No. 1404, Labor and Material Requirements for Private One-Family House Contruction (June 1964) for several reasons: (1) This study excludes the major subtrades, i.e., plumbing, painting, and electrical work; (2) Drywall installation apparently took more hours in this study than in the BLS study; (3) The BLS study has averages for the entire West while this study deals with a northern California County. Interestingly, when our data are adjusted to conform to the BLS definitions, the discrepancy for carpenter manhours on-site is about 10 per cent, a not unreasonable error considering the many sources of estimating differences. In particular, BLS uses as a basis the construction price which is the FHA estimated replacement cost of the property or the actual (or asking) sales price, whichever is lower, less the FHA estimated market price or value of the improved lot. For the West, this price averaged $14,449 in 1962. On this basis, there were 21.3 carpenter manhours per $1000 of on-site construction price in the West. In this study, the estimated sales price of the 1965 typical house was $24,954 (see Table 28, Chapter IV). Subtracting the lot value, the construction price equivalent to the BLS figure was $19,832. Adjusting our carpenter manhours data from MSF of living area to $1000 of construction price, we obtain 18.0 carpenter manhours (excluding drywall installers in order to conform to the BLS practice) for every $1000 of construction price. Differences in geographic coverage (West versus Alameda County, California) and in time (1962 versus 1965) could easily contribute to the differnce of 3.3 hours, not to mention the procedural differences between the BLS study and ours.

home building was virtually eliminated in all framing operations but subfloor underlayment and wall framing. Some of the duties in the 1965 building methods were taken up by carpenters. Finally, as shown in Table 17, roof sheathing required more carpenter hours per MSF in 1965 than in 1930, although total labor time in this activity per MSF decreased over the 35 years.

When reviewing the data in both Tables 19 and 20, it must be recalled that we are dealing with an average house for each period. Our data thus represent averages around which cost figures of individual firms should cluster, some firms having higher figures and others lower ones, depending on the mix of their techniques, the number of houses they produce (because our interviews suggested that economies can be achieved for volume purchases), and the efficiency of the firm. For example, interviews conducted in 1969 suggested that precutting of lumber was being more widely used in this year than four years earlier, the ending date of this study. One estimate was that during 1969, from 60 to 70 per cent of the tract builders were using the precut method. This method means that all lumber is precut, i.e., the lumber going into the mudsill, girders, subfloor, wall framing, roof, and exterior trim. An efficient contractor could reportedly cut labor costs by from 10 to 20 per cent over other methods if all the lumber were precut. Further, precutting reportedly could lead to materials' saving because of reduced wastage estimated at from 10 to 20 per cent. Inasmuch as savings could occur in

both labor and materials, however, it is possible that the 1969 carpenter cost -- materials' cost ratio would not be much different from that shown in Table 20.

Also expanding significantly since 1965 has been the use of preassembled roof trusses, which is part of the broader topic of precut lumber. One estimate suggested that only 10 per cent of the contractors in the Bay Area used these components in 1965. By 1969, about 60 per cent of the contractors were using preassembled roof trusses.

Another insight on what cost differences may exist among firms in framing is provided by comparing labor and materials' costs per square foot between two building methods, i.e., the firm using its own cutting yard and a firm using completely precut components. One company used both methods in tracts that were built. For houses built in the tracts with precut lumber, the labor cost per square foot was $0.66 and the materials' cost, $0.92 per square foot. For houses built in tracts which had a cutting yard at the site, the labor cost per square foot was $1.18 and that for materials about $1.21 per square foot. It is worth repeating that our cost estimating procedure for framing included "pure" types with respect to labor intensity. Our data thus have incorporated in them the extremes of the cost range in framing. Consequently, any mix of situations encountered in the real world are contained within our range of estimates.

The major finding in this section is that the substitution between materials and carpenter labor was not large over the 35 years, with carpenters' earnings at 54 per cent of materials' costs in 1930

and at 51 per cent in 1965. This virtual stability in the ratio can be traced partly to the substitution that occurred between the labor groups, especially the carpenters including in their jurisdiction drywall hanging and changing methods that sharply reduced laborer time. These figures reflect the fact that by 1965 carpenter time accounted for 76.1 per cent of all labor time per MSF of living area for the functions we estimated, whereas in 1930, carpenter hours accounted for 47.0 per cent of all labor hours in the same functions per MSF of living area. The more interesting question for policy issues is what happened to the labor cost -- materials' cost ratio for the integrated crew for the functions we analyzed. For the entire crew, this ratio did drop significantly, substantiating casual observations made that off-site labor has been substituted for labor on the site. Changes that occurred in building and the rising prices and wages brought the following percentage increases in the earnings to labor and materials per square foot:

	Percentage change, 1930-1965
Total costs	101.9
Total materials' costs	130.7
Total labor costs (integrated crew)	65.9
Total carpenter costs	164.1
Total cost of materials used only by carpenters	173.7

As seen in the summarized data above, with more emphasis on materials, labor costs for the integrated crew increased by about half as much as materials' costs over the 35 years. This finding will

be elaborated in Chapter IV where the effect of unit labor costs on the price of houses is analyzed.

4. Annual Rates of Growth for Total Output, Total Manhours, and Physical Labor Productivity

The preceding analysis can now be applied to two of the three policy issues mentioned at the start of this paper: (1) forecasting of labor requirements for carpenters and (2) unemployment rates of carpenters.

As shown above, carpenters and the other workers could produce 1000 sq. ft. of living area in less time in 1965 than in 1930. Obviously, then, their physical labor productivity increased over the 35 years, i.e., the ratio of output to manhours. The discussion in this section converts the productivity measure to square feet of living area per manhour. For this, the data in Table 14 are used with 1000 sq. ft. divided by the manhours needed.

a. The General Formula Required for Forecasting Labor Requirements

As mentioned in Chapter I, there has been disagreement regarding productivity gains in residential building. The data accumulated for this project suggest that productivity gains have occurred in the building of single-family dwellings, at least in the portion of the house constructed here. Using the data in Table 14 and converting the ratio of 1000 sq. ft. of living area divided by manhours to square feet per manhour, annual rates of growth in

productivity (compounded rates of change) have been derived. In this section, then, we look at the issue of how rates of growth in productivity affect total manhours needed to furnish total output. Starting with the basic identity

$$O \equiv MH\ (O/MH),$$

where O is total square feet of living area built in Alameda County, MH is the total manhours required, and O/MH is square feet of living area produced per manhour.

The above identity is a multiplicative relationship and it can be shown that the rates of growth are additive, or

$$g_O = g_{MH} + g_{O/MH}.$$

The rates of growth for the above equation appear in Table 22. In order to derive these growth rates estimates of total output, total labor requirements, and physical labor productivity had to be made for 1930 and 1965. The next section deals with how the basic estimates were made. Further, the estimates are evaluated by comparing them with available data that could be found.

b. Computation and Evaluation of Basic Data Needed

During 1930, 1,320,232 sq. ft. of living area were built in Alameda County. This figure was obtained by multiplying the total number of building permits issued in Alameda County, 908, in 1930 by the average sq. ft. of living space in the house built, computed at 1454, from the building permit sample of 1930 for single-family dwellings. Several caveats are in order regarding the permit number and the

average square foot number used.

In our survey of building permits of single family dwellings we obtained a total of 828 permits authorized. This figure, however, is biased downward, because no data were available for the City of Hayward, whose records previous to 1953 were destroyed by fire. Nor were data available for any communities outside of Albany, Berkeley, Oakland, San Leandro, Piedmont, and Alameda. The cities for which data were gathered in 1930 represented 91 per cent of the population of Alameda County in 1930. Hence, the tabulated permit data were increased to adjust for the nine per cent of the population excluded. Average square feet of living area used for 1930 represent the average for the four typical houses selected for the study.

Using the total square feet of living space calculated for 1930 as the total output figure, i.e., 1,320,232, and the productivity estimate (2,539 sq. ft. per manhour), the total manhours figure derived for carpenters is 519,981 manhours (see Table 21). This figure, divided by 908 houses built, means that the average house took 572.7 carpenter manhours in 1930. An indirect check on all of our computations is possible by using the 572.7 figure mentioned above. (No direct check is possible because contacts with numerous builders failed to provide anyone who had 1930 records available.)

In the September 1931 issue of the magazine, The Small Home (published by the Architects' Small House Service Bureau, pp. 16-18), three homes with prices to consumers of $9,907, $8,597, and $7,390 were detailed by costs of labor and materials. For each of the houses,

carpenter labor was valued at $733. If we assume that the wage rate per hour for carpenters was the union rate as published in the Bureau of Labor Statistics Bulletin No. 1547, Union Wages and Hours: Building Trades, then by interpolating the index numbers presented, the 1931 rate for carpenters was $1.288. On this basis, each of the three houses in the magazine article mentioned above would have required 569.1 carpenter manhours to build. Our estimate of 572.7 carpenter manhours per house for 1930 is thus only 0.6 per cent higher. This small difference suggests that we can have confidence in our estimating procedure.

For 1965, the output figure used is 8,469,037 square feet of living area. This estimate is derived by multiplying the average square feet per house, 1817, by the number of building permits issued in Alameda County in 1965 for single-family dwellings. In this case, the 4,661 figure is that taken from the Department of Commerce report issued by the San Francisco Field Office, i.e., Construction Reports: Authorized Construction--San Francisco Bay Area for 1965.[8] While the number of houses is based on a published statistic, the average square feet per house in 1817 had to be estimated. This estimate was derived as follows. Square feet were available only for the 50 per cent sample of houses, those for which one permit was filed at one time for a given location. Further, these data were available for only San Leandro, Hayward, and Pleasanton. On the basis of these data, the average size

[8] Our collection of data for 1965 from the Alameda County issuing offices showed 4,567 single-family dwelling permits; hence, there was only a two per cent difference between our figure and that of the Department of Commerce.

of the house would have been calculated at 1,883 square feet. This figure served only as a benchmark for the final square foot figure used because it was based on a limited number of observations and was judged to be biased upward because these areas had in common the characteristic that they had more land available for new construction in 1965 (as contrasted, for example, with the core cities), so that larger houses could be built on larger lots.

With this top average limit available, we then examined square feet data available from our building permit survey for both sample years, 1930 and 1965 and found that the average house increased in size by 23.1 per cent. This average increase was arbitrarily rounded up to 25 per cent, so that the 1930 average square feet of 1,454 were expanded by 1.25 to get a 1965 estimate of 1,817. A check on the validity of the 23.1 per cent increase from our data (rounded to 25 per cent) was made by using data published in Sales of New One-Family Homes, Annual Statistics, 1965 (U.S. Department of Commerce and Home Finance Agency). Table S-19 of this report shows that the average square feet of furnished floor area for all homes were 1340.[9] (The larger house size for all homes results because

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[9]This average of 1,340 sq. ft. differs from that of 1,224 reported in the FHA report, FHA Homes 1965. The difference probably arises from differing survey techniques. The data in Sales of New One-Family Homes, Annual Statistics, 1965 are based on monthly sample surveys. The sample for any one month consists of a sample of buildings for which permits were issued and of homes started in nonpermit areas during the month, plus the sample units selected in earlier months that were not yet sold by the beginning of the current month. The characteristics of FHA-insured homes appearing in the FHA report cited are based on data from a variable sample of houses insured under Section 203-b.

homes financed by conventional mortgages include more higher-priced houses than the FHA group.) For example, in Table S-4 of the report, for the Western Region, all homes sold had an average sales price of $23,200, while that for the FHA-insured category was $19,300. According to FHA Homes 1965, the average square feet per house in the San Francisco-Oakland Area were 1470 in 1965 versus 1,224[10] for the U.S. average, or 1.201 times larger. By using the 1525 average for 1965 for all houses and inflating the number by 1.201, the San Francisco Area average would be 1,831. In this case, the 1,817 used in this report would be 99.2 per cent of this figure. On this basis the 1,817 square feet used in this report appears reasonable. While it is 3.4 per cent less than the 1,883 calculated from our building permit figure, the smaller number (1,817) is considered a better approximation, because as mentioned above, the data available locally were from areas that had sufficient land to permit larger homes in terms of square feet. As a point of interest, however, had 1,883 square feet for the average houses in 1965 been used, it would have meant a difference of 307,626 square feet of living area. This increase in the output figure would have increased the average annual growth rate for total output to 5.6 per cent as compared with 5.4 per cent shown in Table 22. The growth rate for carpenter manhours would have been 3.9 per cent rather than 3.7 per cent.

Using the 1965 data derived above, 8,469,037 sq. ft. for total output and dividing the number by carpenter productivity, the total

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[10] Ibid.

manhour requirement in 1965 for carpentry labor is 1,824,044 (see Table 21). Consequently, on the average, in 1965 the typical house required 391.3 carpenter manhours (1,824,044 carpenter manhours divided by 4,661 houses). How reasonable is the 391.3 manhours per house figure? The figure was checked in two different ways.

First, according to a 1962 survey of single-family residences conducted by the Bureau of Labor Statistics, on the West Coast (based on a sample of 25 houses) carpenter on-site manhour requirements per $1000 of construction price for the private one-family houses were 21.3 hours.[11] (This was the lowest for any region in the U.S.). Using the construction price for houses of 1,400 and more square feet ($17,524), carpenter manhours totaled 373.3 per house according to this survey. As shown above, average house size in Alameda County would easily exceed 1,400 square feet. On this evidence, although the years differ (1962 versus 1965), the Alameda County average of 391.3 hours for carpentry labor per house estimated in this report does not seem unreasonable. It is 4.8 per cent higher than the roughly calculated BLS figure.

Another way to check on the 1965 figure is provided by an indirect route. In an analysis of manhours worked by carpenters during 1965, it was found that 4,920 carpenters of union locals in Alameda County (excluding hardwood floor layers and shinglers) were at work

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[11] See Bureau of Labor Statistics, Labor and Material Requirements for Private One-Family House Construction, Bulletin No. 1404 (Washington, D.C.: U.S. Government Printing Office, June 1964).

during some time or another during 1965.[12] However, this number had to be adjusted to include only those carpenters working in residential construction. The adjustment was made by using data in the Becker report[13] which showed that 58 per cent of all building value was in residential construction. Applying 58 per cent to the total number of carpenters (4,920) yielded a total of 2,854 carpenters in residential construction. This figure for all residential construction was adjusted to include only single-family dwellings, which in Alameda County in 1965 was 43.4 per cent.[14] Hence 1,239 carpenters were estimated to be in residential construction. These carpenters worked an average of 1,251 manhours per year.[15] On this basis carpenter manhours (excluding hardwood floor layers and shinglers) totaled 1,549,989 in the building of single-family dwellings. This number divided by the number of dwellings built, 4,661, gives a per house average of 332.5 carpenter manhours. The data estimated in this report (see Table 14) show that when hardwood floor layers and shinglers are excluded, carpenter manhours per MSF are 168.48. Inflating this number to account for 1,817 square feet per house, the per house average becomes 306.1 manhours of carpentry. This figure is 7.9 per cent lower than average of 332.5 manhours estimated on the basis described above. Considering

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[12] B. William Becker, "Manhours Worked During 1965 by Carpenters in the 46 Northern California Counties," (Center for Labor Research and Education. Institute of Industrial Relations, University of California, Berkeley, May 1968, mimeo.).

[13] Ibid.

[14] Department of Commerce report cited above.

[15] Derived from the Becker report cited above. A weighted average of mean manhours to account for the lower means in areas where residential construction predominated.

all of the assumptions needed to arrive at the figure derived from the 1965 manhours study, this error is considered reasonable.

The several checks of the data conducted above suggest that the estimates of output, manhours required, and productivity are reasonable.

c. Total Output Produced

As described above, 908 single-family dwellings were built in Alameda County in 1930 as contrasted with 4,661 in 1965. For these years average square feet of living area per house were 1,454 and 1,817 respectively. Total output in terms of square feet of living area produced consequently was:

1,320,232 in 1930 and
8,469,037 in 1965.

The average annual compounded rate of change between these two years is 5.4 per cent. As explained above, the sum of the average annual compounded rates of change for total manhours required and for real output per manhour equal by definition the rate of growth for total output. In forecasting occupational requirements the annual average compounded rate of change for total manhour requirements will equal the corresponding rate for output if and only if the rate of growth in real labor productivity is zero. The historical statistics derived here show the hazard involved in assuming a zero growth rate for labor productivity.

d. Total Manhour Requirements and Physical Labor Productivity

The data in Table 14 show hours per 1000 square feet of living area. In this section these data are converted to a physical labor productivity measure showing output in square feet of living area per manhour (see Table 21). The absolute data are then used to derive the average annual compounded rates of change between 1930 and 1965, or the growth rates for physical labor productivity shown in Table 22. As shown above, these rates of growth and the growth rates for total manhour requirements are needed in order to discuss the policy issues related to changing building methods and their impact on the construction trades.

In Table 21, the absolute labor requirements by occupational groups are shown. These figures were derived by dividing the total output figure of each year (i.e., 1,320,232 in 1930 and 8,469,037 in 1965) by the output per manhour figures. Growth rates for these figures are given in Table 22.

As seen in Table 22, growth rates for physical labor productivity and total manhour requirements add to the growth rate for total output.

e. Analysis of Growth Rates in Productivity

As shown in Table 22, growth rates for physical labor productivity varied considerably among the crafts. These differential rates of productivity growth were the result of both changes in work methods and also changes in materials, work assignments, and quality. In

TABLE 21

Total Manhour Requirements and Physical Labor Productivity
(Square Feet of Living Space per Manhour),
1930 and 1965

Occupations	Absolute numbers			
	Total manhour requirements[a]		Physical labor productivity[b]	
	1930	1965	1930	1965
1. Carpenters:				
All operations	519,981	1,824,044	2.539	4.643
All operations except drywall	519,981	1,624,287	2.539	5.214
All operations except drywall, hardwood floor laying, and shingling	437,307	1,226,330	3.019	6.906
2. Plasterers	187,612	142,279	7.037	59.524
3. Lathers	67,462	66,907	19.570	126.582
4. General building laborers	149,856	163,462	8.810	51.814
5. Hod carriers	136,644	71,139	9.661	119.050
6. All skilled occupations estimated[c]	802,572	2,164,886	1.645	3.912
7. All unskilled occupations estimated[c]	303,014	233,745	4.357	36.232
8. All occupations estimated (integrated crew)[c]	1,105,721	2,398,481	1.194	3.531

[a]Derived by multiplying the total output figure by the real labor productivity figure (i.e., square feet of living space per manhour).

[b]Taken from Table 14. Derived by dividing 1,000 sq. ft. of living space by manhours per MSF.

[c]See Table 14 for the occupations included.

TABLE 22

Growth Rates[a] for Total Output, Physical Labor Productivity, and Total Manhour Requirements, 1930-1965
(Per cent per annum)

Occupation	Total output	Physical labor productivity	Total manhour requirements
1. Carpenters:			
a. All operations	5.4	1.7	3.7
b. All operations except drywall	5.4	2.1	3.3
c. All operations except drywall, floor laying and shingling	5.4	2.4	3.0
2. Plasterers	5.4	6.3	-0.9
3. Lathers	5.4	5.5	-0.0[b]
4. General building laborers	5.4	5.2	0.2
5. Hod carriers	5.4	7.4	-2.0
6. All skilled occupations	5.4	2.5	2.9
7. All unskilled occupations	5.4	6.2	-0.8
8. All occupations estimated (integrated crew)	5.4	3.2	2.2

[a]Average annual compounded rates of change between the two years.

[b]Actual figure is -0.01.

Source: Derived from data in Table 21.

other words, the rates of growth shown for physical labor productivity include the effects of technological change as well as other effects.[16]

The labor productivity growth rates in this study thus include the following major effects:

1. Technological change, which for the house building industry was essentially the new technique of organization and marketing brought to residential construction by merchant builders.

2. The arrival of the merchant builder introduced economies of scale, or "economies of mass production", through labor specialization and volume purchases of materials obtained at a discount.

3. The rate of diffusion of best practice techniques also played a role. For example, as shown in Section 2 above, the newest techniques that increase labor productivity are not used by all firms at the time of their introduction. Rather, they seem to be introduced gradually.

4. The influence of quality change in both basic materials and in the final product, the house. For example, in materials, thinner gauge plywood; in the final product, interior trim used to enhance appearance in 1930 virtually disappears by 1965.

5. The marked changes in materials used, e.g., precut studs

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[16] As Mansfield points out, the rate of technological change is only one determinant of the rate of growth of labor productivity. Other determinants are the substitution of capital for labor in response to changes in relative input prices, increases in economies of scale, increases in the use of productive capacity, the rate of diffusion of best-practice techniques, and the nature of the technological change as well as its rate. See Edwin Mansfield, The Economics of Technological Change (W.W. Norton and Co., New York, 1968), p. 22.

for random length studs; aluminum windows for double-hung windows; drywall for wet plaster, etc. Such changes in materials used increased on-site labor productivity.

Besides these effects on all of the crafts, labor productivity growth rates in the individual occupations reflect the impact of changing work assignments. In particular, carpenters had the jurisdiction for drywall in 1965, hence adding an activity that in 1930 was in the domain of lathers and plasterers as plaster was applied to interior walls. The effect worked to reduce the growth rate in productivity for carpenters below the all-occupation average. In contrast, the loss of former activities reduced manhours for plasterers, and building laborers, for example. In this case the loss of former tasks induced growth rates for productivity in these occupations that were larger than the all-occupation average.

As mentioned at the start of this study, there has been no definitive answer as to whether or not productivity growth has taken place in housebuilding. The data in Table 22 show that productivity growth has taken place on the construction site insofar as about two-thirds of the on-site operations are taken into account. In terms of the integrated crew studied, which excludes the major subtrades, productivity increased at a rate of 3.2 per cent per annum from 1930 to 1965 (see line 8, Table 22). This all-occupations' estimate of productivity growth was influenced by the substantial productivity gain for unskilled labor. For all unskilled labor combined, productivity grew at a rate of 6.2 per cent per annum as contrasted with the all-skilled-occupations' rate of 2.5 per cent (see lines 6 and 7, Table 22).

Obviously, the large productivity increases in the unskilled category reflect the virtual elimination of tasks performed by these workers in 1930. The same is true for plasterers, whose productivity growth per annum was 6.3 as the use of drywall replaced their 1930 functions.

For carpenters, three rates of productivity growth are shown in Table 22. The annual rate for carpenters that includes the total jurisdiction of the carpenter's union is 1.7 per cent per annum. Note that because the carpenters took over the activity of another craft, drywall supplanting plastering, the productivity rate was increased by 0.4 of a per cent point. As seen in Table 22, when carpenter activity excludes drywall, the productivity growth rate is 2.1 per cent. If drywall and two other definitive specialties, hardwood floor laying and shingling are excluded, then the growth rate in productivity is even higher, rising to 2.4 per cent per annum. As shown above, the productivity of carpenters in the widest definitional sense grew at a rate of 1.7 per cent per annum. What forces contributed to this growth? In Table 23, growth rates in productivity are given for the 11 major operations that comprised the tasks performed by carpenters.

The data in Table 23 show, in a different way, the same results produced in Table 14. The major sources of productivity growth came from the use of prefabricated components, i.e., prefabricated windows and prehung doors. In exterior walls, the 6.00 per cent per annum rise in productivity derived from the abolition of wall sheathing. The framing function had a lower rate of productivity advance than the total. The failure of this activity to show much productivity

growth weighed heavily in keeping the overall carpenter rate below that for the integrated crew because framing accounted for an average of 40 per cent of the carpenter's work in the two years.

As has already been pointed out, productivity actually declined in interior walls and ceilings. In this case carpenters received added work from drywall hanging so that in the ratio, 1000 sq. ft. of living area divided by manhours, the denominator was increased so that productivity declined.

This analysis of the forces underlying the total productivity rate for carpenters shows that the low productivity growth in framing (which accounted for 40 per cent of the total work), and the decline in productivity in interior walls (which accounted for an average of about 10 per cent of the time) as carpenters assumed jurisdiction for drywall hanging contributed to yielding a lower annual rate of growth for carpenter productivity than for integrated crew.

f. Manpower Forecasting

One of the aims of this study was to apply the results above to the problem of manpower forecasting. As shown in Table 22, the annual average compounded rate of growth in total output is the sum of the rates of growth in total labor requirements and physical labor productivity. If then, manpower forecasts start with a projection of demand for a product, the same rate of growth can be applied to total labor requirements if and only if a zero rate of

TABLE 23

Productivity Growth Rates for Activities
Performed by Carpenters,
1930 - 1965

Carpenter Activity	Productivity growth rate (Per cent per annum)
1. All activities	1.74
2. Footings	0.10
3. Framing	1.12
4. Exterior walls	6.00
5. Interior walls and ceilings	-1.11
6. Windows	6.81
7. Doors	4.73
8. Interior trim	3.09
9. Floors	0.63
10. Roof	1.28
11. Stairs	5.43

growth is projected for labor productivity. The above evidence in Table 22 suggests that if productivity growth had been assumed to be zero, then actual forecasts would have been too high. For example, manhours in carpentry would have been projected to grow at 5.4 per cent per annum rather than 3.7 per cent per annum.

Another problem in making occupational forecasts in construction is the shifting allocation of tasks that takes place when techniques change. For example, in the period studied here, drywall installation essentially displaced plasterers and lathers. Now, installed kitchens involve a delicate division of tasks between cabinet installers and plumbers. Given the division of tasks under present institutional arrangements, manpower forecasting is complicated. As new work methods are developed, the determination must be made as to which craft will perform the job. In those countries where the construction work force is organized industrially this complication in manpower forecasting would be precluded, of course, if there were inter-occupational mobility.

The above issue means that the forecaster must understand clearly the definition of the occupation. For example, the evidence here suggests that for carpenters in the widest jurisdictional sense, productivity grew at a rate of 1.7 per cent per annum. Hence, labor requirements on this definition grew at a rate of 3.7 per cent per annum. But, with drywall hangers involved in a separate training program, the definition excluding this group from the carpentry group would be more appropriate. On this definition, carpenter

labor requirements grew by 3.3 per cent per annum. By excluding drywall installers, about 200,000 fewer general carpenter manhours would be required.[17] In terms of men, this would mean 111 if they worked 1800 hours a year, but 160 men if they worked 1251 hours a year on the average.[18] The latter estimate of men needed can be disputed as one valid for manpower forecasting because it uses the actual average hours worked per year in residential construction, which is obviously lower than a full work year in construction (say 1800 hours, the figure most be widely used). As long as building construction has elements of casual as well as seasonal unemployment which would raise the level of frictional unemployment in this industry above an all-industry average, it seems logical to deal with the actual hours worked data rather than a theoretical norm of 1800 hours. This consideration, obviously, adds another complication that cannot be overlooked in manpower forecasting. This institutional characteristic must be considered to get realistic estimates of the workers needed in the construction industry. Obviously, this characteristic adds a complicating dimension to manpower forecasting. Not only are the kind of data that appear in Table 22 needed, but information is needed on converting full-time equivalents to actual manpower needs. As long as on-site construction activity has seasonal and casual aspects, it seems that forecasts must allow room for a less-than-full work year.

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[17] Derived from Table 21.

[18] See footnote 15 above.

This discussion leads logically to a second policy problem related to changing methods in construction, i.e., unemployment and secular change in the construction industry. Given the industry has seasonal and casual elements that lead to unemployment rates in the construction trades that exceed the general overall unemployment rate, how much unemployment persists because new techniques require less manpower than before but supply is slow to adjust to new demand requirements?

Evidence in this study cannot answer this question directly. However, in the next section we provide some insights with regard to how much less labor was needed in 1965 than in 1930. Further research would be needed to determine the lags in adjustment between demand and supply so that some notion of persistent excess supply (if, indeed, such exists) could be determined.

g. Changing Building Methods and Labor Saved

The preceding data are used in this section to show in a rough way how many fewer carpenters were needed in 1965 than in 1930 because of the changing methods in residential construction. As noted above this discussion has bearing on the unemployment issue because if supply adjustments to changing demand are slow, more persons will enter these trades than can be fully utilized so that the disequilibrium will persist.

How many carpenter manhours were saved, or how many fewer carpenters were utilized, in 1965 because of the changes that

occurred in building methods? This question is answered as follows. The actual relevant data for 1930 and 1965 are repeated in Table 24.

As seen in Table 24, the number of houses increased by more than 400 per cent over the 35 years. Further the house became larger. Had 1930 techniques prevailed, how many manhours would have been needed to build the larger number and the larger-sized houses in 1965.

Holding house size at 1,454, then 2,669,355 carpenter manhours would have been required. (572.7 manhours times 4,661 houses.) However, when the 1965 average house size of 1,817 sq. ft. of living area is used, then the number of manhours required would have been 715.7 on the basis of 1930 techniques. (This figure is obtained by applying the 1930 MSF figure of 393.9 to 1817 sq. ft. of living area.) The number of carpenter manhours that would have been used to build the 1965 house of 1817 sq. ft. of living area would then have equalled 3,335,878 (or 4,661 houses times 715.7). These data are summarized in Table 25.

As shown above, the changing building methods, including the market penetration by the merchant builder, meant that 413 per cent more houses could be built with 845,311 fewer manhours than would have been required by 1930 standards, holding the house size constant (2,669,355 minus 1,824,044). Then, even though the average house increased in size, 666,523 fewer manhours were needed in 1965 than in 1930 (3,335,878 minus 2,669,355). Consequently, because of changes

TABLE 24

Selected Data, 1930 and 1965

	1930	1965
Number of single-family dwellings	908	4,661
Average size of house (sq. ft. of living area)	1,454	1,817
Carpenter manhours of MSF of living area	393.9	215.4
Carpenter manhours per house	572.7	391.3
Total carpenter manhours required	519,981	1,824,044

TABLE 25

Total Carpenter Manhours Saved, 1930-65

Carpenter manhours		Difference from actual hours of 1,824,044
Actual, 1965: 1,824,044		
Would have been required in 1965 if 1930 techniques used:		
(a) House size, 1454 sq. ft.:	2,669,355	845,311
(b) House size, 1817 sq. ft.:	3,335,878	1,511,834

in the industry a total of 1,511,834 carpenter manhours were saved between 1930 and 1965.

How many fewer carpenters were needed in 1965 than in 1930 as a result of the changes in technology and industrial organization? The answer to this question is given on the basis of full-time equivalent employees, i.e., each carpenter worked 1800 hours a year, the work year as specified by the labor-management agreement now in effect, 36 hours per week times 50 weeks.

The data in Table 26 show that if 1965 demand and house size had prevailed but no change had taken place in construction technology or industrial organization, then the number of carpenters needed to work year-round would have totaled 1,853. However, with the changes that did take place over the 35 years, 1930-65, the full-time equivalent in 1965 was 54.6 per cent of the hypothetical number 1,853. Put in another way, the increased output over the 35 years was accomplished with a reduction of 45.4 per cent in full-time employees, from 1,853 in 1930 to 1,013 in 1965.

The above discussion obviously must be regarded as a rough approximation of carpenter manhours or employees saved over the 35 years. Another method of obtaining these data would have been to use the four sample houses in 1965 and estimate costs by applying 1930 building practices to them. This procedure was beyond our financial means so that the rough approximations above are presented to give readers a notion of the order of magnitude of labor saving that is involved.

TABLE 26

Carpenter Manhours Converted to Number of Carpenters
(Full-Time Equivalents)

1. Total manhours saved since 1930 by using 1965 building practices	1,511,834
a. Full-time equivalent employees saved (line 1 divided by 1800 hours)	840
2. Actual carpenter manhours estimated for 1965 in building single-family dwellings	1,824,044
a. Actual full-time equivalent employees (line 2 divided by 1800 hours)	1,013
3. Number of carpenters, employed full-time, if 1930 techniques had been used in 1965 (line 1a plus line 2a)	1,853

The final policy question related to the issues examined in this paper is that of the impact of rising wage rates on the prices of houses. The productivity data developed here obviously are needed to examine this issue because it is labor cost per unit of output that plays the critical role in discussing the inflationary bias, if such exists, of wage rate increases. This issue is treated in Chapter IV where the discussion centers about the variables involved in pricing houses. Before proceeding to Chapter IV, however, we digress to examine physical labor productivity growth rates over the years 1940-1965.

5. Physical Labor Productivity, 1940-1965

In Chapter I we noted that available evidence supports the hypothesis that major changes in house construction took place after World War II. On this basis, we assume that the physical productivity data developed in detail for 1930 can be an approximation for 1940's technology and industrial organization. Consequently, physical labor productivity growth rates can be derived for the 25-year period, 1940-65. The resultant growth rates for labor productivity are shown in Table 27.

These growth rates are useful as a benchmark for the debate that has surrounded the issue regarding productivity gains in single-family residential construction. The most important figure is that of 4.4 per cent for the integrated crew. This rate of productivity growth compares with 3.0 per cent for output per manhour in the entire private economy.[19]

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[19] Derived from data in Table C-34, Economic Report of the President, 1970, and in the Bureau of Labor Statistics Bulletin, No. 1249, "Trends in Output per Man-hour in the Private Economy, 1909-58," December 1959. Productivity data in these two reports were spliced in order to account for the shift in base years.

TABLE 27

Growth Rates for Physical Labor Productivity, 1940-1965
(Average annual compounded rates of change)

Occupation	Productivity growth rate
1. Carpenters:	
a. All operations	2.4
b. All operations except drywall	2.9
c. All operations except drywall, floorlaying, and shingling	3.4
2. Plasterers	8.9
3. Lathers	7.8
4. General building laborers	7.2
5. Hod carriers	10.6
6. All skilled occupations	3.5
7. All unskilled occupations	8.8
8. All occupations estimated (integrated crew)	4.4

Source: Derived from data in Table 21 on the assumption that physical labor productivity in 1930 was applicable to 1940.

Chapter IV

WHAT VARIABLES INFLUENCE THE PRICE OF SINGLE-FAMILY DWELLINGS?

1. Introduction

The third policy question remaining for discussion is: What was the influence of unit labor cost on rising house prices between 1930 and 1965? The physical labor productivity figures derived in Chapter III play an important part in answering this question for by definition unit labor cost is the hourly wage rate (wage rate plus fringes) divided by average physical labor productivity. If hourly wage rates increase by a larger percentage than physical labor productivity, then unit labor costs rise and such costs can have an inflationary bias if the rising costs are added to the price of the house. Consequently, to discuss this policy question information is needed on the price of the typical house for 1930 and 1965. In this Chapter, the analysis is extended in order to provide insights into the issue of how much, if at all, unit labor cost contributed to rising house prices.

The influence of unit labor costs must be put in perspective when discussing price changes in houses, however. A house is a durable commodity placed on a natural resource, land, whose price has a significant bearing on the final house price. Further, because large capital requirements are needed to initiate projects, money must be borrowed so that interest costs play an important role in the house price. Consequently, in this Chapter, the price

of the typical house for 1930 and 1965 is estimated. Section 2 discusses the methodology used to determine these prices, and introduces extraneous information to evaluate the derived price estimates.

In Section 3, the changes that occurred in all of the house-price determinants are examined and related to changes that took place in the two components of unit labor cost, i.e., the hourly wage rate and average physical labor productivity. Thus the impact of changes in unit labor cost on changing prices can be analyzed. The data derived show that the price per square foot of the typical house in Alameda County increased at a rate of 2.98 per cent per annum, i.e., the compounded rate of change between 1930 and 1965, and that unit labor cost estimated in this study, i.e., the labor cost for 11 identical operations (cabinets being a subgroup under interior trim) increased by 1.46 per cent per annum. When weighted to account for the other house-price components, this increase in unit labor cost accounted for seven per cent of the annual rate of growth in the unit price of the house. The other determinants entering the pricing structure thus accounted for 93 per cent of the annual increase in the unit price of the house.

In order to provide readers with an understanding of how the other house-price determinants influence house prices, Section 4 develops the analysis beyond the basic data developed for this study to answer such questions as:

1. Can further labor productivity gains stem the price

increases in single-family dwellings?

2. To what extent have consumer tastes for amenities increased house prices?

3. What is the role of land and land developments costs?

4. What is the importance of the cost of financing?

To answer these and other questions, Section 4 provides a basic cost function and examines each variable separately.

2. The Price of the Typical House in 1930 and 1965

a. Derivation of the Typical House Prices

In order to provide consistent estimates of the average price of a house in Alameda County for 1930 and 1965, the final house prices were estimated by using a building-block method that required several sources. These data are shown in Table 28.

The basic figure in deriving the price estimates was the mean building permit value for each year computed from the building permit survey. Hence, the final price is tied to the basic costs prevailing in 1930 and 1965. (See Appendix B.) For 1930, the mean building permit value was inflated by 10 per cent in order to adjust for exclusions. This 10 per cent adjustment was suggested by several persons familiar with the 1930 building practices. As noted in Chapter II, building permit figures in 1930 included only material and labor costs used in constructing the "shell of the house" and excluded the price of small fixtures, equipment, and accessories. The building permit value figure includes direct construction costs,

TABLE 28

Estimated Final House Prices and Related Data, by Totals and Per Square Foot, 1930 and 1965

Category	1930 House (1454 sq. ft.)		1965 House (1817 sq. ft.)		Percentage change, 1930 - 1965, per square foot
	Total	Per square foot	Total	Per square foot	
1. Building permit value	$ 5,277	$ 3.63	$ 17,245	$ 9.49	161.4
(a) Estimated building cost	2,984	2.05	7,530	4.14	101.9
(1) Labor costs[b]	1,328	0.91	2,747	1.51	65.9
(2) Materials' costs[b]	1,655	1.14	4,781	2.63	130.7
(b) Nonestimated building costs	2,293	1.58	9,715	5.35	238.6
2. Overhead and profit	792	0.55	2,587	1.42	158.2[a]
3. Site value	1,071	0.74	5,122	2.82	281.1
4. Total price	7,140	4.92	24,954	13.73	179.1
1. Average hourly wage rate for the integrated crew [included in line 1(a)(1)][c]	1.09		5.35		390.9
2. Square feet per manhour in 11 operations [average labor productivity][d]	1.194		3.531		195.7

[a]Percentage is slightly different from that in line 1 because of rounding.

[b]Derived from costs per MSF in Table 19.

[c]Derived from data in Tables 14 and 19.

[d]Taken from Table 21.

the builder's financing costs, and marketing costs.

Excluded from the building permit value are overhead expenses and profit and land value. Estimates for these two price components were made as follows.

We assumed that overhead expenses and profit are 15 per cent of the building permit value figure. This percentage was applied to the permit value because it is used by the Northern California Real Estate Research Committee in preparing house-cost estimates.

The site value, or land cost, figures for each of the years were based on FHA data in order to obtain consistency and hence permit a 35-year comparison. Although there are no FHA data for 1930, FHA figures for site value are available for the San Francisco-Oakland Metropolitan Area for 1938 and 1940.[1] According to these data, the average site value for 1940 was $795, or 14.5 per cent of the property value. For 1938, the mean site value was $908, which was 15.6 per cent of the property value average. On the basis of these figures, the site-value ratio for our typical houses was arbitrarily set at 15 per cent, a figure between the 1938 and 1940 FHA site-value ratios. The derived site value of $1,071 appears reasonable because it exceeds the FHA 1940 figure of $908, as would be expected on the basis of our building permit survey. The reasoning is as follows. In particular, the building permit survey showed that the mean value of permits declined from $4,797 in 1930 to $4,404

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[1] Federal Housing Administration, FHA Homes in Metropolitan Districts: Characteristics of Mortgages, Homes, Borrowers Under the FHA Plan, 1934-1940 (Federal Housing Administration, 1942), p. 206.

in 1940. Hence it is reasonable to assume that the average 1930 house carried a higher price tag than the 1940 average house. Consequently, if the site-value ratio were the same in the two years, the 1930 site value would be higher than in 1940. As shown above, the derived figure for 1930 is higher than the 1940 FHA site-value figure.

For 1965, the site-value figure used is the mean figure for new homes in the San Francisco-Oakland Area taken from FHA Homes, 1965, the Federal Housing Administration report.

It is worth stressing that use of FHA data for the site price (noting that the 1930 estimate was geared to FHA data) means that the data are consistent so that changes that took place over the 35 years in the site or land prices can be discussed.

The sum of the three estimates described above, i.e., the building permit value, site value, and overhead expenses and profit, yields the average price of the typical house in Alameda County in 1930 and 1965. These data are shown in Table 28.

Besides the three major categories explained above, the building permit value figures are itemized to show estimated and nonestimated building costs. Estimated costs refer to the labor and materials' costs dealt with in this study, i.e., the on-site construction costs for 11 building operations shown in Table 19. In 1930, the estimated building cost of $2,984 accounted for 57 per cent of the building permit value figure, while in 1965 this cost-component of $7,530 accounted for 44 per cent of the building permit

value. The decline in the relative share of this estimate reflects the larger gain proportionally in nonestimated building costs, the difference between the building permit value and the estimated building costs. These costs in both years included payments to the major subtrades not studied here, i.e., painting, plumbing, and electrical work, and loan interest costs paid by builders. In 1965, however, the figure also includes marketing and sales expenses, costs that reflect the industry's change in industrial organization over the 35 years with the advent of the merchant builder. As well, the 1965 figure as will be shown below includes quality changes that required additional on-site labor time for electrical work and plumbing in particular. Consequently, the relative share for nonestimated building costs increased over the 35 years.

b. Evaluation of the Price Estimates

Before analyzing the data in Table 28, it is important to know whether or not the derived prices, $7,140 in 1930 and $24,954 in 1965, and the price components are reasonable estimates. In this section, therefore, these data are evaluated against other evidence.

The price of $24,954 for 1965 can be checked directly against the 1965 FHA Homes publication of the Federal Housing Administration. According to this publication, the mean price for new houses in the San Francisco-Oakland Metropolitan Area in 1965 was $21,449. If this value is multiplied by the factor 1.202 in order to include all homes sold (see Chapter III), then the average price for all new homes

sold would be $25,782. This figure is 3.3 per cent higher than the 1965 estimate in Table 28. The lower figure of $24,954 shown in Table 28 is consistent with using the FHA site-value figure which is most likely an underestimate because of the bias discussed in Chapter III. Considering all of the chances for error, given the building block method of estimating the price of the typical house in this study as discussed above, the difference of 3.3 per cent does not seem unreasonable.

The 1930 price of $7,140 cannot be checked directly against other evidence. However, the following analysis suggests that this price estimate is also reasonable. We assume that prices of houses showed little change between 1930 and 1938 in the San Francisco Bay Area for two reasons. First, the population of the area increased by 117,255 between 1930 and 1940, or by 8.9 per cent over the 10 years, as contrasted with a population growth of 53.3 per cent between 1940 and 1950 and 24.2 per cent between 1950 and 1960. This relatively lower rate of population growth between 1930 and 1940 could imply that little pressure was present on housing prices from the demand side. Second, the 1930 price average shown in Table 28, $7,140, is 22.8 per cent higher than the FHA 1938 average of $5,814 for 1938. This relationship is in the expected direction because the FHA-insured homes' average is consistently lower than the average including all homes sold. In 1965, for example, to repeat, the FHA-homes--all-homes-sold ratio for the West was 1.202. The above data suggest an FHA-homes--all-homes-sold ratio of 1.228 for 1930. These ratios diverge by about

two per cent. On this reasoning, the price of $7,140 for 1930 seems reasonable.

On the basis that the total price figures are reasonable estimates of prices for the typical house in 1930 and 1965, the price-components' data are evaluated by converting the total price of the house to the price per square foot in order to standardize for the change in house size that occurred over this period. These price and/or cost data per square foot are shown in Table 28, along with their percentage changes over the 35 years. Further, to facilitate the discussion, the relative share of each price component with respect to the unit price, i.e., the price per square foot of living area, is given in Table 29. Review of the per square foot cost figures in Table 28 and their relative share in Table 29 suggests the major points that need comment regarding the estimates derived.

The 1965 relative share for the site value, or the land cost, appears low for the following reasons. In Section 4, the FHA detailed data show that in the San Francisco-Oakland Area the site-value ratio in percentage terms was 23.9 per cent in 1965. Further, data provided by two different local builders, one for a 1,450 square foot house selling for $21,350 in 1965 and the other for a 1,965 square foot house selling for $30,500 in 1965, included land and land development costs equal to $3.62 and $4.02 per square foot of selling price, respectively. These amounts accounted for 24.6 per cent and 25.9 per cent respectively of the unit price. On this basis of these

TABLE 29

Allocation of Unit Price (Price per Square Foot) Among the Components, 1930 and 1965

Unit price and price components	Per cent distribution of unit price	
	1930	1965
Price per square foot	$ 4.92	$ 13.73
Per cent	100.000	100.000
1. Building permit value	.738	.691
(a) Estimated building cost	.417	.301
(1) Labor costs	.185	.110
(2) Materials' costs	.232	.191
(b) Nonestimated building costs	.321	.390
2. Overhead and profit	.114	.103
3. Site value	.150	.205

Source: Derived from data in Table 28. (Individual square foot figures divided by the price per square foot.)

Note: Detail may not add to 100.000 due to rounding.

site-value ratios, our ratio of 20.5 per cent for 1965 in Table 29 would appear to be biased downward. As mentioned above, however, we are interested in changes that took place over a 35-year period. Inasmuch as both site value figures are based on a consistent set of data, i.e., FHA data, the 35-year increase in land prices should be meaningful.

The share for overhead expenses and profit could be biased downward because as mentioned above the cost for this variable was derived by taking 15 per cent of the building permit value, following the procedure of the Northern California Real Estate Research Committee. If in fact the 15 per cent were applied to the entire package, including land, then our data in Table 28 would represent an underestimate for both years, and the relative share shown in Table 29 would be biased downward. Again, however, the estimates for the two years are consistent so that the interyear comparisons should have merit.

The major building block for the selling price figure is the building permit value, which was, on a square foot basis, $3.63 in 1930 and $9.49 in 1965. Inasmuch as this figure is the key variable in estimating the final price of the house, can it be supported? Unfortunately, we have no direct evidence against which to test the 1930 figure. The 1965 figure, however, can be checked against data provided by two local builders. As seen in Table 30, the direct construction, marketing and financing costs per square foot of living area (the building permit value figure in Table 28) for the typical house are close to the two actual cost estimates from local builder

TABLE 30

Comparison of Our Data with Those of Two Local Builders, 1965

	Direct construction, marketing, and financing costs, per square foot	Labor costs for carpenters and laborers per square foot
Typical house, Alameda County	$ 9.49[a]	$ 1.25[c]
Local builder, house of 1,450 sq. ft.[b]	8.95	1.23[d]
Local builder, house of 1,965 sq. ft.[b]	9.16	1.14[d]

[a]See Table 28, line 1.

[b]Derived from confidential records given to us for this study.

[c]Derived from data in Table 20. Does not include amount for payroll taxes but includes hourly fringe benefits.

[d]Includes amount for payroll taxes which could not be disaggregated because the total figure includes both taxes and fringe benefits. See footnote c above.

data. The records of the two builders also permitted a check on the labor cost per square foot for carpentry and general labor (included under estimated labor costs in Table 28). As seen in Table 30, the unit labor cost figure estimated for this study for carpenters and general labor was close to those derived from the builders' records.[2]

Although the building permit value per square foot could be estimated from the records of the two builders, the distribution of this value between estimated and nonestimated labor costs was possible only from the data furnished by one of the builders. The comparison between the figures for the builder of the 1,965 sq. ft. house that sold for $30,500 with the data derived from our estimates appears in Table 31. The labor cost per square foot for carpentry and general labor is repeated in order to facilitate the following discussion.

As shown in Table 31, the unit labor cost for carpentry and general labor was 11¢ higher for the typical house we estimated than for the builder's house. However, estimated costs for the typical house were 50¢ lower for the typical house than for the builder's house, while nonestimated costs for the typical house were 83¢ higher per square foot. These data suggest that the nonestimated cost figure in this study may be biased upward. However, it must be noted that a strict comparison with our data was not

[2]The builders' records did not permit a check on the other estimated labor costs because these costs were lumped together in one figure for labor and materials.

TABLE 31

Per Square Foot Costs for Selected Items, 1965

Cost per square foot	Typical house, Alameda County	Local builder, House of 1,965 sq. ft.
1. Estimated costs (line 1(a), Table 28)	$ 4.14	$ 4.64
Carpentry and general labor cost	1.25	1.14
Other estimated labor and materials' costs	2.89	3.50
2. Nonestimated costs (line 1(b), Table 28)	5.35	4.52

possible because of a difference in the way the items were detailed by the builder. Hence, part of these differences, one higher and the other lower, may derive from errors of measurement. What is important, however, is that for the key variable involved in the following discussion regarding the inflationary bias of labor costs, i.e., unit labor cost for carpentry and general labor, the differential is only 11¢.

As noted above, the figure we show for nonestimated labor costs may be biased upward, and research regarding this aspect would be needed to determine the magnitude, if, indeed, such a bias exists. However, it must be noted that it is the nonestimated cost figure that has incorporated in it certain quality and consumer preference changes that occurred over the 35 years to enhance the comfort of single-family dwellings. In particular, this would include the increase in actual plumbing fixtures and more extensive electric wiring to support the growing use of various appliances. In 1965, for example, the final price of the house included kitchen and laundry appliances which could add about 20¢ per square foot. The inclusion of the appliances as a part of the total house package occurred in 1945 with the FHA ruling that appliances could be installed in a new house and so could be amortized with the total price of the home. Further, the 1965 house was better-equipped than the 1930 house with respect to electricity and plumbing. Electrical installation, wired for 100 or 200 Amps, 220 volts, was common in 1965 because of the larger capacity needed for modern kitchen and laundry equipment.

Further, the 1965 house had more circuits to service wall outlets and lighting units. At the same time, 1-1/2 to 2 bathrooms per house were common in new homes in 1965. In 1960, for example, 73.5 per cent of the existing homes in the San Francisco Bay Area had one bathroom. In that year, too, 91.5 per cent of the new homes built had 1-1/2 or 2 bathrooms. The cumulative effect of this quality change was that by 1965, 55.7 per cent of the existing homes had one bathroom and 42.8 per cent had 1-1/2 or 2 bathrooms. More importantly, the trend was apparently up, for of the new homes built in 1965, 85.0 per cent had 1-1/2 or 2 bathrooms, and 9.8 per cent had 2-1/2 or more bathrooms. Five years earlier, only 1.1 per cent of the new homes built in the Bay Area had 2-1/2 bathrooms or more.[3] By 1965, also, fireplaces became popular and were installed as units pre-built from the factory. But this option raised the cost of a house by from $500 to $800.

The direct costs just examined have been included here to show that consumer tastes for more convenience in a home have also played a role in the square foot cost of a house. Obviously, rising family incomes over the 35 years have enabled consumers to satisfy their tastes for comfort and convenience. In fact, our research suggests that by 1965 consumers were no longer satisfied with just houses, as was the case in 1950 when builders could sell identical houses because of the postwar scarcity. By 1965, quality variations

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[3]All data in this paragraph are taken from two reports: FHA Homes, 1960, Data for States and Selected Areas, Table 83M, and the same report for 1965, Table 10M. These reports are published by the Federal Housing Administration.

within single tract developments were important to sell houses. This qualitative impression from the interviews is supported by the data in Appendix B. As shown there, in 1950, the building permit value of 84 per cent of the tract houses was in the $6000 to $7999 class. By 1965, no one cost category dominated the permit value distribution. These data in Appendix B are also consistent with Levitt's report to the President's Committee on Urban Housing. Comparing the Levitt operation just after World War II with that in the mid-sixties, Levitt commented that, "Instead of building 5000 identical houses at a single site in one year, we now build 5000 houses in 150 varieties at 18 sites during the same time, houses whose designs are dictated primarily by marketing, not production disciplines."[4]

3. Sources of the Price Increase in Single-Family Dwellings in Alameda County

As seen in Table 28, the price per square foot of housing increased by 179.1 per cent between 1930 and 1965. Of the individual components included in the price structure, the site value rose by the largest amount, 281.1 per cent, and the estimated unit labor cost, i.e., the cost of employing the crafts used to perform the 11 operations studied here, rose by the smallest amount, 65.9 per cent. That the labor cost per unit variable rose by 65.9 per cent

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[4] Levitt and Sons, Inc., "Levitt's Comments", in The Report of the President's Committee on Urban Housing, Technical Studies, Volume II (Washington, D.C.: U.S. Government Printing Office, 1968), p. 69.

at the same time that the average hourly wage rate for the integrated crew performing the 11 operations increased by 390.9 per cent reflects the influence of the advance in physical labor productivity over the 35 years. As seen in the last line of Table 28, average labor productivity for the crew increased by 195.7 per cent from 1930 to 1965. Because the hourly wage rate increased at a faster rate than labor productivity, unit labor cost advanced over the 35 years.

As shown in Chapter I, unit labor cost is defined as the ratio of the hourly wage rate to average labor productivity. For 1930, this ratio equals $0.91 ($1.09 divided by 1.194); for 1965, $1.51 ($5.35 divided by 3.531). Thus the unit labor cost figure in 1965 is 1.659 times as large as that in 1930. Or, in percentage terms as shown in Table 28, unit labor cost increased by 65.9 per cent from 1930 to 1965. These data suggest that unit labor cost did have an impact on the increase in house prices because hourly wage rates rose at a faster rate than productivity.

It should be repeated at this point that this study does not provide labor productivity estimates for <u>all</u> on-site activity involved in building single-family dwellings. Consequently, the entire discussion with regard to the impact of rising unit labor cost on rising house prices deals with the portion of the on-site work developed in detail here. The major activities omitted are painting,

plumbing, and electrical work.[5]

Dealing with the integrated crew, unit labor cost on site increased by 65.9 per cent over the 35 years. This amount represented a constant rate of growth of 1.5 per cent per annum, the difference between the annual rate of growth of 4.7 per cent in the hourly wage rate of this crew (last line, Table 32), and the annual rate of growth of productivity of 3.2 per cent (Table 22). As shown in Table 22, productivity growth rates varied among the individual occupations as did the growth rates in hourly wage rates as shown in Table 32. Wage rates increased per annum from a low of 4.0 per cent for plasterers

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[5]Payments to these major subtrades are part of nonestimated building costs in Table 28. My guess is that the rate of labor productivity growth in these three subtrades was probably close to that for the integrated crew dealt with here. There are several reasons for this judgment. If the nonestimated building costs in Table 28 are disaggregated, roughly to be sure, then comparability with the 1930 figure is possible by excluding from the 1965 figure the following costs: marketing, financing (on the assumption that the magnitude in 1965 was more substantial than in 1930), the fireplace (common in 1965), and the electrical appliance package (common in 1965). These elements together would account for about $1.62 of the $5.35, leaving a balance of $3.73 to be compared with 1930. (The $1.62 is based on the review of a variety of sources, including the two house builders giving us detailed data.) The percentage change from $1.58 in 1930 to $3.73 in 1965 is 136.1 per cent as contrasted with 238.6 per cent for all nonestimated building costs from 1930 to 1965 as shown in Table 28. This would mean that the unit cost of the three major subtrades excluded from this study besides some other minor items would have increased by 136.1 per cent. However, part of this increase undoubtedly includes (1) materials' costs not part of the 1930 estimate, i.e., those for additional plumbing and electrical fixtures, and (2) additional hours required to install these fixtures. On the other hand, new techniques are now used in painting and plastic pipe is used in plumbing, so that labor productivity should have increased for painters and plumbers, respectively. Further, as shown in note 3 of Table 32 below, the rate of growth in hourly wage rates for the three major subtrades between 1930 and 1965 was within the range of growth rates for the individual occupations studied (see Table 32). The above reasons suggest that labor cost per unit of output for the three major subtrades could have increased at approximately the same rate as that of the integrated crew. Obviously, however, this judgment would have to be tested against evidence such as that found here for the integrated crew.

TABLE 32

Wage Rates Including Fringe Benefits, by Occupations, San Francisco-Oakland Bay Area, 1930 and 1965

Occupations	Wage rates including fringe benefits		
	Absolute numbers ($)		Average annual compounded rate of change, 1930-65
	1930	1965	
1. Individual occupations:			
Carpenter	1.125	5.40	4.6
Shingler	1.125	5.55	4.7
Hardwood floor layer	1.125	5.55	4.7
Cement finisher	1.125	5.11	4.4
Lather	1.250	5.80	4.5
Plasterer	1.375	5.48	4.0
Carpet, soft-tile and linoleum layer	--	5.20	--
Hard-tile setter	1.250	5.50	4.3
General building laborer	0.700	4.17	5.2
Hod carrier	0.940	5.20	5.0
Hard-tile helper	0.750	4.67	5.4
2. Averages for groups:			
Skilled occupations studied	1.196	5.433	4.4
Unskilled occupations studied	0.812	4.518	5.0
All occupations studied	1.091	5.345	4.7

Notes: 1. If contract rates changed during the year, the figure shown is a weighted average, weighted by the number of months the rate was in force.

2. These wage rates applied to Alameda County which is within the San Francisco-Oakland Metropolitan Area.

3. The 1930 July rates for the three major subtracts excluded from this study were $1.12 for electricians, $1.12 for painters, and $1.25 for plumbers. The July 1965 rates were $6.32 for electricians, $5.31 for painters, and $6.54 for plumbers. The rates of growth in wages were thus 5.1 per cent per annum for electricians, 4.6 per cent for painters, and 4.9 per cent for plumbers.

4. The group averages shown represent the data for individual occupations weighted by hours spent in the various operations.

Sources: California Department of Industrial Relations, Division of Labor Statistics and Research and various labor-management agreements.

to a high of 5.4 per cent for hard-tile helpers. More generally, hourly wages grew at a faster rate per annum for the unskilled group than for the skilled group, 5.0 versus 4.4, respectively.[6]

Unlike the productivity growth rates which showed a large variance about the average for the integrated crew (Table 22), the hourly wage rate growth rates did not show as wide a dispersion about the average (Table 32). This difference is logical inasmuch as men of different crafts work together on the same projects. It is not unreasonable that the trade unions involved would attempt to get wage increases of about the same percentage, even though on-site activities differ. This does not mean that each occupational group would have the same wage rate per hour. What it does mean is that having started at some wage level in 1930, then relative wage changes over the years should have been fairly close. Because of changing supply-demand conditions, however, the structure by 1965 could be different from that of 1930, as is the case. In July 1930, in the Bay Area, plasterers had the highest hourly rate, $1.37 per hour, among a group of 14 building trades' occupations.[7] By July 1965, plasterers had dropped to fourth place in this same group. It is reasonable to assume that the declining demand[8] for these workers

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[6]This finding supports the hypothesis that long-run relative skill differentials have narrowed which is consistent with evidence produced by Paul G. Keat in "Long-Run Changes in Occupational Wage Structure, 1900-56", Journal of Political Economy, LXVIII (December 1960), pp. 584-600.

[7]This group included carpenter, cement mason, electrician, painter, plasterer, plumber, roofer, lather, shingler, sheet metal worker, tile layer, general building laborer, hod carrier, and tile helper.

[8]As seen in Table 22, total manhour requirements for plasterers decline by 0.9 per cent per annum over the 35 years.

played a role in their falling in rank in this building trades' wage structure even though their productivity growth rate was almost twice as large as that for the integrated crew.

As shown above, growth rates for labor productivity and hourly wage rates, including fringes, varied among the on-site occupations studied. Important for the price impact is, however, what happened for the integrated crew. For this crew, to repeat, average physical productivity increased by 3.2 per cent per annum while the average hourly wage rate increased by 4.7 per cent per annum. By definition, the ratio of these two variables equals unit labor cost, so that by mathematical manipulation it can be shown that the difference in the growth rates between these two variables is equal to the growth rate of unit labor cost. Hence, unit labor cost for the on-site integrated crew increased 1.5 per cent per annum between 1930 and 1965. Obviously this cost increase implies that an inflationary bias is present from this source. The question that remains to be answered is: How much is the inflationary bias inasmuch as the labor costs involved represent but one of several components that enter the pricing of single-family dwellings.

To answer this question, which is of course an answer to the third policy issue in this study, the rates of growth are shown in Table 33 for the unit price (i.e., the price per square foot of living area) and for the major price components. In addition, this table shows the allocation of the unit price growth rate among the components, with the allocation made by weighting the component growth rates

TABLE 33

Rates of Growth Per Annum in the Unit Price and Its Components and the Allocation of the Price Growth Rate Among Its Components

Category	Rates of growth per annum[a]	Allocation of the price growth rate	
		Percentage points in growth rate	Per cent of growth rate
Unit price	2.98	2.98	100.000
Estimated labor cost	1.46	.21	.072
Estimated materials' cost	2.42	.52	.172
Nonestimated building cost	3.55	1.26	.424
Overhead expenses and profit	2.75	.30	.100
Site value	3.90	.69	.232

[a]Average annual compounded rate of change between 1930 and 1965.

Note: Detail may not add to total due to rounding.

Sources: Growth rates derived from columns 2 and 4 in Table 28. Allocation of growth rates derived by applying average relative share computed from data in Table 29 to the sectoral growth rates.

by the average relative share.[9]

As seen in Table 33, the unit price of the house, i.e., the price per square foot, increased at a rate of 2.98 per cent per annum between 1930 and 1965. In contrast, unit labor cost in 11 on-site operations grew at a rate of 1.46 per cent per annum. When the various growth rates are allocated by the average weights of the relative shares, the increase in this unit labor cost figure accounts for seven per cent of the 2.98 per cent annual growth rate in the unit price of the house. With the shift that took place reducing on-site hours by the substitution of prefabricated materials, the materials' cost per square foot figure grew at a rate of 2.42 per cent per annum, accounting for 17.2 per cent of the unit price increase.

The nonestimated building cost growth rate accounted for 42.4 per cent of the price rise over the 35 years, or for the largest share. As mentioned above, however, this estimate is a conglomerate of several forces, e.g., developments in the major subtrades, equipment and fixtures not included in 1930, and expenses not incurred in 1930.

The growth rate of the site value was the largest, with site cost increasing at a constant rate of 3.90 per cent per annum. This variable accounted for 23.2 per cent of the overall price rise over the 35 years.

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[9]The average of the relative shares given for each year separately in Table 29.

To sum up: Unit labor cost had an inflationary bias on the price of houses. However, not only was the growth rate for this variable lower than that of the other components, but, in addition, when weighted by its relative share in the price, this variable accounted for seven per cent of the annual rate of increase in the unit price of a house between 1930 and 1965. This finding suggests that efforts to hold down the price of single-family dwellings cannot succeed by focusing only on on-site labor costs. The trade-off from on-site to off-site work has not been costless for the materials estimated in this study rose at a rate of 2.42 per cent per annum. Further, the increase in price because of added amenities over the years cannot be considered inflationary inasmuch as this increase in price represents a different bundle of services than was provided by the 1930 house. Finally, the fastest rate of growth among the price components was the increase in the site value, which involves a scarce natural resource.[10]

In the next section, the above variables in addition to others are discussed in detail in order to provide other insights into the issues involved when answering the question regarding the reasons for the increase in the prices of single-family dwellings.

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[10]This result is consistent with findings in a broader study basically addressed to the same problem reported in Sara Behman and Donald Codella, "Wage Rates and Housing Prices," Industrial Relations, 10 (February 1971), p. 90.

4. The Costs Involved in Final Pricing

In this section, we examine a general builder's cost function and comment on each aspect. The analysis is meant to provide the reader with information on the important variables that should be considered in the final price of the home. (No attempt is made to discuss building codes and their relationship to costs.[11])

As the reader will discover, the approach in this section differs from that in the preceding sections and chapters in the study because we no longer deal with original data but rather with data from a variety of sources in order to synthesize the many ideas that came to our attention during the progress of this research.

a. House-Cost Analysis, General

An example of a basic cost function that may assist policy-makers in formulating the questions that need to be answered in order to understand the reason for rising prices in single-family dwellings is outlined below. Such a cost function would include the following variables:

1. Land costs,
2. Lot development, or site development costs,
3. Direct labor costs on the site,
4. Direct payments to subcontractors,
5. Cost of materials,
6. Cost of capital services,
7. Marketing costs, which include the sales expense per house,
8. Cost of holding houses prior to sale,

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[11] See Leland S. Burns and Frank G. Mittelbach, "Efficiency in the Housing Industry," The Report of the President's Committee on Urban Housing, Technical Studies, Vol. II (Washington, D.C.: U.S. Government Printing Office, 1968), for a review of the evidence on this issue.

9. The cost of borrowing money, i.e., the builder's loan costs, and
10. Other costs, including indirect costs and variable construction costs which involve items relating to the building of each project such as architectural fees, various government fees, insurance, and the length of the production schedule.

The reader should observe that these are costs relating to the supply side of the residential market. In an analysis dealing with the consumer side of the market, not only would the price of the house be important but in addition there would need to be a consideration of occupancy costs which would be influenced by interest rates and taxes.

Each of the above cost items is now examined.

b. Land Costs

After the initial decision is made to build a given number of houses the builder must acquire land. It is possible that land may be acquired several years before the actual building starts. According to a special survey of the National Association of Homebuilders, the average price per acre of raw land in the United States increased as follows from 1950 to 1968: 1950--$1222; 1960--$2591; 1965--$4101; and 1968--$5475.[12] According to these data, the price of raw land increased at an annual compounded rate of 8.4 per cent between 1950 and 1965 and of 8.7 per cent between 1950 and 1968. These figures are consistent with the annual compounded rates of growth of the

[12]Data obtained from a reprint of the original information provided by Mr. William Page, Bank of America, San Francisco.

site value reported in FHA Homes.[13] Between 1950 and 1965, for the United States, the value of the property site increased at an annual rate of 8.1 per cent and between 1950 and 1968 at a rate of 8.5 per cent. In contrast, the average property value of the new FHA homes increased at an annual rate of 4.7 per cent between 1950 and 1965 and at a rate of 4.9 per cent between 1950 and 1968. This faster rate of growth in land costs than in other costs included in the price of new homes raised the site-value ratio for FHA homes in the United States from 11.2 per cent in 1950 to 20.7 per cent in 1968. The same trend applied to the San Francisco-Oakland Metropolitan Area, which includes Alameda County. The price of the lot as a percentage of the final price of the house (for new houses) increased from 14.4 per cent in 1950 to 24.8 per cent [illegible] The average lot price in fact increased from $1,339 in 1950 to $6,385 in 1968 in this area, for an annual compounded rate of growth of 9.1 per cent over the 18-year interval. As the following data show, for the metropolitan area which includes Alameda County, the site price within the total house price rose steadily from 1950 to 1967 and then edged down a little in 1968. (Table 34)

Sherman Maisel studied the land cost situation for single-family housing and separated the factors entering into the cost of developed lots as follows: the cost of development, density of land use, and the price of raw land.[14] Studying the change that occurred

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[13] Annual publication of the Federal Housing Administration.

[14] See Sherman J. Maisel, "Land Costs for Single-Family Housing," California Housing Studies, Center for Planning and Development Research, University of California, Berkeley, 1963, p. 6.

TABLE 34

Value of Houses and Developed Sites Insured by the FHA, San Francisco-Oakland Metropolitan Area, 1950-1968

	Total price ($)	Site only ($)	Site value/total price (in per cent)
1950	9,308	1,339	14.4
1955	13,250	2,139	16.1
1956	14,961	2,531	16.9
1957	16,793	2,974	17.7
1958	16,707	3,121	18.7
1959	17,352	3,190	18.4
1960	17,536	3,295	18.8
1961	17,945	3,434	19.1
1962	18,245	3,742	20.5
1963	19,784	4,148	21.0
1964	20,660	4,451	21.5
1965	21,449	5,122	23.9
1966	23,639	5,877	24.9
1967	25,646	6,557	25.6
1968	25,713	6,385	24.8

Sources: Data for 1950-1960 taken from Sherman J. Maisel, "Land Costs for Single-Family Housing," California Housing Studies, Center for Planning and Development Research, University of California, Berkeley, 1963.

Data for 1961 forward taken from FHA Homes: Data for States and Selected Areas (annual releases by the Federal Housing Administration).

in the cost of a typical Bay Area lot between 1950 and 1962, Maisel's analysis shows that the FHA value of the lot increased from $1300 in 1950 (data rounded to nearest $100) to $3850 in 1962, or an increase of $2550 over these 12 years. This increase was allocated among the three factors as follows:

> $720 in cost and quality of development = 28 per cent,
> $1325 in value of raw land = 52 per cent,
> $505 from the change in the size of the lot, which increased from 5500 square feet to 6500 square feet = 20 per cent.

In Section III of his study Maisel outlines a theory of the factors influencing the price of raw land. For purposes of the study at hand, we simply note the fact that raw land had increased substantially in price in the Bay Area, and observe that if the builder is to build houses he must pay the asking price for that land. This variable then cannot be slurred over in any study of furnishing housing to the lower and middle income groups. It is also a fact that some regions have seen higher increases in land as a percentage of the final price of the house. It is important to note, however, that lot sizes have increased on the average. For this Maisel says two factors have been at work. One is the effect of higher incomes. Because space is costly, and, to many people a valuable good, we should expect that as people become wealthier they will buy more space. The other factor has derived from planning commissions and zoning ordinances. These data on land costs as a rising proportion of total property value suggest that this cost variable must be taken into account as an important element to be reckoned with when decisions are made regarding the production of low-cost housing.

c. Site Development Costs

The increase in lot price as mentioned above reflected not only the price of raw land increase but also included 28 per cent because of an increase in site development. As Maisel pointed out, this increase reflected both a rise in the unit costs of development and an increase in required standards. Counties have insisted on more improvements in streets and sewers, so that the builder has had to pay a larger share of total improvement costs.[15] Evidence available indicated that this cost has increased substantially since the early postwar years. The costs involved here were not known in the booming building years after World War II.

Detailed insights into reasons for the rise in land development costs come from a statement made to the National Commission on Urban Problems, chaired by Senator Paul Douglas, during mid-1967. At these hearings, Lawrence Weinberg detailed the cost of a house built in 1967 and one built in 1950 on the same size lot. Land development costs in 1967 were $2000 versus $650 for a lot of the same size. His statement was:

> Now, in order to put land development costs into proper perspective, in 1950 we didn't have sewers, we didn't have street lights, we didn't have underground utilities, we didn't have sidewalks either. So I would say that those items I've just enumerated account for $400 or $500 of this difference. In addition there has been a substantial increase, as we are all aware, in the costs of labor and material that go into the improving of a lot. There are additional costs because of the sophistication, and properly so, of the agencies involved. They

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[15] Maisel, op. cit., pp. 2 and 7.

> are now requiring certain soil tests and certain accommodations to whatever those soil tests indicate in terms of the development to the lot. There are, in addition -- depending on what community you are operating in -- certain fees we did not have 18 or 20 years ago. I'm not certain these are the best systems, but these fees are for the purpose of hooking up sewer systems, of creating park districts, being able to drain your property, and so on. Depending on the community, in Southern California these fees can range between $200 and $600 a lot.[16]

It should be observed that some part of the increase that has taken place is the result of underground utilities. According to House and Home, August 1965, FHA policy became such that no insurance would be granted for home mortgages in new subdivisions unless utility wires were buried. Prior to this date, including the cost of underground wiring in the mortage was not general practice. However, consumer tastes apparently were taken into account. A consumer survey in Seattle showed that prospective home buyers were willing to pay up to one per cent more on a new home if wires were hidden.[17]

d. Direct Labor Costs on the Site

Although wage rates are negotiated by labor-management agreements, total costs can be controlled by reducing manhours spent on the job site by changing materials and construction methods. In particular, the more prefabricated materials are used on the site, the more can on-site manhours be reduced. Our evidence in Chapter III

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[16] Lawrence Weinberg, op. cit., p. 49.

[17] House and Home, August 1965, p. 10.

supports this notion. Two specific examples can also be provided to support this view.

Example 1 uses the testimony of Weinberg[18] who kept records for his 1967 house of 1678 square feet and the 1950 house of 720 square feet. In 1967, Weinberg's house sold for $25,000 and in 1950 for $7,200. In 1967, construction costs accounted for 43.2 per cent of the $25,000 final price, or for $6.436 per square foot. In the 1950 house, the construction cost was $5.70 per square foot, and accounted for 57 per cent of the final price. As Weinberg pointed out, the square foot cost of construction per se increased by about 13 per cent over these 16 years, although as Weinberg points out ". . .in 1950 we were paying our carpenters $1.85 an hour and today we are paying them over $5 an hour,. . . ."[19]

The second example comes from the cost analysis provided quarterly in the Bay Area Real Estate Report prepared by the Bay Area Real Estate Research Committee, affiliated with the Bay Area Council.[20] In 1951, for this cost analysis, a typical house was specified on the technology of that period, and then for each quarter prices of the various items were brought up to date. In January 1961, a new typical house was designed to take account of new building methods and materials. In Table 35 below, prices attached to this

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[18] Op. cit., pp. 47-50.

[19] Ibid., p. 50.

[20] Known now as the Northern California Real Estate Research Committee.

TABLE 35

Changes in Housebuilding Costs for Two Typical Houses, 1951 and 1961

	1951 house (1,026 sq. ft.)		1961 house (1,395 sq. ft.)	
	January 1951	October 1960	January* 1961	
1. Preliminary	$ 115	$ 152	$ 293	
2. Insurance and taxes	126	326	134	
3. General contractor's overhead and profit	1,027	1,336	1,786	
Subtotal	1,268	1,814	2,213	
4. Materials only, general contractor				
Structural concrete (housing only)	187	192	468	Concrete foundation
Rough lumber	806	754	1,285	
Finish lumber	596	636	113	
Doors and jambs	204	215	234	(Preassembled doors includes patio sliding door and aluminum windows)
Window frames and sash	214	324	377	
Rough hardware and building paper	79	72	48	
Finish hardware	160	179	60	
Kitchen and other cabinets	147	220	292	
Window shades	30	46	0	
Subtotal	2,423	2,638	2,877	
5. Labor only, general contractor				
Carpentry	957	1,551	1,222	(Rough = $ 1,005 Finish = 217)
Construction labor	292	477	0	
Supervision -- foundation	0	12	0	
Clean up	40	85	65	
Subtotal	1,289	2,125	1,287	

- continued -

TABLE 35 -- continued

	1951 house (1,026 sq. ft.)		1961 house (1,395 sq. ft.)	
	January 1951	October 1960	January* 1961	
6. Subcontractors	$	$	$	
Stucco exterior	0	0	647	
Plumbing	960	1,289	1,443	(Includes $45 for bathroom fixtures)
Painting	575	960	585	
Electric wiring and fixtures	305	330	598	
Sheet metal and heating	438	518	582	
Hardwood floors	459	388	385	
Linoleum floors	131	130	325	
Tile work	247	209	370	
Fireplace and hearth	250	380	456	
Sheetrock	508	738	732	Gypsum board
Roof covering	338	336	594	
Subtotal	4,211	5,278	6,717	
7. Construction cost (sum of 4, 5, 6)	7,923	10,041	10,881	
8. Total cost (sum of 1, 2, 3, 7)	9,191	11,855	13,094	
Total cost per square foot	$ 8.96	$ 11.55	$ 9.39	
9. Cost per square foot for carpentry	0.93	1.41	0.87	

*Excluded from the other costs are: $135 for excavation and site development and $200 for sewer line and connection. These costs are part of land development costs and presumably would be paid regardless of the type of building put on the site.

Source: Bay Area Real Estate Report, Bay Area Real Estate Research Committee, Affiliated with the Bay Area Council, selected quarters. (Now known as the Northern California Real Estate Report issued by the Northern California Real Estate Research Committee. Title changed in 1965.)

basic house are shown for the initial period, January 1951; then for October 1960, the last time the 1951 house was priced out for materials and wages; and then for the new house in 1961. The changes in cost between January 1951 and October 1960 represent only cost changes and do not account for any changes in building methods that may have occurred. The new house in 1961, however, has a new set of material and labor hours, so that the prices now include costs of that period along with the changes in specifications made to the house. As can be seen, when the 1951 and 1961 figures are compared, the total cost per square foot increased from $8.96 to $9.39. However, the cost per square foot for carpentry actually declined, from $0.93 to $0.87. The important change was the use of more rough lumber versus finish lumber.

As can be seen, price changes and wage increases did occur, for comparing January 1951 and October 1960 indicates that rising prices and wages increased the total cost per square foot from $8.96 to $11.55, or by 28.9 per cent. Over these same 10 years, the wage rate of carpenters increased from $2.45 to $4.085 (which includes fringe benefits) or by 66.7 per cent.

These data make it possible to decompose the change in cost per square foot over the 10 years into price changes and other changes due to different building methods, different house specifications, and differing quality. The cost per square foot in 1961 is the sum of the cost in 1951 and the amount that occurred from factor cost increases from 1951 through October 1960 minus the amount that would represent the effect of the new house model that was based on

different building methods. Specifically, this formulation is

$$\$9.39 = \$8.96 + \$2.59 - \$2.16 .$$

As shown above, factor cost increases amounted to $2.59 ($11.55 less $8.96). Meanwhile the building methods were changing. In fact they changed sufficiently so that when the new house design was introduced in 1961, the price per square foot was $2.16 less than it would have been for the 1951 model built on the basis of 1951 construction practices. In particular, even with rising wage rates, direct labor costs (Item 5 in Table 35) per square foot to the general contractor were $1.27 in 1951 but $0.92 in 1961.

e. Direct Payments to Subcontractors

The general contractor has to deal with subcontractors to complete projects. Such costs might be affected to some extent by reducing quality specifications when asking for bids. According to the data in Item 6 in Table 35, the cost per square foot going to the group of subcontractors was $4.10 in 1951 and $4.81 in 1961. The 1961 house, however, had two bathrooms and more electrical services. The $0.71 increase is composed of a $1.04 increase in factor prices (i.e., rising materials; and wage costs) offset by a $0.33 decline that derived from the model change and new building techniques. That a $0.33 decline did occur is interesting because the number of subcontractors with whom the general contractor deals in completing subdivisions has increased over the past 10 years. Ten years ago, about 25 to 30 subcontractors were used but at present

about 40 subcontractors may be required.[21] According to Eisele, this increased specialization has complicated supervision and scheduling on the site and extended the number of days required to complete a house as contrasted with the late fifties and early sixties.

f. Cost of Materials

The major single variable under materials is lumber which, in Alameda County, is the primary materials' input. Because lumber is a natural resource, however, the builder has periodically been subjected to more than anticipated changes in the price of lumber which must either be absorbed through a reduction in profits or passed on to the final consumer if possible.

The evidence does suggest, however, that the reliance on lumber has diminished over the years. According to the data furnished in FHA Homes,[22] in 83 comparable metropolitan regions, 56 per cent of the houses had a wood exterior in 1940, but by 1967, 30.3 per cent of the houses had an exterior of wood or wood shingles. Inasmuch as the carpenter's main line of work is dealing with wood, the question arises as to how much the shift from wood to other materials was the result of the growing scarcity of lumber and hence a rise in price

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[21] Private communcation received from Arthur T. Eisele, California State Council of Carpenters, April 10, 1971.

[22] See FHA Homes in Metropolitan Districts: Characteristics of Mortgages, Homes, Borrowers under the FHA Plan, 1934-40 (Federal Housing Administration, 1942). See also FHA Homes 1967, Data for States and Selected Areas (Federal Housing Administration.)

versus the rising price of the carpenter's labor services. Harold Barnett[23] has examined economic scarcity in natural resources, dealing with four types of natural resources, i.e., all extractive resources, agricultural output, minerals, and timber. He found that according to his method of measuring economic scarcity, only timber products gave evidence of economic scarcity. Between 1870 and 1955, except for an interruption in the 1900 data, the time series show a steady decline in timber's labor productivity relative to the economy as a whole. Further, relative prices of all timber products quadrupled over the 85 year span he examined. In 1955, output levels in timber products were no greater than in 1900, but the 1955 prices were almost triple those in 1900.

The erratic nature of lumber prices when supply pressures restrict the flow to the housing industry can be seen by following the changes in the price of lumber that entered the typical Bay Area house mentioned above (see Table 35).

As seen in Table 36, rough lumber prices are erratic. In fact, the table fails to capture the entire volatility of these prices. For example, in January 1969 the rough lumber cost entering the price of the model home reached $2,450. Severe supply pressures hit the market for lumber products during 1968 and early 1969. This lumber price increase severely affected local builders who had not anticipated

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[23] Harold J. Barnett, "The Measurement of Change in Natural Resource Economic Scarcity," in Output, Input and Productivity Measurement, Studies in Income and Wealth, Vol. 25, (Princeton University Press, Princeton, 1961), pp. 96-99.

TABLE 36

Cost of Rough Lumber for July of Each Year

1951 house		1961 house	
Year	Cost ($)	Year	Cost ($)
1951	830	1961	1,410
1952	791	1962	1,505
1953	842	1963	1,487
1954	846	1964	1,426
1955	837	1965	1,392
1956	792	1966	1,522
1957	729	1967	1,430
1958	727	1968	1,983
1959	790	1969	1,838
1960	750	1970	1,692

Source: Bay Area Real Estate Report, Bay Area Real Estate Research Committee, Quarterly Reports.

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Source: Bay Area Real Estate Report, Bay Area Real Estate Research Committee, Quarterly Reports.

such a sharp advance when they did the initial estimating on their houses in progress.

A possible hypothesis that might be examined is that each time erratic price changes have occurred in lumber products, there has been increased momentum to find substitute products. Obviously, such substitutes could reduce the work of the carpenter unless the union were able to broaden its jurisdiction. This hypothesis would lead to the generalization that builders have control over kinds of materials used if they are able to find materials in which on-site labor hours can be traded for cheaper off-site labor hours. In Chapter III of this study we have already shown how the use of prefabricated components of various types did reduce the need for hours on the site.

g. Cost of Capital Services

Cost of the services received from capital equipment can also be varied by the builder, for these costs are related to the labor utilized. If it is found, for example, that the cost of supplying a nail gun is cheaper than using a carpenter with a hammer, the cost of capital services would rise on the presumption, of course, that this increase would be more than offset by the reduced manhours required on the construction site. A point made by most persons knowledgeable in this field, however, has been that the cost of capital services, i.e., the use of machinery on the site has never been of primary significance in the cost of building. Nevertheless,

large builders are in a position to purchase large pieces of equipment because their use would be warranted if sufficient houses were to be built. Small builders, on the other hand, probably cannot be as capital-intensive, because the cost of some machinery would be noneconomic for use on a small number of houses per year.

h. Marketing Costs

These costs represent a fixed cost to the builder. Some estimates indicate that such costs represent about five or six per cent of the final price of the house. Weinberg's sales-price analysis showed that marketing costs accounted for four per cent of the final price of the house. These costs include not only payments to the sales force but also maintenance and tax payments on model homes that are built in order to attract consumers to particular house models.

i. Cost of Holding Houses Prior to Sale

This cost can vary considerably but appears to be beyond the control of the builder. If a development is highly successful, and market conditions are favorable, the builder may have a zero cost of holding houses. If, on the other hand, the market has been misjudged, then the cost of holding houses may rise substantially, for certain fixed costs must be paid such as interest payments on loans, insurance, and taxes. Further, maintenance costs would have

to be paid in order to keep up the value of the property.

j. Cost of Borrowing Money

The impact of this cost is far-reaching, for this variable enters the price of the house in its several stages. There is no one common method of financing projects. However, a typical way might be as follows, and in each stage the rate of interest charged enters the cost. First, if the builder must obtain a land loan, the going rate of interest to purchase the land is included. Second, when he makes a land improvement loan he must pay the going rate of interest. Third, when he makes a construction loan, which in most cases is used to repay the land and land improvement loans, he must pay the going rate of interest. A rule of thumb is that the rate paid is about 1 to 1-1/2 per cent above the prime rate in effect. Finally, there is a loan for final financing, or "take-out financing". If FHA insures the loan, the builder must pay points in order to cover the difference between the FHA rate and the market rate of interest being charged by lenders. In each of these stages of financing, the cost of money in a sense pyramids and adds to the final sale price of the house.

Weinberg's records showed that financing costs accounted for 10.8 per cent of the sales price of his $25,000 house. Of the $2700 involved, $1500 was for the discount on sale of the FHA mortgage. This figure from Weinberg's testimony is supported by Levitt in his paper in the Report of the President's Committee on

Urban Housing (p. 70). According to the Levitt statement, "A mortgage discount of $1200, which seems typical today for a $25,000 house, constitutes an unproductive cost that we must reflect in our selling price ." Other evidence regarding the magnitude of the cost of money is given by Eichler and Kaplan.[24] "Even under the highly competitive conditions of the 1960's, the combined interest and fees for constructing a $20,000 house (sales price) can run between $500 and $1,000."[25]

k. Other Costs

These costs along with profit to the builder account for about 10 to 15 per cent of the sales price of the house. In the Weinberg house they accounted for 10 per cent of the $25,000 house. In its cost analysis of the typical house, the Northern California Real Estate Research Committee (formerly the Bay Area Real Estate Research Committee) allows 15 per cent of the construction cost for the builder's overhead and profit. In this instance, the only variable that could be adjusted would be the profit to the builder if he must absorb rising costs that cannot be passed on in the final sales price. This would probably vary with the strength of demand for houses.

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[24]See Edward P. Eichler and Marshall Kaplan, The Community Builders (University of California Press, Berkeley, 1967), pp. 46-47, for another description on how subdividers and merchant builders finance projects.

[25]Ibid., p. 47.

1. Cost Synthesis

After reviewing the various costs which the builder must include in the typical project, we are left with the question as to how much tradeoff is possible among costs. If our reasoning above is correct, then it would seem that the major tradeoff that is possible is in the area of construction costs that involve direct manhours paid for on the construction site and materials used. It is probably for this reason that efforts have been made to minimize the cost between these two items, for under present institutional arrangements the remaining costs are those over which the builder has but little control and consequently they have been taken as given. Is the evidence clear, however, that low-cost housing needs can be met by only reducing direct construction costs? These direct construction costs which are within the builder's control, account roughly for from 44 to 53 per cent of the final sales price. The question comes down to the following: Can direct construction costs (whether in tract developments or in factory housing) be reduced much further in order to offset increases in the variables beyond the control of builders?

The new housing effort is directed at a section of the demand curve for new housing on which no information is available because it is the portion of the market that has been excluded by the price of houses built to date. Some inroads have been made, perhaps, on a part of this market by the increasing sales of mobile homes. Families purchasing such homes of course are purchasing shelter services only, for they make no investment in land. Do low and moderate income

families have aspirations for shelter only, or are their aspirations built on viewing a home as a capital asset that will yield services of permanence beyond their ownership and also personal satisfaction in excess of shelter requirements? Answers to these questions are as important as finding the proper mix of direct construction, land, and financing costs to market a house low and moderate income families can afford to buy, because the services a house provides include many nonpecuniary elements to consumers.

APPENDIXES

APPENDIX A

Detailed Cost Estimates for the Eight Sample Houses

1596

Comments Regarding the Sample Size

Obviously, with the data in this study based on a few sample points in each year, a comment regarding the sample size is in order. For 1965, for example, our houses representing 4,661 dwellings cannot be considered a satisfactory sample in rigorous statistical terms. However, by distributing the houses to account both for custom versus tract building methods and qualitative differences in order to select "representative" houses in one of each of the four cost groups we, in effect, have a larger effective sample. Further, mass-produced homes accounted for 78 per cent of the building in 1965 and every effort was made to contact many tract builders to get a consensus on various aspects of building. The magnitude of the problems involved in this type of in-depth study is confirmed by the Bureau of Labor Statistics study. The Bureau relied on 101 different houses for its 1962 study of private new one-family dwellings. Their effective sample was larger because some reports for individual houses represented similar homes in large housing developments.[1] This characteristic, however, also applies to our sample as mentioned above.

The BLS sample was, with few exceptions, restricted to FHA appraised or mortgage-insured homes.[2] Restricting the report to FHA-insured or appraised homes means that the BLS study is biased in the direction of less expensive houses. For example, in 1964, only 23 per cent of all

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[1] Bureau of Labor Statistics, Bulletin No. 1404, June 1964, p. 2.

[2] Ibid., p. 2.

homes sold were FHA-insured, and these homes had an average sales price of $16,100 versus $22,600 for conventional mortgage homes which accounted for 63 per cent of all homes sold.[3] In addition to this bias, which obviously was necessary to conduct an intensive study because of the richness of the information in FHA records, the BLS sample of 101 different houses compares with a universe of all single-family dwellings started in 1962 of 991,300.[4] In this report, the four houses are representative of the entire population of 4,661 dwellings.

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[3] U. S. Department of Commerce and Home Finance Agency, Sales of New One-Family Homes, Annual Statistics, 1964, Table S-4, p. 16.

[4] U. S. Department of Commerce, Bureau of the Census, Housing Construction Statistics, 1889 to 1964, p. 20.

TABLE A-1: Detailed Cost Estimates for House I, 1930

Operation	Material Unit	Material Quantity	Hours Laborer	Hours Skilled	Material Cost ($)	Labor Cost ($) Laborer	Labor Cost ($) Skilled
Footings: Total:			14.8	7.8		10.39	8.82
Excavation (including backfill)	CY	5.44	8.3			5.81	
Forms	SF	196	6.5	7.8		4.58	8.82
Concrete Floor: Total:	SF	378	40.4	5.7[1]	30.89	28.31	6.38[1]
Framing: Total:			84.8	314.0	517.34	59.44	353.00
Mudsill (including bolts), beam	BF	292	1.6	5.5	17.83	1.13	6.21
Floor joists, blocking, bracing	BF	3,162	14.2	33.2	101.18	9.96	37.35
Subfloor	BF	2,111	10.5	21.1	67.55	7.38	23.54
Studs, (including basement), sole plate, top plate, bracing, blocking	BF	4,138	20.7	128.3	132.42	14.48	144.30
Ceiling joists, blocking, bracing	BF	1,275	5.7	15.0	40.80	4.02	16.85
Rafters, collar beams, bracing blocking, ridge poles	BF	2,526	17.2	82.5	73.85	12.01	92.33
Roof sheathing	BF	2,616	14.9	28.4	83.71	10.46	31.92
Outside Walls: Total:			140.6	280.3	477.02	127.45	363.87
Wall sheathing	BF	3,945	19.7	51.3	126.24	13.80	57.69
Stucco - grounds and building paper	SF	3,500		16.5	24.60		18.56
- lathing	SY	390		37.0[2]	119.48		46.31[2]
- plastering	SY	390	120.9[3]	175.5[4]	206.70	113.65[3]	241.31[4]

TABLE A-1: Detailed Cost Estimates for House I, 1930 cont.

Operation	Material Unit	Material Quantity	Hours Laborer	Hours Skilled	Material Cost ($)	Labor Cost ($) Laborer	Labor Cost ($) Skilled
Interior Walls: Total:			87.6	221.5	158.35	82.34	287.50
Plaster grounds	BF	501		39	17.00		43.87
Lathing	SY	730		58.4[2]	50.00		73.00[2]
Plaster	SY	730	87.6[3]	124.1[4]	91.35	82.34[3]	170.63[4]
Windows: Total: (including trim and hardware)	PC	20		80.0	201.67		90.00
Doors: Total:				103.9	344.00		117.00
Exterior & interior (including closets)(including trim & hardware)	PC	15		92.2	258.98		103.78
Garage (including trim & hardware)	PC	1		11.7	85.02		13.22
Inside trim: (excluding windows & doors): Total:	LF	1,972	11.6	73.6	109.10	8.12	82.84
Floors: Total:			52.3	172.1	461.07	38.83	199.07
Resilient floors	SF	211		5.5[5]	19.63		6.21[5]
Hardwood floors	SF	2,011	7.6	123.5	304.30	5.29	138.97
Tile (including wall & kitchen drainboard)	SF	224	44.7[6]	43.7	137.14	33.54[6]	53.87
Roof Cover: Total:				45.8	145.98		51.28
Composition shingles	SF	2,616		45.8[8]	145.98		51.28[8]
TOTAL			432.1	1,304.7	2,445.42	354.88	1,559.76

See footnotes after Table A-8

TABLE A-2: Detailed Cost Estimates for House II, 1930

Operation	Material Unit	Material Quantity	Hours Laborer	Hours Skilled	Material Cost ($)	Labor Cost ($) Laborer	Labor Cost ($) Skilled
Footings: Total:			41.0	38.8		29.38	43.64
Excavation (including backfill)	CY	[illegible].3	9.6			6.73	
Forms (footings, wall)	SF	815	32.4	38.8		22.65	43.64
Concrete Floors: Total:	SF	1,100	125.4	16.5[1]	105.70	87.78	18.40[1]
Framing: Total:			79.4	292.6	503.93	55.61	329.20
Mudsill (including bolts)	BF	188	1.1	4.3	14.59	0.79	4.86
Floor Joists (2 floors), blocking, bracing	BF	3,870	17.4	40.6	123.84	12.19	45.72
Subfloor (2 floors)	BF	2,257	11.3	22.6	72.22	7.89	25.39
Studs (3 floors), plates, bracing, blocking	BF	4,992	24.9	154.7	159.74	17.46	174.09
Ceiling joists (top floor), blocking, bracing	BF	1,139	5.1	12.0	36.45	3.58	13.45
Rafters, dormer studs, ridge pole, blocking	BF	1,374	9.6	38.5	43.97	6.73	43.28
Roof sheathing	BF	1,660	10.0	19.9	53.12	6.97	22.41
Exterior Walls: Total:			134.3	263.7	463.11	122.15	343.67
Wall sheathing	BF	3,808	17.1	40.0	121.86	12.00	44.98
Stucco - grounds & building paper	SF	3,400		17.7	25.02		19.91
- lathing	SY	378		35.9[2]	115.89		44.89[2]
- plastering	SY	378	117.2[3]	170.1[4]	200.34	110.15[3]	233.89[4]

TABLE A-2: Detailed Cost Estimates for House III, 1930 cont.

Operation	Material Unit	Material Quantity	Hours Laborer	Hours Skilled	Material Cost ($)	Labor Cost ($) Laborer	Labor Cost ($) Skilled
Interior Wall & Ceiling: Total:			94.5	260.1	187.20	88.83	334.12
Plaster grounds	BF	718		56.0	24.38		63.02
Lath	SY	756		60.5[2]	51.80		75.60[2]
Plaster	SY	756	94.5[3]	143.6[4]	111.02	88.83[3]	195.50[4]
Windows: (including trim & hardware) Total:	PC	16		64.0	156.36		72.00
Doors: (including trim & hardware) Total:				108.9	334.37		122.63
Exterior & interior (including casesets)	PC	17		97.2	279.35		109.41
Garage	PC	1		11.7	55.02		13.22
Inside trim: (excluding windows & doors) Total:	LF	2,416	13.4	90.6	125.80	9.51	101.92
Floors: Total:			41.4	136.5	359.34	30.57	157.31
Hardwood	SF	1,695	8.5	101.7[9]	225.88	5.93	114.41[9]
Resilient	SF	186		4.8[5]	16.05		5.43[5]
Tile (including wall & kitchen drainboard)	SF	219	32.9[6]	30.0[7]	117.41	24.64[6]	37.47[7]
Roof Cover: Total:				18.7	88.32		21.00
Composition shingles	SF	1,660		18.7[8]	88.32		21.00[8]
Stairs: Total:	SF	515		38.0	25.44		42.75
TOTAL			529.4	1,328.4	2,349.57	423.83	1,586.64

See footnotes after Table A-8

TABLE A-3: Detailed Cost Estimates for House III, 1930

Operation	Material Unit	Material Quantity	Hours Laborer	Hours Skilled	Material Cost ($)	Labor Cost ($) Laborer	Labor Cost ($) Skilled
Footings: Total:			21.9	13.3		15.34	14.94
Excavation (including backfill)	CY	7.1	10.8			7.58	–
Forms	SF	332	11.1	13.3		7.76	14.94
Concrete Floors: Total:	SF	972	75.0	14.6[1]	71.91	52.53	16.40[1]
Framing: Total:			53.1	160.9	347.28	37.29	181.06
Mudsill (including bolts), beams, posts	BF	404	1.7	6.0	21.56	1.21	6.71
Floor joists, blocking, bracing	BF	1,561	6.2	15.6	49.95	4.37	17.56
Subfloor	BF	1,310	6.5	10.5	41.92	4.58	11.79
Studs, (including basement), plates, bracing, blocking	BF	2,959	14.8	62.1	94.69	10.36	69.90
Ceiling joists, blocking, bracing	BF	805	3.2	8.0	25.76	2.25	9.06
Rafters, studs, ridge boards	BF	1,517	10.6	42.5	48.54	7.43	47.79
Roof sheathing	BF	2,027	10.1	16.2	64.86	7.09	18.25
Exterior Walls: Total:			84.5	148.9	294.96	76.70	192.80
Wall sheathing	BF	2,541	11.4	26.7	81.31	8.00	30.01
Stucco - grounds & building paper	SF	2,269		8.8	15.43		9.86
- lathing	SY	252		23.9[2]	64.66		29.92[2]
- plastering	SY	252	73.1[3]	89.5[4]	133.56	68.70[3]	123.01[4]

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TABLE A-3: Detailed Cost Estimates for House III, 1930 cont.

Operation	Material Unit	Material Quantity	Hours Laborer	Hours Skilled	Material Cost ($)	Labor Cost ($) Laborer	Labor Cost ($) Skilled
Interior Walls & Ceilings: Total:			54.9	136.4	106.80	51.63	177.51
Plaster grounds	BF	236		18.0	7.94		20.24
Lath	SY	546		43.7[2]	37.19		54.60[2]
Plaster	SY	546	54.9[3]	74.7[4]	61.67	51.63[3]	102.67[4]
Windows: (including trim & hardware) Total:	PC	15		52.5	141.80		59.06
Doors: (including trim & hardware) Total:				36.0	177.22		40.52
Exterior & interior (including closets)	PC	8		24.5	120.40		27.58
Garage	PC	1		11.5	46.82		12.94
Inside trim: (excluding windows & doors) Total:	LF	779	5.7	31.5	66.77	4.00	35.45
Floors: Total			14.0	62.8	165.21	10.36	71.73
Hardwood	SF	768	3.8	46.1[9]	102.68	2.69	51.84[9]
Resilient	SF	312		8.0[5]	26.04		9.06[5]
Tile (including kitchen drainboard)	SF	85	10.2[6]	8.7[7]	36.49	7.67[6]	10.83[7]
Roof Cover: Total:				43.0	66.55		48.37
Wood shingles	SF	1,810		43.0[8]	66.55		48.38
Stairs: Total:	BF	245		22.0	7.84		24.75
TOTAL			309.1	721.9	1,446.34	247.85	862.59

See footnotes after Table A-8

TABLE A-4: Detailed Cost Estimates for House IV, 1930

Operation	Material Unit	Material Quantity	Hours Laborer	Hours Skilled	Material Cost ($)	Labor Cost ($) Laborer	Labor Cost ($) Skilled
Footings: Total:			15.6	13.2		10.96	14.85
Excavation (including backfill)	CY	3.05	4.6			3.25	
Forms	SF	330	11.0	13.2		7.71	14.85
Framing: Total:			25.2	74.5	173.41	17.70	83.90
Mudsill (including bolts) beam	BF	194	0.8	2.4	11.10	0.55	2.73
Floor joists, blocking, bracing	BF	980	3.9	9.8	31.36	2.74	11.02
Subfloor	BF	700	3.5	5.6	22.40	2.45	6.30
Studs, plates, blocking, bracing	BF	1,390	6.9	29.2	44.48	4.86	32.84
Ceiling joists, blocking, bracing	BF	473	1.9	4.7	15.14	1.32	5.32
Rafters, Cripples, ridge pole, blocking	BF	624	3.7	15.6	19.97	2.62	17.55
Roof Sheathing	BF	905	4.5	7.2	28.96	3.16	8.14
Exterior Walls: Total:			38.9	71.0	130.98	35.30	91.57
Wall sheathing	BF	1,170	5.3	12.3	37.44	3.68	13.81
Stucco - grounds, building paper	SF	1,045		6.5	8.15		7.37
- lathing	SY	116		11.0[2]	23.91		13.77[2]
- plaster	SY	116	33.6[3]	41.2[4]	61.48	31.62[3]	56.62[4]
Interior Walls & Ceilings: Total:			27.2	71.5	50.23	25.57	92.31
Plaster grounds	BF	170		13.0	5.76		14.62
Lath	SY	272		21.8[2]	18.63		27.20[2]
Plaster	SY	272	27.2[3]	36.7[4]	25.84	25.57[3]	50.49[4]

TABLE A-4: Detailed Cost Estimates for House IV, 1930 cont.

Operation	Material Unit	Material Quantity	Hours Laborer	Hours Skilled	Material Cost ($)	Labor Cost ($) Laborer	Labor Cost ($) Skilled
Windows: (Including trim & hardware) Total:	PC	8		28.0	45.97		31.50
Doors: (including trim & hardware) (including closets) Total:	PC	6		18.7	70.66		21.01
Inside trim: Total:	LF	520	3.9	21.4	22.00	2.73	24.13
Floors: Total:			4.0	11.9	46.29	2.82	13.57
Softwood	SF	574	2.9	9.3[9]	38.57	2.01	10.50[9]
Resilient	SF	60		1.5[5]	4.96		1.72[5]
Tile (kitchen drainboard)	SF	6	1.1[6]	1.1[7]	2.76	0.81[6]	1.35[7]
Roof Cover: Total:				9.7	52.12		10.91
Composition shingles	SF	970		9.7[8]	52.12		10.91[8]
TOTAL			114.8	319.9	591.66	95.08	383.75

See footnotes after Table A-8

TABLE A-5: Detailed Cost Estimates for House I, 1965

Operation	Material Unit	Material Quantity	Hours Laborer	Hours Skilled	Material Cost ($)	Labor Cost ($) Laborer	Labor Cost ($) Skilled
Footings: Total			3.6	10.6	26.40	15.01	57.33
Excavation	CY	6.9		2.0[10]			11.00[10]
Forms			3.6	7.2		15.01	38.88
Reinforcements	LB	240		1.4	26.40		7.45
Concrete Floors: Total:	SF	880	6.6	7.0[1]	187.35	27.65	35.98[1]
Framing: Total:			54.1	295.8	1,810.50	225.51	1,597.76
Beam, mudsill (including bolts), pier blocks	BF	264	0.3	13.7	49.20	1.42	73.93
Floor joists, blocking, bridging (one floor)	BF	2,719	10.9	35.3	271.90	45.37	190.89
Subfloor (one floor)	BF	2,588	3.9	14.2	318.00	16.18	76.84
Studs, sole plates, top plate, blocking, bracing (two floors)	BF	4,140	24.9	124.2	420.00	103.75	670.68
Ceiling joists, ceiling beams, blocking, bracing	BF	1,954	11.7	58.6	195.40	48.87	316.55
Redwood T & G, roof sheathing	SF	1,836	2.4	49.8	556.00	9.92	268.87
Outside Walls: Total:			18.2	55.6	483.95	92.02	307.25
Felt, redwood sawn rustic siding	SF	1,016	3.0	13.4	330.69	12.72	72.36
Stucco - lathing	SY	194		11.7[2]	60.14		67.86[2]
- plastering	SY	194	15.2[3]	30.5[4]	93.12	79.30[3]	167.03[4]
Inside Walls & Ceilings: Total:				91.0	734.25		491.07
Insulation	SF	666		6.7	39.29		35.96
Sheetrock	SF	6,482		57.7	337.96		311.47
Cherry plywood siding	SF	700		26.6	357.00		143.64

TABLE A-5: Detailed Cost Estimates for House I, 1965 cont.

Operation	Material Unit	Material Quantity	Hours Laborer	Hours Skilled	Material Cost ($)	Labor Cost ($) Laborer	Labor Cost ($) Skilled
Windows: (including solid glass) Total:	PC	18		43.9	542.34		237.06
Doors: (including trim) Total:				23.7	460.28		127.98
Exterior and interior	PC	12		12.0	266.97		64.80
Wardrobe	PC	5		8.7	133.50		46.98
Garage	PC	1		3.0	59.81		16.20
Inside trim: Total:				33.8	94.51		182.91
Baseboard, picture mold	LF	774		23.2	69.66		125.40
Window trim	LF	355		10.6	24.85		57.51
Floors: Total:				97.7	510.98		537.86
Resilient	SF	583		11.9[5]	251.28		61.78[5]
Hardwood	SF	1,330		85.8[9]	259.70		476.08[9]
Roof Cover: Total:				11.9	130.88		59.58
Tarn and Gravel	SF	1,636		11.9[11]	130.88		59.58[11]
Cabinets: Total				8.0	740.00		43.20
Kitchen, vanity, wardrobe drawer units, linen	LF	74		8.0	740.00		43.20
Stairs: Total:	BF	173		8.0	70.94		43.20
TOTAL			82.5	687.0	5,792.38	360.19	3,721.18

See footnotes after Table A-8

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TABLE A-6: Detailed Cost Estimates for House II, 1965

Operation	Material Unit	Material Quantity	Hours Laborer	Hours Skilled	Material Cost ($)	Labor Cost ($) Laborer	Labor Cost ($) Skilled
Footings: Total:			9.8	23.5	35.97	40.87	126.99
Excavation	CY	7.7		2.0[10]			11.00[10]
Forms	LF	490	9.8	19.6		40.87	105.84
Reinforcement	LB	327		1.9	35.97		10.15
Framing: Total:			85.7	293.9	2,190.54	357.54	1,589.61
Beam, mudsill (including bolts), pier blocks	BF	328	0.3	18.1	77.23	1.42	97.59
Floor joists, blocking, briding (2 floors)	BF	4,994	20.0	64.9	499.40	83.32	352.62
Subfloor (2 floors)	SF	2,638	7.9	23.7	527.52	33.03	128.19
Studs, sole plate, top plate, headers, blocking, bracing, (2 floors)	BF	5,340	32.0	106.8	545.34	133.56	576.72
Ceiling joists	BF	1,446	6.5	20.2	144.60	27.15	109.30
Rafters, ridge board, ribbons, bracing, blocking	BF	1,293	7.8	32.3	129.30	32.36	174.53
Roof sheathing, plancher board	SF	2,790	11.2	27.9	267.15	46.70	150.66
Outside Walls: Total:			16.6	94.7	948.58	82.82	517.70
Stucco - lathing	SY	168		10.1[2]	52.08		58.75[2]
- plastering	SY	168	13.2[3]	26.4[4]	80.64	68.64[3]	144.62[4]
Redwood siding, felt, blocking	SF	2,087	1.7	49.2	778.43	7.26	265.95
Drip Molding	LF	160					
Box eves	SF	416	1.7	9.0	37.43	6.92	48.38
Inside Walls & Ceilings: Total:				51.7	317.69		279.40
Sheetrock	SF	4,648		43.5	244.25		235.17
Birch Siding	SF	216		8.2	73.44		44.23

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TABLE A-6: Detailed Cost Estimates for House II, 1965 cont.

Operation	Material Unit	Material Quantity	Hours Laborer	Hours Skilled	Material Cost ($)	Labor Cost ($) Laborer	Labor Cost ($) Skilled
Windows: Total:	PC	14		7.5	280.70		40.50
Doors: (including trim) Total:				16.1	267.66		86.94
Exterior and interior	PC	10		10.0	157.94		54.00
Wardrobe	PC	5		6.1	109.72		32.94
Inside trim: Total:				14.5	33.95		78.57
Baseboard	LF	285		8.5	19.95		46.17
window trim	LF	200		6.0	14.00		32.40
Floors: Total				67.5	368.72		370.25
Resilient	SF	1,134		13.3[5]	183.66		69.16[5]
Hardwood	SF	974		54.2[9]	185.06		301.09[9]
Roof Cover: Total:				32.4	446.67		174.29
Wood shakes	SF	2,395		28.3[8]	446.67		156.84[8]
Prestocking	SF	2,395		4.1[12]			17.45[12]
Cabinets: Total:				6.0	570.00		32.40
Wall, base, counter top, drawer units	LF	27		6.0	570.00		32.40
Stairs: Total	BF	428		18.0	119.24		97.20
TOTAL			112.1	625.8	5,579.72	481.23	3,393.85

See footnotes after Table A-8

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TABLE A-7: Detailed Cost Estimates for House III, 1965

Operation	Material Unit	Material Quantity	Hours Laborer	Hours Skilled	Material Cost ($)	Labor Cost ($) Laborer	Labor Cost ($) Skilled
Footings: Total:			5.9	27.1	43.01	24.44	146.54
Excavation	CY	7.6		2.0[10]			11.00[10]
Forms	LF	586	5.9	23.4		24.44	126.58
Reinforcement	LB	391		1.7	43.01		8.96
Concrete Floor: Total	SF	469	3.3	3.7[1]	92.44	13.68	19.16[1]
Framing: Total:			10.5	136.7	1,302.09	43.78	739.09
Mudsill (including bolts), pier blocks & posts	BF	390	0.4	4.8	70.98	1.50	25.81
Girders, rim joist	BF	1,005	1.0	10.0	108.72	4.17	54.27
Subfloor (T & G)	SF	1,679		13.4	306.25		72.52
Studs, sole plate, top plate, headers, blocking, bracing	BF	4,568	9.1	50.2	439.49	38.11	271.35
Ceiling joists	BF	1,259		15.5	115.83		83.97
Rafters, ridge boards, purlins, bracing	BF	1,341		16.6	123.37		89.42
Roof sheathing (spaced)	BF	1,494		26.2	137.45		141.75
Outside Walls: Total:			16.9	50.1	230.40	87.78	279.85
Stucco - lathing	SY	288		16.4[2]	89.28		95.06[2]
- plastering	SY	288	16.9[3]	33.7[4]	141.12	87.78[3]	184.79[4]
Inside Walls & Ceilings: Total:				46.3	293.29		250.29
Insulation	SF	1,324		11.2	64.54		60.75
Sheetrock	SF	4,473		35.1	228.75		189.54

TABLE A-7: Detailed Cost Estimates for House III, 1965 cont.

Operation	Materials Unit	Materials Quantity	Hours Laborer	Hours Skilled	Material Cost ($)	Labor Cost ($) Laborer	Labor Cost ($) Skilled
Windows: Total:	PC	13		3.2	315.78		17.55
Doors: (including trim) Total:			1.9	12.5	488.30	7.92	67.50
Exterior, interior, sliding, bifold, pocket	PC	16	1.6	8.0	370.50	6.67	43.20
Wardrobe	PC	3	0.3	1.5	57.99	1.25	8.10
Garage	PC	1		3.0	59.81		16.20
Inside trim: Total:				14.7	45.40		79.38
Baseboard	LF	360		9.0	21.60		48.60
Window trim	LF	230		5.7	13.80		30.78
Floors: Total				73.6	700.85		402.97
Resilient	SF	348		6.9[5]	107.25		36.09[5]
Carpeting	SF	772		8.6	361.20		44.72
Hardwood	SF	859		47.8[9]	158.24		265.51[9]
Slate	SF	82		10.3[7]	74.16		56.65[7]
Roof Cover: Total:				35.1	485.65		189.86
Wood Shakes	SF	2,604		30.7[8]	485.65		170.55[8]
Prestocking	SF	2,604		4.4[12]			19.31[12]
Cabinets: Total:				4.0	704.50		21.60
Kitchen, bathroom, vanities, shelves	LF	50		4.0	704.50		21.60
TOTAL			38.5	407.0	4,701.71	177.60	2,213.79

See footnotes after Table A-6

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TABLE A-8: Detailed Cost Estimates for House IV, 1965

Position	Material Unit	Material Quantity	Hours Laborer	Hours Skilled	Material Cost ($)	Labor Cost ($) Laborer	Labor Cost ($) Skilled
Footings: Total:			3.9	18.7	28.71	16.30	101.45
Excavation	CY	6.1		2.0[10]			11.00[10]
Forms	LF	391	3.9	15.6		16.30	84.46
Reinforcement	LB	261		1.1	28.71		5.99
Concrete floors: Total:	SF	396	2.8	3.2[1]	78.05	11.55	16.20[1]
Framing: Total:			7.3	91.1	980.40	30.19	491.98
Mudsill (including bolts), pier blocks, posts	BF	258	0.3	3.4	47.10	1.08	18.58
Rim joists, girders	BF	676	0.7	6.8	61.61	2.84	36.50
Subfloor	SF	1,138		9.1	197.81		49.14
Studs, sole plate, top plate, headers, blocking, bracing	BF	3,148	6.3	34.6	293.65	26.27	187.00
Ceiling joists	BF	933		8.9	85.03		47.84
Rafters, ridge boards, ties, perlins, braces	BF	1,096		10.4	99.89		56.21
Roof sheathing	SF	2,132		17.9	195.31		96.71
Outside Walls: Total:			8.3	24.7	113.60	43.26	137.99
Stucco - lathing	SY	142		8.1[2]	44.02		46.86[2]
- plastering	SY	142	8.3[3]	16.6[4]	69.58	43.26[3]	91.13[4]
Inside Walls & Ceilings: Total:				37.4	227.40		201.80
Insulation	SF	823		7.0	33.54		37.80
Sheetrock	SF	3,835		30.4	193.86		164.00

TABLE A-8: Detailed Cost Estimates for House IV, 1965 cont.

Position	Material Unit	Material Quantity	Hours Laborer	Hours Skilled	Material Cost ($)	Labor Cost ($) Laborer	Labor Cost ($) Skilled
Windows: Total:	PC	7		1.7	112.95		9.45
Doors: (including trim) Total:			1.4	10.0	286.31	5.84	54.00
Exterior, glass sliding interior	PC	8	.8	4.0	150.47	3.34	21.60
Wardrobe closet	PC	6	.6	3.0	83.65	2.50	16.20
Garage	PC	1		3.0	52.19		16.20
Inside trim: Total:				9.8	23.64		53.19
Base molding	LF	280		7.0	16.80		37.80
Window trim	LF	114		2.8	6.84		15.39
Floors: Total:				49.1	173.85		271.05
Resilient	SF	169		3.4[5]	33.63		17.58[5]
Hardwood	SF	820		45.7[9]	140.22		253.47[9]
Roof cover: Total:				15.4	170.56		81.90
Composition shingles	SF	2,132		12.6[8]	170.56		69.82[8]
Prestocking	SF	2,132		2.8[12]			12.08[12]
Cabinets: Total:				4.0	458.50		21.60
Kitchen, bathroom vanities	LF	49		4.0	458.50		21.60
TOTAL			23.7	265.1	2,653.97	107.14	1,440.61

See footnotes after Table A-8

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Footnotes to tables in Appendix A.

Hours and dollar costs in the laborer column without a footnote reference refer to Building Laborer; in the skilled column, they refer to Carpenter.

[1]Cement finisher

[2]Lather

[3]Hod carrier

[4]Plasterer

[5]Linoleum layer (1930); Carpet-linoleum layer (1965)

[6]Tile helper

[7]Tile setter

[8]Shingler

[9]Hardwood floorlayer

[10]Excavation machine operator

[11]Roofer

[12]Teamster

APPENDIX B

Data Obtained from Building Permit Survey

in

Alameda County, California

TABLE B-1

Number of Builders by Size-Class of Permits Filed,
Alameda County, California,
1940, 1950, 1955, and 1960

Size-class of permits filed	Number of builders						
	1940	1950		1955		1960	
	50 per cent sample	50 per cent sample	100 per cent sample	50 per cent sample	100 per cent sample	50 per cent sample	100 per cent sample
1-5	359	580	10	579	49	173	24
6-19	29	14	9	28	32	3	22
20-49	5	0	4	1	32	0	22
50-99	0	0	4	1	19	0	8
100-199	0	0	6	0	12	0	6
200-299	0	0	1	0	0	0	5
300-499	0	0	2	0	1	0	0
500 or more	0	0	1	0	1	0	0
Permits on which builders name excluded	297	15	0	19	0	0	0

Source: Building permit records, issuing offices, Alameda County.

Note: The 50 per cent sample is for builders filing one permit. The 100 per cent sample is for builders filing two or more permits. See Table 1, p. 19, for comparable 1930 and 1965 data.

TABLE B-2

Number of Houses by Size-Class of Builders, Alameda County, California, for the 100 Per Cent Sample, 1950, 1955, and 1960

Size-class of builder	Number of houses		
	1950	1955	1960
1 - 5	26	92	72
6 - 19	99	266	231
20 - 49	170	851	722
50 - 99	248	1,452	580
100 - 149	244	1,066	549
150 - 199	706	680	345
200 - 299	221	0	1,255
300 - 399	711	330	0
400 - 499	0	0	0
500 - 599	0	0	0
600 - 699	702	842	0
Total	3,127	5,579	3,754

Source: Building permits, issuing offices, Alameda County.

Note: See Table I, p. 19, for comparable 1965 data.

TABLE B-3.1

Distribution of Single-Family Dwellings
by Building Permit Value,
Alameda County, California,
1930 and 1940

Building permit value ($)	Number of dwellings	
	1930	1940
Less than 2,000	40	16
2,000 - 3,999	320	1,122
4,000 - 5,999	288	1,088
6,000 - 7,999	96	168
8,000 - 9,999	46	54
10,000 - 11,999	16	22
12,000 - 13,999	4	16
14,000 - 15,999	6	4
16,000 - 17,999	4	6
18,000 - 19,999	4	2
20,000 - 21,999	4	0
22,000 - 23,999	0	2
Total	828	2,500

Source: Building permit records, issuing offices, Alameda County.

Note: Over 50 per cent sample. Sample number doubled to get total population.

TABLE B-3.2

Distribution of Single-Family Dwellings by Building Permit Value, Alameda County, California, 1950, 1955, 1960, and 1965

Building permit value ($)	Number of dwellings							
	1950		1955		1960		1965	
	50 per cent sample	100 per cent sample	50 per cent sample	100 per cent sample	50 per cent sample	100 per cent sample	50 per cent sample	100 per cent sample
Less than 6,000	279	139	102	40	12	3	10	3
6,000 - 7,999	494	2,640	200	2,660	68	71	8	5
8,000 - 9,999	378	305	308	2,549	94	565	18	118
10,000 - 11,999	294	43	240	243	134	1,634	28	373
12,000 - 13,999	170	0	270	65	200	894	46	777
14,000 - 15,999	112	0	176	19	166	349	58	696
16,000 - 17,999	36	0	100	1	188	154	98	629
18,000 - 19,999	56	0	80	0	100	34	112	432
20,000 - 21,999	30	0	42	1	88	26	88	397
22,000 - 23,999	16	0	28	1	44	9	86	78
24,000 - 25,999	23	0	11	0	52	15	122	44
26,000 - 27,999	4	0	6	0	30	0	60	11*
28,000 - 29,999	8	0	6	0	6	0	66	--
30,000 - 31,999	10	0	16	0	12	0	64	--
32,000 - 33,999	6	0	8	0	12	0	46	--
34,000 or more	10	0	48	0	28	0	94	--
Total	1,926	3,127	1,641	5,579	1,234	3,754	1,004	3,563

Source: Building permit records, issuing offices, Alameda County.

*This number is for houses $26,000 or more.

Note: For the 50 per cent sample, the sample number was doubled to get the total population.

BIBLIOGRAPHY

Books and Monographs

Becker, B William. Manhours Worked During 1965 by Carpenters in the 46 Northern California Counties. Foreword by Sara Behman. Berkeley, California: Center for Labor Research and Education, Institute of Industrial Relations, University of California, Berkeley, May 1968. Mimeographed.

Christie, Robert A. Empire in Wood. Ithaca: Cornell University Press, 1956.

Colean, Miles L. and Newcomb, Robinson. Stabilizing Construction. New York: McGraw-Hill Book Company, 1952.

Conference on Research in Income and Wealth. Output, Input and Productivity Measurement, Studies in Income and Wealth. Vol. 25. A Report of the National Bureau of Economic Research. Princeton: Princeton University Press, 1961.

Daily, James Merle. "Skill Utilization and Its Impact Upon Apprenticeship Programs in the Home Building Industry." Unpublished Ph.D. dissertation, University of Colorado, 1964.

Denison, Edward F. The Sources of Economic Growth in the United States and the Alternatives Before Us. New York: Committee for Economic Development, 1962.

Eichler, Edward P., and Kaplan, Marshall. The Community Builders. Berkeley and Los Angeles: University of California Press, 1967.

Fortune Editors. Housing America. New York: Harcourt, Brace, 1932.

Grebler, Leo. Production of New Housing. New York: Social Science Research Council, 1950.

Haber, William, and Levinson, Harold. Labor Relations and Productivity in the Building Trades. Ann Arbor: University of Michigan Press, 1956.

Herzog, John P. The Dynamics of Large-Scale Housebuilding. Berkeley, California: Institute of Business and Economic Research, University of California, Berkeley, 1963.

Kaplan, Lawrence J. "Factors Affecting Productivity in the Homebuilding Industry." Unpublished Ph.D. dissertation, Columbia University, 1958.

Kelly, Burnham, and others. Design and Production of Houses. New York: McGraw-Hill Book Company, 1959.

Maisel, Sherman J. Housebuilding in Transition. Berkeley and Los Angeles: University of California Press, 1953.

_____. "Land Costs for Single-Family Housing." In California Housing Studies. Berkeley, California: Center for Planning and Development Research, University of California, Berkeley, 1963.

Mansfield, Edwin. The Economics of Technological Change. New York: W. W. Norton and Co., 1968.

National Association of Home Builders Research Foundation, Inc. Concrete Flatwork in Residential Construction, Industrial Engineering Study for the Portland Cement Association. Rockville, Md.: NAHB Research Foundation, Inc., 1966.

Salter, W. E. G. Productivity and Technical Change. Cambridge, England: Cambridge, University Press, 1966.

Articles

Barnett, Harold J. "The Measurement of Change in Natural Resource Economic Scarcity," in Output, Input, and Productivity Measurement Studies in Income and Wealth. Vol. 25, Conference on Research in Income and Wealth. Princeton: Princeton University Press, 1961.

Behman, Sara, and Codella, Donald. "Wage Rates and Housing Prices," Industrial Relations, 10 (February, 1971). (Reprint No. 351 in the Reprint Series of the Institute of Industrial Relations, University of California, Berkeley, California.)

Burns, Leland S., and Mittelbach, Frank. "Efficiency in the Housing Industry," in The Report of the President's Committee on Urban Housing, Technical Studies, Volume II. Washington: U. S. Government Printing Office, 1968.

Downs, Anthony. "Moving Toward Realistic Housing Goals," in Agenda for the Nation. Edited by Kermit Gordon. Washington: The Brookings Institution, 1968.

Dunlop, John T., and Mills, D. Quinn. "Manpower in Construction: A Profile of the Industry and Projections to 1975," in The Report of the President's Committee on Urban Housing, Technical Studies, Volume II. Washington: U.S. Government Printing Office, 1968.

Fortune, "The Industry Capitalism Forgot." Vol. XXXVI, No. 2, August, 1947.

Johnson, Ralph J. "Housing Technology and Housing Costs," in The Report of the President's Committee on Urban Housing, Technical Studies, Volume II. Washington: U. S. Government Printing Office, 1968.

Keat, Paul G. "Long-Run Changes in Occupational Wage Structure, 1900-1956," Journal of Political Economy, LXVIII (December, 1960).

Levitt and Sons, Inc. "Levitt's Comments," in The Report of the President's Committee on Urban Housing, Technical Studies, Volume II. Washington: U.S. Government Printing Office, 1968.

Richman, Raymond L. Comments on a paper by George L. Stigler, "Economic Problems in Measuring Changes in Productivity," in Output, Input, and Productivity Measurement, Studies in Income and Wealth. Vol. 25. Conference on Research in Income and Wealth. Princeton: Princeton University Press, 1961.

Sims, Christopher A. "Efficiency in the Construction Industry," in The Report of the President's Committee on Urban Housing, Technical Studies, Volume II. Washington: U.S. Government Printing Office, 1968.

Whelchel, Barry D. "Informal Bargaining in Construction," Industrial Relations, 10, (February, 1971).

Government Publications and Sources

California Department of Industrial Relations, Division of Labor Statistics and Research. Various labor-management agreements.

California State Board of Equalization, Division of Assessment Standards. Residential, Multiple Residential and Motels Building Cost Manual: Part I of the Building Supplement, 1961. Sacramento, California.

California State Board of Equalization. Specification of Typical Construction for Class "D" Construction. August 16, 1940. Processed.

Economic Report of the Governor, 1969. Transmitted to the California Legislature March 1, 1969. Sacramento, California.

Federal Housing Administration. FHA Homes in Metropolitan Districts: Characteristics of Mortgages, Homes, Borrowers under the FHA Plan, 1934-1940. Washington: Federal Housing Administration, 1942.

National Commission on Urban Problems. Hearings Before the National Commission on Urban Problems, Vol. 2, June-July 1967, Los Angeles and San Francisco. Washington: U.S. Government Printing Office, February, 1968.

The President's Committee on Urban Housing. The Report of the President's Committee on Urban Housing, A Decent Home. Washington: U.S. Government Printing Office, 1969.

U.S. Department of Commerce, Bureau of the Census. Construction Reports--Series C25 Housing Sales, Sales of New One-Family Homes, Annual Statistics. Selected issues. Washington: Bureau of the Census.

U.S. Department of Housing and Urban Development, Federal Housing Administration. FHA Homes, Data for States and Selected Areas on Characteristics of FHA Operations under Section 203. Selected issues. Washington: FHA, Division of Research and Statistics, Statistics Section.

U.S. Department of Labor, Bureau of Labor Statistics. Labor and Material Requirements for Private One-Family House Construction. Bulletin No. 1404. Washington: U.S. Government Printing Office, June 1964.

_____. Labor and Material Requirement Studies. These are BLS Report 299 and BLS Bulletin Nos. 1299, 1331, 1340, 1390, 1402, 1404, 1441, 1490, 1586, and 1691. Washington: U.S. Government Printing Office, various dates.

_____. Structure of the Residential Building Industry in 1949. Bulletin No. 1170. November 1954.

_____. Trends in Output per Man-Hour in the Private Economy, 1909-58. Bulletin No. 1249.

Periodicals and Miscellaneous

Architect and Engineer. "Estimator's Guide." Various dates.

Architects' Small House Service Bureau, The Small Home. September 1931.

Architectural Record. "Estimator's Guide, S.F. Bay Area," Various dates.

Bank of America. Cost Data, Single Family Residence. June 1965.

Batelle Memorial Institute. Columbus Laboratories. Final Report on the State of the Art of Prefabrication in the Construction Industry. September 29, 1967. R. B. Guy and others.

Behman, Sara. Preliminary summary of results from a survey of former carpenter apprentices. Center for Labor Research and Education, Institute of Industrial Relations, University of California, Berkeley, California. May 1968. Mimeographed.

Cal Pacific Estimators, editors. National Construction Estimator. Los Angeles: Craftsman Book Company. Various dates.

C. C. Crow Publications, Inc. Crow's Forest Product Publications. Portland, Oregon.

Engineering News Record. Various issues.

House and Home. Various issues.

Northern California Real Estate Research Committee. Northern California Real Estate Report. Various issues. Prior to 1965 this was entitled the Bay Area Real Estate Report and published by the Bay Area Real Estate Research Committee.

Random Lengths. A weekly report on lumber and plywood/prices and marketing. Eugene, Oregon.

Walker Co. (Frank R.) The Building Estimator's Reference Book. Chicago, Illinois. Various dates.

Weinberg, Lawrence. Statement in Hearings Before the National Commission on Urban Problems, Vol. 2, June-July 1967, Los Angeles and San Francisco. Washington: U.S. Government Printing Office, February 1968, pp. 44-57.

Other Sources

1. Interviews and correspondence with contractors, manufacturers, union officials, government officials, and others.

2. Trade journals besides those listed above.

3. Price lists from manufacturers and wholesalers, Sear's Roebuck Catalog, and Montgomery Ward's Catalog.

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VT 017 731
ANNUAL EVALUATION REPORT TO THE STATE BOARD OF EDUCATION--1971.

NEVADA STATE ADVISORY COUNCIL FOR MANPOWER TRAINING AND CAREER EDUCATION, CARSON CITY.
MF AVAILABLE IN VT-ERIC SET.
PUB DATE - 71 36P.

DESCRIPTORS - ANNUAL REPORTS; *STATE PROGRAMS; *VOCATIONAL EDUCATION; CAREER EDUCATION; *MANPOWER DEVELOPMENT; JOB TRAINING; *PROGRAM EVALUATION; *STATEWIDE PLANNING
IDENTIFIERS - *NEVADA; EDUCATIONAL AWARENESS; EMPLOYMENT SKILLS

ABSTRACT - IN THE FACE OF RAPIDLY CHANGING SOCIETY AND ADVANCING TECHNOLOGY, THE VOCATIONAL EDUCATION PROGRAMS OF NEVADA ARE ATTEMPTING TO MEET THE CHALLENGE OF EFFICIENT AND EFFECTIVE CAREER PREPARATION FOR ALL YOUTH. TO EVALUATE THE PROGRAM IN 1971, THE ADVISORY COUNCIL SET FORTH THREE EVALUATION GOALS: (1) TO DETERMINE THE SUITABILITY OF THE STATE PLAN GOALS IN TERMS OF STUDENT AND LABOR MARKET NEEDS AND THE EXTENT TO WHICH THESE GOALS WERE MET, (2) TO DETERMINE THE EFFECTIVENESS OF LOCAL VOCATIONAL EDUCATION PLANS IN PROVIDING FOR CAREER AWARENESS AND JOB PLACEMENT, AND (3) TO EVALUATE THE ACTION TAKEN ON THE 1970 RECOMMENDATIONS. FINDINGS AND CONCLUSIONS ARE DETAILED IN THIS REPORT AND 12 NEW RECOMMENDATIONS ARE ADDED TO THE FOUR WHICH REMAINED UNACCOMPLISHED FROM THE 1970 REPORT. THE NEW RECOMMENDATIONS INCLUDE PROVISIONS FOR A DATA-GATHERING AND DISSEMINATING SYSTEM, BETTER ARTICULATION IN THE VOCATIONAL PROGRAM FROM THE ELEMENTARY TO THE ADULT LEVEL, REVIEW OF THE STATE PLAN FOR VOCATIONAL EDUCATION, AND EXPANDED COMMUNICATIONS WITH LOCAL EMPLOYMENT AGENCIES FOR STUDENT PLACEMENT OPPORTUNITIES. THE REPORT INCLUDES AN ANNOTATED BIBLIOGRAPHY OF 20 ITEMS. (KH)

VT 017 731

ANNUAL EVALUATION REPORT

TO THE

STATE BOARD OF EDUCATION

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
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1971

Nevada State Advisory Council for

Manpower Training and Career Education

VT017731

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Vice Chairman

September 30, 1971

Mr. Robert T. Rose
3370 Cashill Boulevard
Reno, Nevada 89502

Dear Mr. Rose:

The Nevada Advisory Council for Manpower Training and Career Education hereby submits its Second Annual Report, evaluating programs operated through the Nevada State Board for Vocational Education, under P.L. 90-576. The Report is submitted in accordance with regulations to that law which state that State Advisory Councils shall "Prepare and submit through the State Board to the (U.S.) Commissioner (of Education) and to the National Advisory Council an annual evaluation, accompanied by such additional comments of the State Board as the State Board deems appropriate..."

The Council Membership is hopeful that the Board will give serious consideration to the entire document, since the motivation to publish it extends far beyond submitting a "qualifier" to the Federal Government. Indeed, the Membership is convinced that its activities, including this evaluation, contribute significantly toward Nevada's capacity to prepare its youth and adults for satisfying and rewarding careers.

Sincerely,

Max M. Blackham

Max M. Blackham
Chairman

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SUMMARY STATEMENT

In terms of social and individual development, remedial efforts to train people for jobs are at best desperate but necessary mandates reflecting a very real challenge to Nevada--that the efficient and effective preparation of all youth for careers may well become the single most critical factor in achieving social and economic stability in the 70's.

The mere concept of training for specific jobs seems to carry little significance in view of population and industrial mobility, the evolution in labor demands resulting from an advancing technology, and the changing perspective of the American style of life as it relates to work. Training directed to suit specific and limited jobs does not prepare a person for a career in a society where most of today's jobs will cease to exist before the end of this century, when those born this year will be only 29 years old, and when those graduating from the high school class of '72 will be only 47 years old. The current proliferation of citizens' demands for remedial job training programs addresses an urgent need which in turn forces reflection to determine why millions of people have been denied adequate preparation for the world of work. Even the inauguration of massive Federal efforts in remedial job training programs has not appreciably reduced the number of people who upon termination of their schooling are not prepared to assume careers designed to carry them and their families productively through the rapidly shifting forces which will affect their future lives.

To this end, the Council recognizes that the vocational education program operated through the State Board for Vocational Education will have a very real need to secure the cooperation of all agencies concerned with preparing persons for careers and placing them on jobs; to seek and obtain the guidance and assistance of business, industry, and labor; to modify or replace

existing programs in light of educating persons for careers as opposed to training them for jobs; and to help change the general public's attitude toward acceptance of career education as an integral part of each person's need for and right to an education.

The Council commends the State Board Staff for pursuing high standards of program planning, operation, evaluation, and reporting, and has been particularly appreciative of the cooperation extended by the Staff in the preparation of this evaluation.

RECOMMENDATIONS

Consistent with the function of the Advisory Council, the following recommendations are submitted to the State Board for Vocational Education and its staff in the hope that their administration of the statewide vocational education program may in some way be facilitated through the perceptions of the Council.

Recommendation # 1

The State Department of Education should muster a substantial effort to devise a system for securing and utilizing demographic and manpower data and output figures from other agencies. The system should accommodate the generation of a State Plan related to such data and figures and enable local educational agencies to develop their vocational education plans in relation to the information.

Recommendation # 2

The State Department of Education should develop vocational education output figures in reference to labor market statistics rather than on a class by class basis. The Department should supply those figures to all Nevada agencies concerned with human resource development.

Recommendation # 3

The State Department of Education should revise the format and requirements for local plans so that the information reporting and management system (VERIFY) could simplify local plan preparation. The base data for local plans would only need to be altered through addition or deletion of projected programs based on manpower or demographic information, thus allowing local plan narrative to address such issues as student placement, evaluation, or local advisory committees.

Recommendation # 4

The State Department of Education should increase its dissemination of information about highly successful programs, with the objective that this increased activity would facilitate replication of successful programs offered by other agencies.

Recommendation # 5

Both in educational institutions and in other agencies, the State Department of Education should pursue articulating the vocational program from the elementary to the adult level in context with related educational programs. Such an emphasis is a prerequisite to providing comprehensive career education services for all the people in the State.

Recommendation # 6

The State Department of Education should increase its leadership activities to assist local educational agencies in developing organizational efforts in areas such as the following: planning, evaluation, task analysis, cost analysis, and interagency cooperation.

Recommendation # 7

In developing and promoting systems for plans, programs, evaluations, program reports, and other such activities, the State Department of Education should solicit and secure input from all concerned with preparing people for careers.

Recommendation # 8

The State Department of Education should review its State Plan to insure that it cohesively addresses student and population needs, goals and objectives drawn from those needs, and procedures which assure that those goals and objectives will be attained.

Recommendation # 9

In view of the size and scope of its programs for vocational education, the State Department of Education should devote more of its resources to statewide and interagency manpower planning efforts.

Recommendation # 10

In cooperation with local directors, guidance personnel, teachers, and all others concerned with educating people for careers and/or placing them on jobs, the State Department of Education and local educational agencies should expand and strengthen the program of communications with local employment security offices and employers to expand job placement opportunities for vocational education students. The State Department of Education should allocate funds to local educational agencies to insure successful placement programs.

Recommendation # 11

Through the Nevada Congressional Representatives and the U.S. Office of Education, the State Department of Education should accelerate its efforts to secure increases of Federal funding, both for general funding of vocational education programs and for categorical funding of special programs.

Recommendation # 12

The Nevada State Department of Education should make every effort to meet the federal matching requirements entirely through State appropriations.

The following recommendations of 1970 Advisory Council evaluation are again noted as recommendations, since activities satisfying their intent have not to this date been fully accomplished.

1970 Recommendation # 2

The State Department of Education should recommend that each local educational

agency appoint a general advisory committee to work in harmony with the State Advisory Council to effect a statewide advisory structure.

1970 Recommendation # 10

The State Department of Education should encourage local educational agencies to provide intensive work with minority communities to determine their particular vocational education needs and recruit members into programs designed to meet these needs.

1970 Recommendation # 11

The State Department of Education should develop workable methods whereby closer coordination and integration of Adult Basic Education and vocational programs can occur.

1970 Recommendation # 17

The State Department of Education should develop and encourage the use of a plan of action whereby local vocational education administrators can make themselves and their programs better known to business, industrial and labor leaders.

Evaluation Goal I

The FY 1971 Nevada State Plan for Vocational Education

Evaluation Objective 1-A

To determine the extent to which the State Plan goals and objectives were suitable in terms of student needs, particularly in terms of specific population groups, such as the disadvantaged and handicapped.

Methodology:

The State Plan was reviewed in order to evaluate the objective. Population distribution data and other demographic information was secured from the Nevada State Employment Security Department.

Findings:

The Program Needs in Part II were not really needs, but rather were operational objectives, assuring that priority would be given these various population groups. This priority was reflected only in two of the ten service area needs statements and then only to the degree of assuring that particular focus would be directed toward these population groups. There were no objectives for disadvantaged and handicapped in the ongoing programs in areas dealing with Secondary, Post-secondary or Adult. However, the objectives presented specifically toward the Disadvantaged and the Handicapped were measurable and appropriate. The objectives in Research related specifically to student needs were to follow up and study the employment trends of previous vocational students, to evaluate special needs curriculum, and to evaluate vocational programs for the handicapped. The objectives in Exemplary Programs related to such student needs specifically in developing vocational programs for rural and remote rural students. The objectives in Consumer and Homemaking Education related to such student needs by showing the number of programs serving youth in economically depressed areas and the number of programs serving adults in economically depressed areas. The objectives in Cooperative Education did not address specific student needs

in terms of population groups, nor did the objectives in Work Study.

The Analysis of State's Population provided in Table 2, Part II, was utilized in formulating few of the objectives or goals. Data for population distribution and other demographic information was secured from the Nevada State Employment Security Department.

Conclusion:

The State Plan goals and objectives were not necessarily related to population needs or needs of special groups within the population. Such relationship occurred infrequently and not according to pattern. In reality, the format was not particularly conducive to promoting these descriptions. Program Needs were statements of intent, not specifically related to analysis of population needs. If such an analysis existed, it was not available for the evaluation.

The data source was appropriate, and the Employment Security Department is to be commended for its cooperation.

Evaluation Objective 1-B

To determine the extent to which the State Plan Goals and Objectives related to labor market and other manpower needs.

Methodology:

The scope of this evaluation objective did not extend beyond the Plan, so the methodology was confined to reviewing the State Plan and reviewing manpower data sources.

Findings:

Table I of Part II adequately summarized labor market information, as did the two supplemental tables provided in the Plan. However, some of the goals and objectives stated were inconsistent with the information provided in the table which were used as rationales for their existence nor were outcomes expressed in terms of meeting specific labor market needs. The output shown in Table I was questioned in that, for example, sophomores or juniors in high school who may have been completing only a part of a program leading to a job were shown as output, as determined by an analysis of Table I figures related to Part III of the Plan. The goals and objectives were not specifically related to manpower information beyond the level of generalizing that emphasis or priority would be given to programs in these areas or that there was a constant labor demand in these areas. However, the Research Objectives in Part II recognized that a weakness existed, and provided for devising a solution to overcome the problem.

The manpower data provided by the Nevada State Employment Security Department appeared to be adequate in the generalized form in the Plan. However, there was no way of telling how the vocational education program configuration related to specific labor market needs as available through Employment Security.

Conclusion:

The State Plan goals and objectives did not specifically address manpower and labor market needs. They did not reflect an analysis of the data. The degree to which manpower and labor market needs specifically meshed with occupational output by occupation could not be determined. Output figures for vocational education were apparently not developed considering that no distinction was made between class completion and program completion.

Evaluation Objective 1-C

To determine the extent to which the State Plan Goals and Objectives related appropriately to other human resource development programs in the State.

Methodology:

This objective was evaluated through an analysis of the State Plan and the Manpower Planning Council's FY 1971 State Plan.

Findings:

Generally, the cooperative procedures expressed in the Part I agreements between the State Department of Education and the Employment Security Department, the Rehabilitation Division, and the Special Education Program appeared to have value and were appropriate as goals and objectives for that selected portion of the program management system.

Information reasonably consistent with the State Plan was included in the Comprehensive Area Manpower Plan, though the consistency was not carried through to include reporting by Standard Metropolitan Statistical Area, as local educational agencies were involved on that level. However, within time and location variables, the information provided was appropriate.

Part II of the Plan itself only addressed goals and objectives in terms of cooperative activity with other human resource agencies under Public Service Occupations, and that citation was only on a generalized level. Part III of the State Plan only addressed procedures under the section titled "Other Vocational Education Programs", and these procedures were generalized. Part II offered "Other Sectors Output", but the data appeared to be an unsubstantiated estimate. It is most probable that if a conversion of other sector output were available in O.E. Code breakout, such a conversion would have been cited.

Conclusion:

The goals and objectives did not specifically relate to other human resource development agencies, though sections not defined as goals and objectives did somewhat relate to them.

Evaluation Objective 1-D

To determine the extent to which procedures were set forth in the State Plan to accomplish each stated goal or objective.

Methodology:

The scope of this evaluation objective did not extend beyond the purview of the State Plan, and the methodology was appropriately limited.

Findings:

In theory, the procedures established in Part I would have logically addressed the goals established in appropriate sections of Part II. The Plan did appear to do this, and had appropriate cross-references entered. However, the information describing program needs should probably have been incorporated into the section on procedures, and a section more appropriately addressed to needs could have been developed. This new section should have specifically analyzed and defined Vocational Education Program Needs. There seemed to be a number of goals, objectives, program needs, and procedures which were not organized into the correct parts of the Plan.

Conclusion:

The procedures were generally related to the objectives; however, procedures also appeared as program needs. This did not lead to an organized description starting with needs, progressing to goals and objectives, and ending in procedures.

Evaluation Objective I-E

To determine the extent to which the State Plan Goals and Objectives were met during the year.

Methodology:

In order not to duplicate the FY 1971 Annual Descriptive Report being prepared by the Nevada State Department of Education, the methodology in this evaluation utilized data provided in the Nevada State Department of Education's compilation of management data about enrollments in Vocational Education. That data was applied against selected data in the objectives of the State Plan.

Findings:

Relationship of the data against the plan revealed the following:

Outcome	1971 Estimate	1971 Actual	Difference
Percentage of secondary school students enrolled in vocational education.	26.4%	25.4%	-1%
Percentage of population age 20-65 enrolled in post-secondary vocational education.	.6%	.5%	-.1%
Percentage of population age 20-65 + enrolled in adult vocational education.	1.6%	1.1%	-.5%
Percentage of disadvantaged population enrolled in vocational education.	1.5%	5.4%	+3.9%
Percentage of handicapped population (by level) enrolled in vocational education.	4.8%	.3%	-4.5%
Number of youth served by program	230 Students	385	+155
Percentage of secondary vocational students enrolled.	1.7%	2.2%	+.5%

Note: In the case of the objective addressing % Secondary students enrolled in vocational education, the Nevada State Department of Education Research Bulletin, Volume 13, #2 was used for the other base data; other appropriate percentages were based on that publication or on the estimates in the plan.

The FY 1971 Actual Figures above had still to be finalized and made official by the State Department of Education. For example, finality revealed that many of the Handicapped enrollments, some Disadvantaged enrollments, and many Adult enrollments had not yet been justified against final financial and program reports (one county alone enrolled 58 more Handicapped students than were included in the compilation of enrollments). The Annual Descriptive Report should shed additional light on the extent to which the State Plan objectives and goals were met.

Conclusion:

Based on a sample, and using the most current information available, it appeared as though the goals and objectives under Section 5.0 of Part II were measurable and have been met within reasonable degrees of tolerance. However, some difficulties were evident in the plan estimate or as a result of incomplete information.

Evaluation Goal II

The FY 1971 Nevada Vocational Education Program

Evaluation Objective Data

To determine the extent to which local manpower and employment opportunity data are utilized in the development of local vocational education plans and programs.

Methodology:

Review of Local Plan Application form requirements, review of FY 1971 local plans, and review of manpower data.

Findings:

During FY 1971, the State Plan required that applicant agencies relate jobs estimated to be available to their anticipated output. Generally, this requirement was not able to be met due to two basic limitations:

1. No manpower data was available to applicant agencies on an organized basis which was compatible with the OE Code system of reporting required by the U.S. Office of Education. In isolated instances, some data was available, but most local employment security offices had to rely on the central office of Employment Security for that information. The central office supplied the State Board Staff with their manpower data publication, but severe limitations precluded applicant agencies from utilizing the information effectively. For example, in an exaggeration of simple differences between Tables 3 and 4 of that report, a course of instruction in welding may have helped to qualify 20 boys for 50 to 100 different occupations, including firemen, janitors, sheet metal workers, farmers, etc. Because the output factor in vocational education had not been specifically defined in terms of occupational qualifications or output to the labor market, applicant agencies were not able to use the data. The applicant agencies did receive the Report, but no cohesive use resulted.

2. The June 15 deadline for plan submission was set by Title XIX [illegible] to June 15.

Conclusion:

It would appear that in order for manpower data to be effectively utilized by applicant agencies, significant changes would need to occur in the local plan requirements and submission procedures, and that data more properly related to their programs must be supplied them.

Evaluation Objective II-B

To determine the extent to which local vocational plans served as effective management tools for local educational agencies.

Methodology:

Written reaction from three local directors of Vocational Education was solicited and reviewed. FY 1971 Local Plans were reviewed. Letters from local Directors solicited by the State Staff were reviewed. 1971 Minutes of Advisory Council were reviewed.

Findings/Conclusions:

Generally, the FY 1971 local plans were utilized as management tools by local agencies; however, more effective use would have been realized had the documents been more concise and manageable themselves.

The FY 1971 local plans adequately described projected local vocational activities for FY 1971.

The VEA-1's (financial forms) were appropriate in relation to ease of program revision--this was particularly significant in adult education programs where many revisions were required to meet community needs.

Evaluation Objective II-C

To determine the extent to which local vocational education programs were operated in cooperation with other human resource programs in the State.

Methodology:

Inquiry was made of the State Board Staff and local directors, program operations were analyzed, and written reaction was solicited and received from seven local Employment Security offices and their state office.

Findings:

The Employment Security Department, the Division of Rehabilitation, and the Governor's Manpower Planning Council were sent copies of all FY 1971 Preliminary Program Reports in early Fall of 1971. These reports specified the OE Code, the class title, the instructor, the location, and the extent of all classes proposed to be operating through Vocational Education during Fiscal Year 1971. Those local educational agencies strongly involved with local Governor's Manpower Planning Committees and those local educational agencies extensively involved in working with their own advisory committees generally reported that they enjoyed excellent cooperative relationships.

Of the eighteen agencies receiving funds for vocational education, four were institutions existing for fundamental purposes other than education: the Nevada State Hospital and the Nevada Youth Training Center, the Nevada State Prison, and the Nevada State Highway Department. In addition, two other such agencies operated programs through educational institutions: the Nevada Girls'Training Center (through Lincoln County School District) and the Nevada State Personnel

Division (through the University of Nevada at Reno). There appeared to be a broad scope of cooperation carried out by various local educational agencies.

Conclusion:

Generally, the cooperative efforts between the various human resource agencies concerning vocational education programming seemed to be more spontaneous than planned. There were, however, significant degrees of cooperative effort, though this was not a program activity common to all programs. Interagency manpower planning did not appear to have been a factor for program decision on an organized basis.

Evaluation Objective II-D

To determine the extent to which there was articulation between vocational secondary, postsecondary and adult programs carried out by local educational agencies.

Methodology:

Review of FY 1971 local plans and programs, review of Advisory Council activities, and inquiry of the State Board Staff.

Findings:

Articulation between secondary, postsecondary, and adult programs varied to a great degree from community to community, and was generally characterized as follows:

1. There was little articulation between adult programs and any other programs, since these were operated on an "as the demand warranted" basis. Articulation that did exist was found where a significant number of secondary day school students enrolled in adult vocational programs.
2. A system for articulating secondary and postsecondary programs had not as yet been developed The only enforcement of articulation came as a result of the State Board giving financial aid to both levels.

The State Advisory Council has formed a Coordinating Committee composed of two members from the Board of Regents, two members from the State Board for Vocational Education, two members from the Association of School Boards of Trustees, and two members from the Governor's Manpower Planning Council. Articulation will become considerably more feasible as a result of this structure.

The State Board for Vocational Education and the U.S. Office of Education

were both on record, and both were progressing positively, to develop the cluster approach to vocational education. These activities were indicators that work is being done to develop articulated vocational education programs in Nevada.

Conclusion:

Although efforts were being directed to develop an articulated system of vocational education in Nevada, the FY 1971 vocational education program did not provide an organized system of articulated programs between the secondary, postsecondary and adult levels.

Evaluation Objective II-E

To determine the extent to which local educational agencies were assuring vocational education graduates of job placement.

Methodology:

Review of FY 1971 local plans, review of State Department of Education Vocational Program management data, review and site visits of local programs, inquiry of State Staff, and review of the FY 1971 State Plan.

Findings:

None of the FY 1971 local plans contained organized systems for assuring job placement of vocational education graduates. However, review of enrollment information and site visits revealed that statewide implementation of cooperative education programs and various vocational counseling programs, plus the somewhat limited programs of work study and work experience did assure job placement for some of the students in these programs. Some special programs for the Disadvantaged and Handicapped particularly featured job placement and follow-up services for students. The Research Coordinating Unit and the Nevada State Employment Security Department have been working during the fiscal year to develop Nevada Occupational Briefs, a system of job descriptions similar to those published by the California Department of Human Resource Development, with a view toward increasing student awareness of specific job opportunities.

Conclusion:

Much was being done in local programs to increase the probability of job placement for vocational educational program graduates, although there were no state or local organized plans designed to assure vocational student placement in Nevada.

Evaluation Objective II-F

To determine the extent to which the statewide vocational education program progressed in relation to providing opportunities for occupational awareness and orientation at the elementary level.

Methodology:

Site visitation, review of FY 1971 local plans.

Findings:

Review of the FY 1971 local plans pointed out that generally those counties which operated their school systems on other than an 8-4 plan were directing themselves to some degree toward providing occupational information and exploratory experiences on the pre-secondary level.

The "World of Construction, Manufacturing, etc." programs instituted by Washoe County School District through Exemplary funds and broadened in part through Disadvantaged funds appeared to be a singularly successful pilot program for Nevada in this respect. A number of vocational directors expressed interest in replicating the program, though no organized effort has to this date been made to facilitate widespread replication.

Conclusion:

The desire to initiate such programs and activities was apparent, and a successful model program was available for technical assistance. Replication has not yet occurred.

Evaluation Objective II-G

To determine the extent to which the 1971 vocational education program was efficient, in terms of cost.

Methodology:

Vocational education program management data was related to FY 1971 cost figures which were unofficial though reasonably accurate for purposes of evaluation. A more complete review of these factors may be made when the State Department of Education submits its Annual Descriptive Report to the U.S. Office of Education.

Findings:

The total estimated Federal and State support cost per person served in vocational education was $76.11. In other words, that was the amount of support generated per person.

The total estimated Federal and State support cost per enrollee in vocational education was $58.38. In other words, if one person enrolled in three classes, he would have been counted as three separate enrollments.

Conclusion:

In light of the total program activity, the estimated support is minimal and should be increased through securing additional State and Federal resources for vocational education programs.

Evaluation Goal III

The FY 1970 Nevada Advisory Council for Manpower Training and Career Education

Evaluation Objective III-A

To determine the extent to which action has been taken by the State Board in respect to the FY 1970 Nevada Advisory Council's recommendations.

Methodology:

Review of FY 1970 Evaluation Recommendations, review of FY 1970 State Board Response, inquiry of State Board Staff and local directors.

Findings:

The Council is satisfied that most of it's FY 1970 recommendations were appropriately responded to and that State Staff activities in relation to the recommendations have been commendable. However, the Council's review of these activities has found that recommendations number 2, 10, 11, and 17 were not accomplished in the course of the FY 1971 program activities.

Conclusion:

The Council's FY 1970 recommendations number 2, 10, 11, and 17 will again be noted as recommendations in the FY 1971 evaluation, and so referenced.

Annotated Bibliography

1. Local Plans, FY 1971

   Plans submitted by Applicant Agencies for FY 1971 Vocational Education Programs. Due Date for Submission was June 15, 1970.

   Carson City School District
   Churchill County School District
   Clark County School District
   Elko County School District
   Humboldt County School District
   Lincoln County School District
   Lyon County School District
   Mineral County School District
   Nye County School District
   Pershing County School District
   Washoe County School District
   White Pine County School District
   Elko Community College
   University of Nevada, Reno
   Nevada State Prison
   Nevada Youth Training Center
   Nevada State Hospital
   Nevada State Highway Department

2. Minutes, Advisory Council Meeting, March 5, 1971
   Specifically noted was reaction from a County Superintendent in relation to the Local Plan as a Management Tool.

3. Annual Manpower Planning Report, FY 1972
   Employment Security Department
   Manpower data by Dictionary of Occupational Trades and Standard Industrial Classification as related to Nevada and projected output from human resource development agencies.

4. Evaluation, FY 1970
   Nevada State Advisory Council
   An Evaluation of Nevada's FY 1970 State Plan and Program under PL 90-576.

5. Response to the Evaluation, FY 1970
   Nevada State Department of Education
   Response submitted to National Advisory Council with the Evaluation.

6. Comprehensive Manpower Plan, Parts A and B, FY 1971
   Manpower Planning Council
   Nevada Statewide human resource agency plans for FY 1971, with needs analyzed by Employment Security.

7. VERIFY II, August 12, 1971
   Nevada State Department of Education
   Compilation of management data about all vocational enrollees in FY 1971.

8. Part I, Continuing State Plan for Vocational Education, FY 1970-71
State Department of Education
Revised State Plan on a continuing basis - administration, policies and procedures.

9. Part I, State Plan, Appendix, June, 1969
State Department of Education
Guide for the development of Local Plans for Vocational Education.

10. Part II, Long Range State Plan, FY 1969-70
Nevada State Department of Education
5 Year Projected Needs, Goals and Objectives, and Procedures for Vocational Education in Nevada FY 1970.

11. Part III, Annual State Plan, FY 1969-70
State Department of Education
FY 1970 Estimated Needs, Goals and Objectives, and Procedures for Vocational Education in Nevada.

12. Parts II and III, The Long Range Annual State Plan, FY 1970-1971
State Department of Education
One and 5 year plan for vocational education in Nevada, projecting needs, Goals, Objectives, and Procedures, FY 1971.

13. Annual Descriptive Report of Program Activities, FY 1970
State Board for Vocational Education
Final Statistical & Narrative Report for Vocational Education for FY 1970.

14. Biennial Report of Selected Data, July 1, 1968 to June 30, 1970, Inclusive
Superintendent of Public Instruction
Statistical Report on Education to the State, showing vocational and non-vocational activities.

15. Research Bulletin, Volume 13, No. 2
State Department of Education
Specifically utilized to determine total secondary enrollments, FY 1971.

16. Public Law 90-576, The Vocational Amendments of 1968
The Public Law providing the State Department of Education with funds to support the extension and improvement of vocational education in Nevada.

17. Federal Register Vol. 35, No. 91, Part II, May 9, 1970
The Regulations developed by the U.S. Office of Education for the administration of programs under the law.

18. State Plan Guidelines for FY 1971 - U.S. Office of Education
Format and required information for the Nevada State Plan for Vocational Education.

19. Program Memorandum AVT (V) 71-61 - U.S. Office of Education
Suggested Content of Advisory Council Evaluations.

20. Other References

a. Letters from Local Directors regarding state and local plan systems.

b. Letters from local and State Employment Security Department regarding interagency cooperation.

c. Inquiry of State Board Staff, local directors, and others.

d. Site review of programs.

VT 017 735
EICHNER, JOHN D.
A COMPREHENSIVE STUDY OF THE EDUCATIONAL PROGRAMS FOR X-RAY TECHNOLOGISTS IN CONNECTICUT. FINAL REPORT.

CONNECTICUT STATE DEPT. OF EDUCATION. HARTFORD. DIV. OF VOCATIONAL EDUCATION.
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IDENTIFIERS - *CONNECTICUT

ABSTRACT - THE FIELD OF X-RAY TECHNOLOGY IS, LIKE OTHER ALLIED HEALTH PROFESSIONS, CONSTANTLY CHANGING. FOLLOWING A NATIONAL TREND TO UPGRADE THE PROFESSION AND TO PROVIDE MORE COMPETENT TECHNOLOGISTS, HOSPITALS IN CONNECTICUT ARE NOW AFFILIATING WITH COMMUNITY COLLEGES FOR THE PURPOSE OF ESTABLISHING ASSOCIATE DEGREE PROGRAMS IN X-RAY TECHNOLOGY. THE OBJECTIVE OF THIS REPORT IS TO PROVIDE INFORMATION FOR THE STATE TO USE IN ESTABLISHING GUIDELINES FOR THESE AFFILIATIONS. INFORMATION FOR THE REPORT WAS GATHERED BY MAIL, PERSONAL INTERVIEWS, AND TELEPHONE. EVALUATION OF THE DATA GATHERED INDICATED THAT A COORDINATING COMMITTEE SHOULD BE ESTABLISHED WITH REGULATORY AUTHORITY TO OVERSEE THE PROGRAMS. OTHER RECOMMENDATIONS WERE FOR REQUIRED LICENSING OF X-RAY TECHNOLOGISTS, REMEDIAL AND CONTINUING EDUCATION PROGRAMS, A STANDARDIZED PROCEDURE FOR REIMBURSING HOSPITALS BY COMMUNITY COLLEGES, AND SHARING OF INSTRUCTORS FOR COST REDUCTION AND IMPROVED INSTRUCTION. THE REPORT INCLUDES A LISTING OF CURRENT SCHOOLS OF X-RAY TECHNOLOGY IN CONNECTICUT WITH DATA ON THEIR FACILITIES AND A STATEMENT PREPARED BY THE AMERICAN MEDICAL ASSOCIATION ON THE ESSENTIALS OF AN ACCREDITED EDUCATIONAL PROGRAM FOR RADIOLOGIC TECHNOLOGISTS. (MF)

VT 017 735

A COMPREHENSIVE STUDY OF THE EDUCATIONAL PROGRAMS FOR X-RAY TECHNOLOGISTS IN CONNECTICUT

FINAL REPORT

John D. Eichner
Middlesex Community College
425 Hunting Hill Avenue
Middletown, Connecticut

June 27, 1972

CONNECTICUT STATE DEPARTMENT OF EDUCATION
DIVISION OF VOCATIONAL EDUCATION
RESEARCH AND PLANNING UNIT
HARTFORD, CONNECTICUT

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CONNECTICUT STATE DEPARTMENT OF EDUCATION
DIVISION OF VOCATIONAL EDUCATION
RESEARCH AND PLANNING UNIT
HARTFORD, CONNECTICUT

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Preface

It is hoped that the information and recommendations in this report will help to better the educational programs for x-ray technologists in this state. The importance of the x-ray technologist as an allied health professional has grown rapidly in recent years and will continue to grow. With this growth has come need for better educational facilities, more qualified instructors, and improved programs.

I would like to acknowledge my indebtedness to my assistant, Marilyn Emery Hooper, for the conscientious and tireless effort that she has made in assisting me in the preparation of this report.

John D. Eichner

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Summary

The field of x-ray technology is, like other allied health professions, constantly changing. Following a national trend to upgrade the profession and to provide more competent technologists, hospitals in this state are now affiliating with community colleges for the purpose of establishing Associate Degree programs in x-ray technology.

The State of Connecticut has now become actively involved through three of its community colleges in the training of these technologists and they will continue to become more involved as more affiliations occur.

The primary objective of this report is to provide information for the State to use in establishing guidelines for these affiliations. It is important that these guidelines be established now while the number of affiliations is small. Trying to implement guidelines at a later date when there is a large number of affiliations will be difficult and frustrating.

Information for this report was gathered through mailing, personal interviews, and telephone conversations. The information obtained was evaluated and incorporated into this report, and it indicates that a coordinating committee should be established to oversee these programs.

Background

Up to approximately four years ago the task of training X-ray technologists (Radiologic Technologists) within the State of Connecticut was the responsibility of twenty separate hospitals. The schools of x-ray technology were hospital based and granted diplomas or certificates of completion. The student, upon completing this program, became eligible to sit for the National Registry Examination, given by the American Registry of Radiologic Technologists, twice a year. Successful completion of this examination allows the student to become a Registered X-Ray Technologist (R.T.). Under this system, the student received only technical training, and generally there were no liberal arts courses offered. The program in most cases was completed in 24 months.

The training of x-ray technologists within the State of Connecticut and also throughout the United States is now in a period of transition. By this I mean in this state the hospital-based schools are now becoming affiliated with the community college system. The previously hospital-based certificate programs are now being made into 2 year associate degree programs. Presently there are 21 schools of x-ray technology in this state, of which six have become affiliated with community colleges. There are other schools presently considering affiliation.

Prior to the beginning of the transition period, the State had little or no responsibility in the training of x-ray technologists nor did it carry any of the financial burden. However, as future affiliations occur, the State continues to bear more of the responsibility and costs in the training

of X-ray technologists. The trend now is for hospital-based programs to affiliate with colleges, and it appears that in time the majority of the hospitals that have schools of x-ray technology in this state will become affiliated with the Community College system.

Why do hospitals wish to affiliate with a college? Mr. Arve H. Dahl of HEW gives the following explanation.

> In the past few years there has been a gradual shift from hospital-based programs to two-year college programs. Several explanations have been advanced for this trend: (1) Nationally, community and junior colleges, increasing at the rate of one a week, make available the type and number of educational institutions needed to collaborate with hospitals in training radiologic technologists. (2) Financial aid from local, State, and Federal governments, for support of educational programs, is available only to the academic institutions. (3) States have been showing increasing interest in laws for licensure of radiologic technologists and graduation from college-affiliated programs has been required to meet the specific requirements for certification or licensing imposed by such laws. (4) The cost of hospital-based training is reflected in the fees which hospitals must charge for services. Since fees are currently subject to a host of inflationary pressures, the merit of this means of financing training is being seriously questioned.[2]

In addition to the above, there appears to be a general trend to upgrade the profession. To this end, affiliations are being sought by hospitals for associate degrees.

As is the case with all medical education, the cost of training these students will be very high, and as I see the future, the State will end up with much of the financial burden for this type of program--as well as for other programs in the allied health professions.

When a hospital is affiliated with a community college, there is a

contractual agreement made. In this contract, there are financial provisions as well as a multitude of other provisions. The State ends up reimbursing some arbitrary amount to the hospital. Many of the provisions of the contract are purely arbitrary. Why? Because the State has no previous experience in this field. The State has no studies, criteria, or standards which it can use as a guide in the negotiation process. There is no objective information by which equitable agreements can be determined.

Recently I had the opportunity to sit in on negotiations for an affiliation between a community college and two large hospitals. During these discussions, we sometimes found ourselves at a loss in making decisions because of a lack of objective information concerning the educational facilities for x-ray technologists in this state. We could not compare what was being done by others with what we planned to do. A few specific examples of questions that arise are: Do other hospitals pay a stipend to students? If so, how much? Do they provide room and board? If so, to what extent? How many clinical hours at the hospital are students required to complete? How much class time is required? What are admission policies? These are just a few of the questions which must be answered by the State before any equitable agreement can be reached between a community college and a hospital. What is needed, then, is a comprehensive study of the x-ray technology educational facilities in this state so that the State may have such information to refer to when making future contractual agreements with

hospitals. It is hoped that this report will provide that information. This study will also provide suggested provisions for future agreements. Some of the information gathered for this project can also be applied in contractual agreements made for other allied health profession programs, e.g. inhalation therapy, nursing, medical lab. Because all allied health programs are affiliated with community colleges and controlled by the Office of the Board of Trustees of Regional Community Colleges, information gathered by this project could easily be put into practice on a system-wide basis.

There are other basic needs which this project will serve. One is concerned with minority groups and the other with employment opportunities. In relation to minority groups, there is a need to indicate how well these groups are represented in the field of x-ray technology as well as methods for recruiting them into the profession. The second need is concerned with employment opportunities. As it stands now, each hospital, quite arbitrarily, graduates whatever number of students it deems appropriate, without any consideration of employment opportunities.

Recently I attended a symposium for instructors in radiologic technology. Some thirty schools throughout New England were represented. There were serious indications that a surplus of x-ray technicians are now being produced in some areas. There is a need, then, to discover what the future demands will be in the State.

Because of the current trend toward affiliation, the State is now and

will be, to a much greater extent in the future, in a position to govern the number of graduate x-ray technicians. Therefore, some indication of future employment opportunities should be made. It is hoped that by doing this not only will we avoid producing too many x-ray technicans, but also money will be saved that can be tunnelled into other needed health occupations so that the supply of allied health workers will be commensurate with the demands of the State.

OBJECTIVES TO BE ACHIEVED

A. To complete a comprehensive study of the educational facilities for x-ray technologists in the State which may later be used by the State of Connecticut in determining affiliation agreements and policy decisions. This study will show the existing structure of each of the 21 schools of x-ray technology in the State of Connecticut.[3]

B. To devise "Model Provisions" for future agreements between educational institutions and hospitals in x-ray technology.

C. To determine minority group representation and methods for recruitment in the field.

D. To determine future employment opportunities for individuals formally trained in x-ray technology.

METHODS

To achieve the desired objectives it was necessary to gather information through several means. Each method of obtaining information is described in detail below.

(A) Survey Forms

There were two types of survey forms used. Survey sheet #1 was sent to those institutions which had x-ray equipment but did not have schools of x-ray technology. Survey sheet #2 was sent to those hospitals which had schools of x-ray technology, except in cases where personal visits were made. Both forms were essentially the same except that form #2, for hospitals with a school of x-ray technology, had additional questions pertinent to those schools. The information gathered and samples of these forms are found in the Appendix of this report.

(B) Personal Interviews

It was first thought that it would be necessary to visit all of the schools of x-ray technology in the state. However, after making nine such visits, it was found that this would not be necessary. Instead the survey sheets were mailed to the remaining twelve schools. The nine schools that were visited were generally the larger hospitals and they were geographically disbursed.

(C) Letters

Numerous letters were sent to various people and organizations for information pertinent to x-ray technology. A list of all sources contacted appears in the Appendix of the report.

(D) Telephone

Extensive use of the telephone was made in obtaining information and sources of information.

Findings

Presently there are some 21 separate schools of x-ray technology within the state of Connecticut. These schools are ultimately governed by the American Medical Association which, through the American College of Radiology, American Society of Radiologic Technologists, and the American Registry of Radiologic Technologists, oversees these schools and establishes guidelines for their operations. These guidelines consist of such things as suggested curriculum content, minimum number of clinical hours and class hours. The extent to which these guidelines are followed varies considerably from school to school depending upon the philosophy of each hospital. There appears to be very little coordination between hospitals. Each act separately in terms of what should be taught, how many students should be graduated, and the methodology of teaching. I do not think that this situation is most advantageous to either the students, the hospital, or the patients.

Because of the large number of separate schools in this state, there are certain diseconomies which result. Some schools have a large number of students and can justify full time instructors, others have very few students and consequently have only part time instructors. The part time instructors usually have other duties in the Clinic and often are not able to devote adequate time for the preparation of classroom work.

From the hospitals polled, it has been noted that there is a great need to have full time instructors rather than part time. However the cost of having full time instructors for the smaller hospital schools would be too great. What has been suggested is that those hospitals which are in close proximity to each other might share the cost of full time instructors. What is suggested, in effect, is that students from smaller hospitals would go to larger hospitals for their classroom or didactic training and then return to their own hospital for clinical training. Obviously this would not be feasible in every case insofar as the distance between hospitals would be too great. But in those situations where it could be accomplished, instructional costs could be reduced, better utilization of educational facilities could be made, and the students would have the benefit of having a full time instructor. Also, this would help to standardize the classroom instruction throughout the state.

Employment Situation:

There has been considerable concern recently over employment opportunities for x-ray technologists in this state as well as over the entire nation. Some individuals have indicated that we are producing a surplus of technologists and we will soon find ourselves in the same situation in which teachers are. Others polled have indicated in varying degrees that there should be a reduction in the number of technologists produced. However, the general concensus is that this situation is temporary and that considering the economic conditions existing in this state, the job market is holding up reasonably well.

In spite of the fact that the demand for x-ray technologists is less than it has been in the past, the situation is not nearly as critical as some have proposed. All reports that have been studied have clearly shown that there will be a rapid growth in the profession. There are several reasons for this. In the first place, the use of x-rays in diagnosing diseases is constantly increasing and will continue to increase with the development of new, complex and sophisticated equipment. This equipment will require highly trained technologists to operate it. Secondly, many more people are becoming covered by various types of insurance which will allow them to have increased medical care and this will almost certainly include some type of x-ray work. Because of the

obvious trend in the country to upgrade the health care for everyone, not only will the demand for x-ray technologists increase but also all the allied health professions. Thirdly, we must consider the economic situations in this state. Unemployment has been high in every field and there is no reason why x-ray technologists should not suffer also. Hospitals, industry, state and federal agencies are all feeling the financial squeeze, and consequently are not hiring the number that they did before. Another factor that affects employment situations is that approximately 70% of all employed technicians in this state are females. Under normal circumstances the rate of turnover amongst females is very high. Many stay in for 2 to 4 years and eventually get married and leave their jobs. However, this is not the present situation. It has been noted in our survey that the turnover rate is not as high as it has been. Females are staying on the job longer. Certainly in many of the cases, the increased cost of living and unemployment amongst husbands are contributing factors in causing them to stay on the job longer.

The employability of x-ray technologists is definitely linked to the economic situation in this state and as this situation improves, job openings for x-ray technologists will almost certainly occur also. Not only will the turnover rate increase, but new openings will also occur in those agencies employing x-ray technologists.

Minority Groups:

Minority group representation in the field of x-ray technology in this state appears to be very small. Yet there is evidence that many of the hospitals are making a sincere effort to recruit members of minority groups. Although some directors of schools indicate that they are not getting qualified applicants, the real problem lies in the fact that hospitals are simply not receiving sufficient volume of minority group applicants or very few, while there appears to be sufficient number of other applicants. It must be remembered, too, the nature of this profession. It is obviously very technical, and it is sometimes difficult to get qualified applicants from every group.

Three methods have been suggested to improve recruitment of minority groups. The first is to educate minority groups in the early high school years to the opportunities available in the field of x-ray technology. The second method suggested is to establish a remedial program for those students who show a sincere interest in this field but lack the necessary background. The third method would be to establish minority group scholarships specifically for students wanting to enter this profession.

Recommendations

1. The State of Connecticut should require licensing of all x-ray technologists. Because of the inherent nature of this field and the potential danger of radiation, it is imperative that only qualified individuals be allowed to operate x-ray equipemnt. Therefore, the State of Connecticut should introduce proper legislation to exact laws for licensing that will guarantee the residents of the state that the technologists who serve them will be properly trained and fully qualified.

2. A coordinating committee with authority to regulate should be established to oversee those programs in which community colleges are involved as well as to establish guidelines concerning future affiliations. The committee should be composed of appropriate members of the community colleges and technologists from the hospital which are presently affiliated.

3. A remedial program should be established for those minority group members who show a sincere desire to enter the field of x-ray technology, but lack the necessary background. The program should be designed by the coordinating committee previously mentioned.

4. There should be further research done in the area of financial reimbursement. A standardized procedure should then be established whereby all community colleges reimburse hospitals by the same method.

5. Continuing education programs should be provided for the individual already employed in the field of x-ray technology. The program should offer refresher courses as well as other courses to keep abreast of changes in the field.

6. Efforts should be made by the hospitals to share instructors for didactic training. This could possibly be done on a regional basis. By training students in this way, all students could have the benefits of a full time instructor, institution costs could be reduced, and a more standardized curriculum could be maintained to allow a smooth transition from the community college to the four year institution.

Contractual Agreement

The purpose of this section of the report is to emphasize the importance of the contractual agreement between the hospital and the college as well as to recommend specific points which should be covered in such a contract.

Originally, it was thought that a complete model contract would be necessary. However, after reviewing the data available, it became apparent that it would be more beneficial to list those specific points which should be covered in the contract as well as to establish a rationale for each.

Importance

As was stated previously in this report, whenever an affiliation occurs between a hospital and a college, a contractual agreement is made. The purpose of this contract is to formally state the objectives, duties, and responsibilities of both the college and the hospital. The importance of this contract cannot be overstated, and much care should be taken in preparing it. The responsibilities of each institution should be clearly and accurately stated. The contract should also be written in such a manner that the rights of the College, hospital, and the student are fully protected, while allowing for some flexibility in the program. An incomplete or ambiguous contract can soon lead to animosities between the college and the hospital as well as to complete failure of the program.

Recommended Points to be Covered by the Contract

1. Affiliation Objectives

An opening statement should be made concerning the overall objectives of this affiliation. The objectives of the hospital and the college should be compatible.

2. Student Enrollment

The maximum number of new students admitted each year should be determined by mutual agreement.

Because this program is of a joint nature, each institution should have equal status in determining the number of new students. In determining the exact number to be enrolled, consideration should be made of employment opportunities which will be available when these students graduate. Clinical facilities as a limiting factor should also be considered.

3. Student Expenses

There are certain student expenses such as uniforms, books, other instructional material, and transportation. There should be a provision in the contract designating who is responsible for paying these, whether it be the students, hospital, or the college.

4. Financial Arrangements

There are presently three community colleges affiliated with hospitals, for the purpose of training x-ray technologists. The financial

arrangements between these hospitals and the colleges all differ. Without considerably more research in this area, it is difficult to establish an accurate model for determining reimbursement policies. However, when colleges do affiliate, there are several considerations which should be made. In the first place, hospitals suffer an immediate loss insofar as they no longer are able to collect tuition fees as the student will now be making payment directly to the college. This is a starting point in determining what financial losses the hospital incurs through an affiliation. Once you have determined the amount of loss incurred because of the affiliation, you have a basic figure to start with.

Some hospitals provide a stipend and/or room and board. Whether or not the hospital will continue to provide these should also be viewed.

One point which is often overlooked in determining financial arrangements is the fact that students in the x-ray technology program are required to complete a minimum of 2400 hours of clinical work during the 2 year program. It must be noted also that this is a minimum number of clinical hours and that, in many cases, far more hours are worked. Because the students spend such a large number of hours, the departments in which they work become very dependent on them as a labor force. In fact, it has been reported in many cases, that departments cannot run efficiently without the use of student labor. If this is the case,

then the students, in fact, become a source of inexpensive labor, which effectively causes a savings to the hospital. Some hospitals have reported savings of up to $47,000. per year, and most state that this savings is derived from the use of student labor. However, some hospitals show no savings but rather the x-ray program is shown as an expense to the hospital.

The point we are bringing out in this section, then, is that if the students do incur a savings to the hospital, then this, along with other factors, certainly, should be reimbursed by the college.

5. Classroom Instruction

The courses which the hospital will instruct should be specifically listed as well as those for which the college will be responsible. In general, those courses which lend themselves to the environment of the hospital, i.e. technical courses dealing directly with radiology, should be taught at the hospital and by the hospital personnel. Those courses which lend themselves to the environment of the college, i.e. courses of a liberal arts nature, should be taught at the college and by the college personnel.

6. Curriculum

The college and the hospital should jointly design the curriculum. The 2400 clinical hours and 410 didactic hours required by the AART should be closely adhered to.

7. Coordinator

A coordinator should be appointed at the hospital and at the college. Together, they will oversee the program. In addition, the hospital coordinator should hold adjunct appointment at the college.

8. Clinical Practicum, Work Schedules, and Vacations

The minimum number of clinical hours required by the AART is 2400 hours. In all affiliations, the exact number of clinical hours offered should be specifically stated and should not be less than 2400 hours nor more than 2500 hours. There has been a tendency in some hospitals to use the students far in excess of the 2400 hours, and for this reason it is necessary to have a provision which will protect the student from being exploited.

In addition to this, the number of hours a student will be required to work per day and week should be stated. Generally, a student should not be required to work more than 8 hours per day nor more than 5 days per week. These 8 hours should include classroom as well as clinical work.

In regards to vacation, the hospital calendar and school calendar should be compatible. Because of the inherent problems involved in the

operation of the radiology department as well as those associated with educating x-ray technologists, it is not always possible to have vacations coincide exactly, but an effort should be made to bring these as close as possible without causing undue hardship on either party.

9. Admission of New Students

The admission of new students should be a joint venture between the hospital and the college. Appropriate members of each institution should form an admissions committee for the purpose of making a final decision on those applicants to be accepted.

10. Suspensions or Dismissals

The hospital should not suspend or dismiss a student without first consulting the college. However, the hospital should have the right to issue written warnings, when necessary, without prior consultation with the college. A copy of such warnings should be sent to the Coordinator at the college.

In such cases where the hospital or the college deem it necessary to suspend or dismiss a student for academic or disciplinary reasons, a committee, composed of appropriate members of the hospital and college, should make the final decision.

The student should have the right to appear before this committee for the purpose of stating his position. If the student chooses, he

may do this in writing.

Written notice of the committee's final decision should be sent to the student.

11. Insurance

Appropriate liability insurance for time spent in the hospital by the student should be the responsibility of the hospital.

12. Disaffiliation

There should be a provision for disaffiliation in the event that either the college or the hospital wishes to discontinue the program. Any disaffiliation agreement should allow for sufficient time for the phasing out of students currently enrolled in the program.

The above list of suggested provisions is not to be considered all inclusive. There are other necessary provisions of a legal nature to be included, such as the authority for each institution to enter into agreement as well as to preclude any possibility of discrimination on the grounds of race, color, religion, or national origin. The wording of the contract should not be such that it hampers any of the parties involved, but rather it should allow for the program to be conducted in an orderly fashion as well as to state the duties and responsibilities of all involved.

Hospitals with X-Ray Technology Schools

Bridgeport Hospital
267 Grant Street, Bridgeport, Connecticut 06602

St. Vincent's Hospital
2820 Main Street, Bridgeport, Connecticut 06606

Bristol Hospital
Brewster Road, Bristol, Connecticut 06010

Danbury Hospital
Hospital Avenue, Danbury, Connecticut 06810

Hartford Hospital
80 Seymour Street, Hartford, Connecticut 06115

Mount Sinai Hospital
500 Blue Hills Avenue, Hartford, Connecticut 06112

St. Francis Hospital
114 Woodland Street, Hartford, Connecticut 06105

Manchester Memorial Hospital
71 Haynes Street, Manchester, Connecticut 06040

The Meriden-Wallingford Hospital
181 Cook Avenue, Meriden, Connecticut 06450

Middlesex Memorial Hospital
28 Crescent Street, Middletown, Connecticut 06457

New Britain General Hospital
100 Grand Street, New Britain, Connecticut 06050

Hospital of St. Raphael
1450 Chapel Street, New Haven, Connecticut 06511

Yale-New Haven Hospital
789 Howard Avenue, New Haven, Connecticut 06504

Lawrence and Memorial Hospital
365 Montauk Avenue, New London, Connecticut 06320

1996

William W. Backus Hospital
326 Washington Street, Norwich, Connecticut 06360

St. Joseph Hospital
128 Strawberry Hill Avenue, Stamford, Connecticut 06904

Stamford Hospital
190 West Broad Street, Stamford, Connecticut 06069

St. Mary's Hospital
56 Franklin Street, Waterbury, Connecticut 06702

Waterbury Hospital
64 Robbins Street, Waterbury, Connecticut 06720

West Haven Veterans Administration Hospital
West Spring Street, West Haven, Connecticut 06516

Windham Community Memorial Hospital
Mansfield Avenue, Willimantic, Connecticut 06226

Affiliations

College	Hospital
Mattatuck Community College	St. Mary's Hospital, Waterbury Waterbury Hospital, Waterbury
Middlesex Community College	Middlesex Memorial Hospital, Middletown
South Central Community College	Yale-New Haven Hospital, St. Raphael's, New Haven
Quinnipiac College	West Haven Veterans Administration Hospital, West Haven

Bridgeport Hospital
Bridgeport, Connecticut

M.D. in charge: Dr. Joseph J. Esposito

R.T. in charge: Fred Steinbrick

Entrance requirements: Recent high school graduate, completion of application form with references, personal interview with Mr. Steinbrick and the Director of the school

Classes begin: July 1st

Can students enter at mid-year?: No

Student capacity: 30

Number of full time technicians currently employed: 22

Number of part time technicians currently employed: 4

Tuition: per year: None

Room and board: None

Other costs: $85. book fee, must buy uniforms, hospital pays for $1,000. life insurance policy and regular Blue Cross/CMS coverage

Stipend: $65. per month in the second year

Scholarships: None

College affiliation: None

Degree or certificate awarded: Certificate

Length of program: 24 months

Approximate clinical hours: 2800 hours

Approximate class hours (didactic): 550 hours

Internship: None

Sick time: 10 days per year-exceptional then more

1998

Vacation time: 1 week per year

Holidays: 7 per year

Do students work holidays?: Yes

Do students work weekends?: Yes

Do students work nights?: Yes

Special clinical training with an affiliated institution: None

Number of instructors employed:
Full time: 12
Part time: 0

St. Vincent's Hospital
Bridgeport, Connecticut

M.D. in charge: Dr. Robert D. Russo

R.T. in charge: Mr. Rosati

Entrance requirements: Desire to help the sick and the infirm, good health, pleasant personality, serious intent and study, application toward learning the required procedures and techniques, high school diploma, personal interview with chief radiologist and staff is required, character references, courses in physics, biology, chemistry, mathematics, and typing are recommended in the high school curriculum

Classes begin: July 1st

Can students enter at mid-year?: No

Student capacity: 21

Number of full time technicians currently employed: 16

Number of part time technicians currently employed: 1

Tuition: per year: None

Room and board: No facilities, generally accept local students

Other costs: $60.-$70. for books, must purchase own uniforms and insurance

Stipend: Second year=every one and a half weeks get paid for duty at $2. per hour for the 4:30-12:00 shift, holidays they get time and a half, and weekends they receive $1.85 per hour, there is some time off

Scholarships: Volunteers of the hospital pay for a scholarship which is open every year to families of employees of the hospital

College affiliation: None

Degree or certificate awarded: Certificate

Length of program: 21 months

Approximate clinical hours: 1400 hours

Approximate class hours (didactic): 500 hours

Internship: None

Sick time: 5-10 days per year, if extended illness then they have to make the time up

Vacation time: 1 month vacation

Holidays: 9 per year-really get 2 days off as work the rest

Do students work holidays?: Yes, get an alternate day off

Do students work weekends?; Yes

Do students work nights?: No, only evenings work the first year until 10:00 and 12:00 the second year when they get half of the following day off

Special clinical training with an affiliated institution: None

Number of instructors employed:
Full time: 1
Part time: 14

Bristol Hospital
Bristol, Connecticut

M.D. in charge: Dr. Edward Fox

R.T. in charge: Linda Gejda

Entrance requirements: High school diploma

Classes begin: September

Can students enter at mid-year?: Yes

Student capacity: 20

Number of full time technicians currently employed: 9

Number of part time technicians currently employed: 4

Tuition: per year: $200. for two years

Room and board: At student's expense

Other costs: Books, uniforms

Stipend: None

Scholarships: None

College affiliation: None

Degree or certificate awarded: Certificate

Length of program: 24 months

Approximate clinical hours: first year: 27.50 hours per week, second year: 32 hours per week

Approximate class hours (didactic): 431 hours for both years

Internship: None

Sick time: 6 days per year

Vacation time: 2 weeks per year

Holidays: 10 holidays per year

Do students work holidays?: Yes

Do students work weekends?: Yes

Do students work nights?: Yes

Special clinical training with an affiliated institution: Yale-New Haven Medical Center and Newington Hospital

Number of instructors employed:
Full time: 1
Part time: 0

Danbury Hospital
Danbury, Connecticut

M.D. in charge: Dr. William Goldstein

R.T. in charge: Mrs. Dorothy Ann Gereg

Entrance requirements: High school diploma-upper third of class, appropriate courses=chemistry, algebra, two references, good character

Classes begin: First part of September

Can students enter at mid-year?: No

Student capacity: 22

Number of full time technicians currently employed: 9

Number of part time technicians currently employed: 2

Tuition: per year: $100.

Room and board: No facilities

Other costs: Textbooks=$80., $75. for uniforms, encourage to join the Connecticut Society of Radiologists

Stipend: None at present

Scholarships: Personal scholarships may be used toward tuition

College affiliation: None

Degree or certificate awarded: Certificate

Length of program: 24 months

Approximate clinical hours: 2760 hours=minimum

Approximate class hours (didactic): 720 hours

Internship: None

Sick time: 10 days per year

Vacation time: 2 weeks per year

Holidays: Birthday off, can pull duty on state and federal holidays

Do students work holidays?: Yes, time to compensate for it

Do students work weekends?: Yes, same as above

Do students work nights?: Yes, same as above

Special clinical training with an affiliated institution: None

Number of instructors employed:
Full time: None
Part time: 2

Hartford Hospital
Hartford, Connecticut

M.D. in charge: Dr. Arnold Janzen

R.T. in charge: Jerry Hrycyna

Entrance requirements: High school diploma, top half of graduating class

Classes begin: September

Can students enter at mid-year?: No

Student capacity: 48

Number of full time technicians currently employed: 28

Number of part time technicians currently employed: 14

Tuition: per year: $200. for two years

Room and board: Rooms available at $35. per week. Board not included.

Other costs: Six uniforms for female students at approximately $100.

Stipend: 0-6 months=none, 6-12 months=$25. per week, 12-18 months=
$35. per week, 18-24 months=$45. per week

Scholarships: None

College affiliation: None

Degree or certificate awarded: Certificate

Length of program: 24 months

Approximate clinical hours: 3000 hours

Approximate class hours (didactic): 500 hours

Internship: None

Sick time: 11 days

Vacation time: 15 days

Holidays: 9 days

Do students work holidays?: Yes

Do students work weekends?: Yes

Do students work nights?: Yes

Special clinical training with an affiliated institution: Newington Children's Hospital

Number of instructors employed:
Full time: 1
Part time: 1

Mount Sinai Hospital
Hartford, Connecticut

M.D. in charge: Dr. Harold Moskowitz

R.T. in charge: Mr. Osman

Entrance requirements: High school diploma, upper half of graduating class, good character background, 18-30 years of age.

Classes begin: July

Can students enter at mid-year?: No

Student capacity: 18

Number of full time technicians currently employed: 10

Number of part time technicians currently employed: 2

Tuition: None

Room and board: No facilities

Other costs: Book cost: $80. for two years, must pay for uniforms, sick time benefits and health and life insurance available

Stipend: After six months=$15. per week, second year=$30. per week

Scholarships: None

College affiliation: None

Degree or certificate awarded: Certificate

Length of program: 24 months

Approximate clinical hours: 3200 hours

Approximate class hours (didactic): 472 hours

Internship: None

Sick time: 12 days per year

Vacation time: 4 weeks per year

Holidays: 9 holidays per year

Do students work holidays: Not all-alternate holidays

Do students work weekends: Not all-alternate

Do students work nights: No

Special clinical training with an affiliated institution: 2 weeks at Hartford Hospital in radiation therapy. 2 weeks at Newington Children's Hospital in Pediatric Radiation

Number of instructors employed:
Full time: 4
Part time: 0

St. Francis Hospital
Hartford, Connecticut

M.D. in charge: Dr. E. J. Sennett

R.T. in charge: Ms. N. Teti

Entrance requirements: High school diploma

Student capacity: 40

Tuition: None

Stipend: Yes

Classes begin: July

College affiliation: None

Degree or certificate awarded: Certificate

Scholarships: None

Length of program: 24 months

Manchester Memorial Hospital
Manchester, Connecticut

M.D. in charge: Dr. Douglas J. Roberts, Jr.

R.T. in charge: Daniel Mikolowsky

Entrance requirements: High school diploma

Classes begin: July

Can students enter at mid-year?: Not as a rule

Student capacity: 16

Number of full time technicians currently employed: 12

Number of part time technicians currently employed: 2

Tuition: per year: None

Room and board: None

Other costs: None

Stipend: $20. per month first year, $150. per month second year

Scholarships: None

Degree or certificate awarded: Certificate

College affiliation: None

Length of program: 24 months

Approximate clinical hours: 4 hours per day first year, 36 hours per week second year

Approximate class hours (didactic): 4 hours per day first year, 4 hours per week second year

Internship: None

Sick time: 12 days per year

Vacation time: 2 weeks per year

Holidays: 8 per year

Do students work holidays?: Yes

Do students work weekends?: Yes

Do students work nights?: Yes, only until 9:00 P.M.

Special clinical training with an affiliated institution: None

Number of instructors employed:
Full time: 2
Part time: 0

Meriden-Wallingford Hospital
Meriden, Connecticut

M.D. in charge: Dr. John F. Hennessey

R.T. in charge: Mrs. Willena Burke

Entrance requirements: High school graduate-College Preparatory in Algebra, Geometry, Biology, Chemistry, Physics, and typing are preferred, upper half of class rank, S.A.T.'s=preferred 850

Classes begin: September

Can students enter at mid-year?: No

Student capacity: 14

Number of full time technicians currently employed: 12

Number of part time technicians currently employed: 0

Tuition: per year: $200. for two years

Room and board: $30. monthly

Other costs: Uniforms

Stipend: Approximately $2,300.

Scholarships: None

College affiliation: None

Degree or certificate awarded: Certificate

Length of program: 24 months

Approximate clinical hours: 2700 hours

Approximate class hours (didactic): 1200-1300 hours

Internship: None

Sick time: 12 days per year

Vacation time: 2 weeks per year-total 4 weeks

Holidays: 6 per year

Do students work holidays?: Yes, but sometimes, time off on another work day

Do students work weekends?: Yes, same as above

Do students work nights?: No

Special clinical training with an affiliated institution: Newington Children's Hospital

Number of instructors employed:
Full time: 1
Part time: 0

Middlesex Memorial Hospital
Middletown, Connecticut

M.D. in charge: Dr. H. Rosenbaum

R.T. in charge: J. Zieller

Entrance requirements: High school diploma, personal interview

Classes begin: July

Can students enter at mid-year?: No

Student capacity: 25

Number of full time technicians currently employed: 10

Number of part time technicians currently employed: 3

Tuition: per semester $100.

* Room and board: Free of charge for first year students; $25. per month second year

Other costs: Books=$75., insurance and student fees=$41.50

* Stipend: Second year=$75. per month

Scholarships: None

College affiliation: Middlesex Community College

Degree or certificate awarded: Associate Degree

Length of program: 27 months

Approximate clinical hours: 3000

Approximate class hours (didactic): 420 hours

* Stipend, room and board policy presently being reevaluated

Internship: Yes, for three months

Sick time: 5 days per year

Vacation time: 1 week

Holidays: Hospital schedule for holidays

Do students work holidays?: Yes, on rotating basis

Do students work weekends?: Yes, on rotating basis

Do students work nights?: Yes, on rotating basis

Special clinical training with an affiliated institution: None

Number of instructors employed:
Full time: None
Part time: 3

New Britain General Hospital
New Britain, Connecticut

M.D. in charge: Dr. Howard Root

R.T. in charge: Miss Doucette

Entrance requirements: High school diploma, above average high school student, references, good character, personal interview

Classes begin: July

Can students enter at mid-year?: No

Student capacity: 20

Number of full time technicians currently employed: 15

Number of part time technicians currently employed: More than one

Tuition: per year: $200. for two years

Room and board: Do not receive

Other costs: Books included in tuition, must purchase own uniforms, males can exchange uniforms at the laundry

Stipend: None

Scholarships: None

College affiliation: None

Degree or certificate awarded: Certificate

Length of program: 24 months

Approximate clinical hours: At least 2400 hours

Approximate class hours (didactic): 650 hours

Internship: None

Sick time: 10 days per year

Vacation time: 2 weeks per year

Holidays: 1 holiday within the first year and time off the second year to compensate for it

Do students work holidays?: Second year only

Do students work weekends?: Second year only

Do students work nights?: Second year only

Special clinical training with an affiliated institution: None

Number of instructors employed:
Full time: 7
Part time: 1

Hospital of St. Raphael
New Haven, Connecticut

M.D. in charge: Dr. R. Shapiro

R.T. in charge: N. Piscitelli

Entrance requirements: High school diploma

Student capacity: 24

Tuition: $150.

Classes begin: July

Stipend: Yes

Scholarships: None

College affiliation: South Central Community College

Degree or certificate awarded: Certificate

Length of program: 24 months

Yale-New Haven Hospital
New Haven, Connecticut

M.D. in charge: Dr. Salomon Schwartz

R.T. in charge: Ralph Bannister

Entrance requirements: High school diploma

Classes begin: June 26th

Can students enter at mid-year?: No

Student capacity: 40

Number of full time technicians currently employed: 60

Number of part time technicians currently employed: 3

Tuition: per year: According to community college rates

Room and board: $250. per year for females only

Other costs: Not available

Stipend: Yes

Scholarships: Available

College affiliation: South Central Community College

Degree or certificate awarded: Associate Degree

Length of program: 24 months

Approximate clinical hours: 2560 hours (160 hours to be used for sick leave)

Approximate class hours (didactic): 60 credits

Internship: None

Sick time: 160 hours

Vacation time: Not available

Holidays: Not available

Do students work holidays?: No

Do students work weekends?: No

Do students work nights?: Yes

Special clinical training with an affiliated institution: Yale University Medical School

Number of instructors employed:
Full time: 1
Part time: 4

Lawrence and Memorial Hospital
New London, Connecticut

M.D. in charge: Dr. Fredrick J. Cagan

R.T. in charge: Norman K. Crawford

Entrance requirements: High school diploma or equivalent, good health and moral character, above average grades, and between the ages of 18 to 35.

Classes begin: July 1st

Can students enter at mid-year?: Yes, if they are transfer students from another school, otherwise-no

Student capacity: 20

Number of full time technicians currently employed: 14

Number of part time technicians currently employed: 5

Tuition: Per year: None

Room and board: Rooms are available at $5. per week

Other costs: $55. for textbooks, and they also have to buy their own shoes and uniforms

Stipend: $.75 per hour for the first six months, next six months at $1.00, then $1.10 and $1.30 for last six months of training

Scholarships: None

College affiliation: None

Degree or certificate awarded: Certificate

Length of program: 24 months

Approximate clinical hours: 8 hours per day, 40 hours per week

Approximate class hours (didactic): 2 hours per day minimum, sometimes more

Internship: None

Sick time: 1 day per month after first 6 months

Vacation time: 2 weeks the first year and 3 weeks the second year

Holidays: 9 paid holidays

Do students work holidays?: Yes

Do students work weekends?: Yes

Do students work nights?: No

Special clinical training with an affiliated institution: Phelps Radiation Center, Uncasville, Connecticut

Number of instructors employed:
Full time: 1
Part time: 1

William W. Backus Hospital
Norwich, Connecticut

R.T. in charge: Joseph A. Marcinek

Entrance requirements: High school diploma, test in employment office, personal interview, character references on application form

Classes begin: September

Can students enter at mid-year?: No

Student capacity: 3 presently attending

Number of full time technicians currently employed: 10

Number of part time technicians currently employed: 4

Tuition: per year: $100. before starting classes

Room and board: No arrangements made for this purpose

Other costs: Cost of books included within $100. tuition, uniforms and insurance must be paid for by student-opportunity to join Blue Cross and CMS plans

Stipend: $15. per week after 3 months probation

Scholarships: None

College affiliation: None

Degree or certificate awarded: Certificate

Length of program: 24 months

Approximate clinical hours: 2400 hours

Approximate class hours (didactic): 400 hours

Internship: None

Sick time: None

Vacation time: 2 weeks between first and second year

Holidays: All state and federal holidays

Do students work holidays?: Yes

Do students work weekends?: Yes

Do students work nights?: Yes

Special clinical training with an affiliated institution: Short time period spent at Uncas-Phelps Radiation Center for radiation therapy, and a short period of time spent with a local dentist training in his office

Number of instructors employed:
Full time: 10
Part time: 0

St. Joseph's Hospital
Stamford, Connecticut

M.D. in charge: Dr. J. F. Connolly

R.T. in charge: Miss Keenan

Entrance requirements: High school diploma, I.Q. test, interview, math and biology courses in high school, references

Classes begin: September

Can students enter at mid-year?: No

Student capacity: 14

Number of full time technicians currently employed: 8

Number of part time technicians currently employed: 4

Tuition: per year: $100.

Room and board: No facilities

Other costs: Students are provided with books

Stipend: Minimum

Scholarships: None

College affiliation: None

Degree or certificate awarded: Certificate

Length of program: 24 months

Approximate clinical hours: 2400 hours minimum

Approximate class hours (didactic): 410 hours mimimum

Internship: None

Sick time: Open

Vacation times: 1 year [illegible] weeks second year

Holidays: [illegible] followed by hospitals

Do students work holidays?: No

Do students work weekends? [illegible] second year

Do students work nights: [illegible]

Special clinical training with an affiliated institution: None

Number of instructors employed:
Full time: 0
Part time: 0

Stamford Hospital
Stamford, Connecticut

M.D. in charge: Dr. Richard Fleming

R.T. in charge: Mrs. Anne L. Welch

Entrance requirements: High school diploma, above H.S. average, interview

Classes begin: July

Can students enter at mid-year? No

Student capacity: 24

Number of full time technicians currently employed: 15

Number of part time technicians currently employed: 6

Tuition: per year: None

Room and board: None

Other costs: Books-$85., must pay for uniforms, insurance is paid for by hospital

Stipend: $50. per month after first 6 months

Scholarships: None

College affiliation: None

Degree or certificate awarded: Certificate

Length of program: 24 months

Approximate clinical hours: 4000 hours

Approximate class hours (didactic): 450 hours

Internship: None

Sick time: 1 day after first 6 months

Vacation time: 1 week first year, 2 weeks second year

Holidays: 0 first year, 7 second year pull duty and paid for it

Do students work holidays?: Yes, second year

Do students work weekends?: Yes, second year

Do students work nights?: Yes, second year only until 11:00 P.M.

Special clinical training with an affiliated institution: None

Number of instructors employed:
    Full time: 1
    Part time: 1

St. Mary's Hospital
Waterbury, Connecticut

M.D. in charge: Dr. Kenneth Reese

R.T. in charge: Mrs. Rose Marie LaFontaine

Entrance requirements: High school diploma, no letters of recommendation, ages 18-55, science or math background, and personal interview

Classes begin: September

Can students enter at mid-year?: Only for classroom courses

Student capacity: 30 at present, may increase

Number of full time technicians currently employed: 27

Number of part time technicians currently employed: 11

Tuition: per year: 1,00.., pay by the semester at $100.

Room and board: No facilities

Other costs: Purchase books, uniforms, have to take liability insurance, and pay activity fee

Stipend: None

Scholarships: Work/study program available

College affiliation: Mattatuck Community College

Degree or certificate awarded: Associate Degree

Length of program: 27 months

Approximate clinical hours: 2400 hours

Approximate class hours (didactic): 565 hours

Internship: Yes, for 12 weeks

Sick time: 2 days/per semester

Vacation time: 4 weeks off in summer

Holidays: All school and federal holidays

Do students work holidays?: No, only under Work/Study program or volunteer for summer so that it would not interfere with courses

Do students work weekends?: No, same as above

Do students work nights?: No, same as above

Special clinical training with an affiliated institution: Waterbury Hospital

Number of instructors employed:
Full time: 6
Part time: 0

Waterbury Hospital
Waterbury, Connecticut

M.D. in charge: Joseph M. Jones

R.T. in charge: Robert Griffin

Entrance requirements: Notify school but applicant after admissions to Waterbury Community College, complete physical exam, personal interview

Classes begin: September

Can student enter at mid-term: No

Student capacity: 54

Number of full time R.T.'s currently employed: 14

Number of part time R.T.'s currently employed: 16

Tuition: per year: state residents $100. per semester, out-of-state=
$4.0. per semester

Room and Board: No facilities

Other costs: Application fee $10., mandatory accident insurance=$10., activity fee $25. per semester, books and supplies=$50. per semester

Stipend: None

Scholarships: None available through Waterbury Community College

College affiliation: Waterbury Community College

Degree or certificate awarded: [illegible]

Length of program: 27 mos (as-only 2 months of third year

Approximate clinical courses: 40% [illegible]

Approximate class hours (off [illegible] 40 hours

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

The full clinical [illegible] with an affiliated institution: St. Mary's Hospital, [illegible] 40 week period, emphasis in Cobalt Therapy [illegible] Full Time [illegible]

Number of [illegible] available:
Full time: 1-[illegible] position requires 90% of time used in instruction
Part time: 4

[illegible] Administration Hospital
[illegible] River, Connecticut

[illegible]

[illegible] Hours: [illegible] credits in courses as outlined in [illegible] College

[illegible]

[illegible]

[illegible]

Number of full time instructors currently employed: 12

Number of part time instructors currently employed: 0

Tuition per year: College dues for first year, no tuition for second and third year

Fees and books: No facilities

Other costs: 50% for books

Stipend: Other year stipend

Scholarships: None [illegible] scholarships available for first year

College affiliation: Quinnipiac College

Degree or certificate awarded: Associate Degree

Length of program: [illegible] months

Approximate clinical hours: second year-1457 hours, third year-1676 hours

Approximate class hours attended: second year-543 hours, third year-534 hours

Internship: None

Vacation time [illegible] per year

Vacation time [illegible] per year

Full-time [illegible]

Students work holidays [illegible]

Students work weekends? Yes

Students work [illegible] rotations

Special clinical training (from an affiliated institution): Yale-New Haven Medical Center, Grafton Hospital, Newington Children's Hospital

Number of [illegible] employed:

Full time: [illegible]

Part time: [illegible]

Windham Community and Memorial Hospital
Willimantic, Connecticut

M.D. in charge: Dr. Carlo A. Herbert

R.N. in charge: Lee M. Lucaig

Entrance requirements: High school graduate or Equivalency diploma

Classes begin: September

Can students enter at midyear?: No

Student capacity: 8

Number of full time technicians currently employed: 9

Number of part time technicians currently employed: 2

Tuition per year: $100.

Room and board: Not available

Other costs: None

Stipend: None

Scholarships: Tuition and $50. per month from private source for minority group student

College affiliation: None

Degree or certificate awarded: Certificate

Length of program: 24 months

Approximate clinical hours: 2400 hours

Approximate class hours (didactic): 410 hours

Internship: None

Sick time: 5 days per year.

Vacation time: 10 days

Holidays: See below

(a) Students work holidays?: Yes, on a rotating schedule and only under direct staff technician supervision

(b) Students work weekends?: Yes, same as above

(c) Students work nights?: Yes, same as above

Special clinical training with an affiliated institution: Hartford Hospital

Number of instructors employed:
Full time: 2
Part time: 4

References

1. "Approved Educational Programs for Radiologic Technologists-1972", Approved by the Council on Medical Education of the American Medical Association in collaboration with the American College of Radiology and the American Society of Radiologic Technologists.

2. Arve H. Dahl, Acting Director, Division of Medical Radiation Exposure, from the National Conference on College Affiliated Educational Programs in Radiologic Technology. U.S. Department of Health, Education, and Welfare, Public Health Service.

3. "Approved Educational Programs for Radiologic Technologists-1972" Approved by the Council on Medical Education of the American Medical Association in collaboration with the American College of Radiology and the American Society of Radiologic Technologists.

Bibliography

Booklets

1. American Hospital Association, Hospital-Junior College Survey, Bureau of Manpower and Education, Chicago, Illinois, June, 1970

2. American Medical Association, Allied Medical Education Newsletter, 535 North Dearborn Street, Chicago, Illinois 60610, April 1st and May 1st, 1972, Volume 5, Nos. 4 and 5.

3. American Society of Radiologic Technologists, Careers in X-Ray Technology, 645 North Michigan Avenue, Chicago, Illinois 60611

4. American Society of Radiologic Technologists, Curriculum and Teacher's Syllabus for Schools of Radiologic Technology-A Teaching Guide, 645 North Michigan Avenue, Chicago, Illinois 60611, Interim printing, 1970.

5. American Society of Radiologic Technologists, Essentials of an Accredited Educational Program for Radiologic Technologists, 645 North Michigan Avenue, Chicago, Illinois 60611, Volume 41, No. 2

6. American Society of Radiologic Technologists, Job Descriptions for Diagnostic X-Ray, Radiation Therapy, and Nuclear Medicine Technologists, 645 North Michigan Avenue, Chicago, Illinois 60611, Volume 43, No. 1

7. Connecticut Hospital Association, Report on Coordinating Hospital and Regional Community College Programs, 90 Sargent Drive, P.O. Box 1900, New Haven, Connecticut 06509

8. Fenn, Robert H., Requirements of X-Ray Course, Acting President, Manchester Community College, Manchester, Connecticut 06040

9. Kemp, Barbara H., The Youth We Haven't Served-A Challenge to Vocational Education, U.S. Department of Health, Education, and Welfare

10. Medical Care and Education Foundation, Inc., The Parham-Smart Report on Minority Group Medical Education in New England, Tri-State Regional Medical Program, One Boston Place, Boston, Massachusetts 02108

11. Reinhart, Dr. Claire, X-Ray Technologist Employment Opportunities, State Department of Education-The Finski Report, 1971

12. State Department of Education, Health Service Occupations-Occupational Needs, Educational Requirements, 1967-1971-1976, Connecticut and Its Areas, Division of Vocational Education, Labor Education Center, The University of Connecticut, September, 1967

13. U.S. Department of Health, Education, and Welfare, Health Manpower Source Book, Section 11, Allied Health Manpower, 1950-80, Public Health Service, National Institutes of Health, Bureau of Health Professional Education and Manpower Training, Bethesda, Maryland 20014

14. U.S. Department of Health, Education, and Welfare, National Conference on College Affiliated Education Programs in Radiologic Technology, Public Health Servi

15. U.S. Department of Labor, Employment Oc -Radiologic Technologists, reprint from the Occupational Outlook Handbook, 1970-71 edition, Bureau of Labor Statistics, Bulletin 1650-17

16. Vizard, Richard E., Directory-1970-Education and Training Programs for Connecticut Health Occupations, Bureau of Pupil Personnel and Special Educational Services, State Department of Education, State Office Building, Hartford, Connecticut 06115

Letters

1. Adams, Dr. Frederick, Allied Health Professions, 41 Canterbury Street, Hartford, Connecticut

2. American College of Radiology, 20 North Wacker Drive, Chicago, Illinois 60611, Dr. James P. Steele, Chairman, Commission on Technologist Affairs, Robert E. Becker, Assistant Executive Director, William K. Melton, Director of Education, Washington Office

3. American Registry of Radiologic Technologists, 2600 Wayzata Boulevard, Minneapolis, Minnesota 55405

4. American Society of Radiologic Technologists, 645 North Michigan Avenue, Chicago, Illinois 60611, Mr. Robert Best-Executive Director, Mr. Edward L. Doyle-Director of Education, Peggy Miller-Assistant to the Executive Director, Mr. Richard A. Olden-Board of Directors

5. Bennett, Mr. James L., Deputy Director, Office of Training, Bureau of Radiological Health, Department of Health, Education, and Welfare, Public Health Service, Food and Drug Administration, Rockville, Maryland 20852

6. Cardozo, Mr. Raymond L., Job Program Officer, Department of Health, Education, and Welfare, Regional Office, Region I, John F. Kennedy Federal Building, Room 1309, Boston, Massachusetts 02203

7. Connecticut Hospital Association, P.O. Box 1900, 90 Sargent Drive, New Haven, Connecticut 06509

8. Cunningham, Mr. Daniel, Chief Technologist, Medical Center Hospital of Vermont, Burlington, Vermont 05401

9. Dahl, Mr. Arve, Division of Medical Radiation Exposure, Bureau of Radiological Health, Environmental Control Administration, 1901 Chapman Street, Rockville, Maryland 20852

10. Department of Allied Medical Professions and Services, American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610

11. Hallisey, Mr. Robert M., Radiological Health Representative, Bureau of Radiological Health, FDA, John F. Kennedy Federal Building, Room 1401-B-6, Government Center, Boston, Massachusetts 02203

12. Holmes, Dr. David, P. Box 55, M.D. Bishop Building, University of Connecticut, Storrs, Connecticut 06268

13. Horowitz, Mr. Alfred, Director of Research and Information, Connecticut Labor Department, 200 Folly brook Boulevard, Wethersfield, Connecticut 06109

14. Lester, Dr. Richard G., Professor and Chairman, Department of Radiology, Duke University Medical Center, Durham, North Carolina 27710

15. Mogg, Mr. Jerome, Workers Committee and Public Relations, 3247 South Lincoln Road, Mt. Pleasant, Michigan 48858

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Telephone Interviews

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2. Borraco, Mr. Nicholas, West Haven Veterans Administration Hospital, West Haven, Connecticut

3. Clifford FL Associates, New London, Connecticut

4. Commission on Human Rights and Opportunities, Shirley Rothkrug, Hartford, Connecticut

5. Connecticut Portable X-Ray Service, New Britain, Connecticut

6. Drew, Al, Eastman Kodak medical salesman, Guilford, Connecticut

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9. [illegible], Hartford, Connecticut

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Essentials of an Accredited Educational Program for Radiologic Technologists

With the collaboration of The American College of Radiology and The American Society of Radiologic Technologists, the Council on Medical Education of the American Medical Association prepared the following revision of the 1960 version of the "Essentials of an Accredited School of X-Ray Technology," which was approved by the House of Delegates of the AMA in December, 1969.

Preamble

The organizations primarily concerned with the education of radiologic technologists are the Council on Medical Education of the American Medical Association, The American College of Radiology, and The American Registry of Radiologic Technologists. The Council, in collaboration with The American College of Radiology and The American Society of Radiologic Technologists, functions by surveying, reporting, and approving these schools. The Registry investigates, examines, and certifies the competency of technologists applying for registration.

The Council, with the cooperation of the College, the Society and the Registry, has established the following minimal standards for this type of training for the information of technical schools, physicians, hospitals, prospective students, and others, and for the protection of the public.

Individuals are being trained in these schools to work as technologists under the direction of radiologists and other qualified doctors of medicine and not independently.

1. Administration

I. Acceptable schools for training radiologic technologists may be conducted by approved medical schools, radiology departments affiliated with accredited general hospitals, or by accredited institutions of higher education which have clinical affiliations with approved medical schools or radiology departments affiliated with accredited general hospitals.

A complete radiology department with a sufficient volume and variety of x-ray examinations shall be maintained. A radiology department which performs at least 4,000 examinations each year should provide sufficient material for proper instruction. It is recommended that at least 1,500 examinations per student enrolled be performed annually, exclusive of photofluorography, and that adequate facilities for training in radiation therapy be available. It is required that students receive some didactic training in nuclear medicine and therapy. Under certain circumstances, schools may be developed in specialty hospitals or in educational facilities other than those defined above which have demonstrated capabilities of providing suitable training in radiologic technology where clinical training may not be possible in radiation therapy and nuclear medicine or in the performance of some of the more complex radiologic procedures such as pneumoencephalography, angiocardiography and others. The school should arrange for affiliation with some other hospitals to provide students

clinical training in these fields.

2. The department shall comply with standard safety regulations for safety protection.

3. All trainees in radiologic technology shall be under competent radiologic supervision.

4. Necessary [illegible] financial contributions of the school should be insured through [illegible], gifts or endowments. A tuition fee may be charged to compensate the school for part of the costs of instruction and for the purchase of [illegible], library books, teaching aids, and other materials. Stipends may be paid to students during the latter months of training.

II. Organization

1. Affiliation with an accredited college, university, or medical school is desirable but not essential. When such an affiliation exists, an advisory committee shall be established including representatives from the school and from the departments of the college, university or medical school which participate in the training program. Degree granting programs should conform to the guidelines established by the Commission on Technologist Affairs [illegible] American College of Radiology for college affiliated programs.

2. Adequate space, light and modern equipment should be provided in the radiology department. A library containing up-to-date references,

texts, [illegible] pertaining to radiologic technology shall be maintained and be readily accessible to the students.

[illegible] shall be [illegible] work carried on in the [illegible].

4. Records of students' college and other credentials shall be on file [illegible] each student's attendance and grades as well as [illegible] performed. An outline of [illegible] duration of assignments shall be available to the [illegible].

5. Two, [illegible], students shall be enrolled in each class. Approval is withdrawn automatically if a school does not have any students for a period of two years, unless a satisfactory reason is provided.

6. An annual report of schools of radiologic technology shall be submitted to the Council promptly upon request.

7. Periodic re-survey will be carried out by The American College of Radiology and The American Society of Radiologic Technologists in collaboration with the Council on Medical Education of the American Medical Association. [illegible] to the Council and re-evaluation shall be required if the [illegible] of the educational program is changed.

III. Faculty

The school should have a competent teaching staff. The directing radiologist must be a duly licensed physician who is well qualified, experienced and proficient in his specialty. He shall be eligible for certification by, have been certified by the American Board of Radiology, or have qualifications acceptable to the Council on Medical Education. In addition to his qualifications in his specialty he should have high professional standing, possess the attributes of a teacher. He shall be in regular attendance for sufficient time to supervise adequately the educational program.

There should be at least one instructor who is a trained radiologic technologist, registered or eligible for registration by The American Registry of Radiologic Technologists, who may serve as assistant director of the school. Under him should be a corps of well-trained technologists who are capable of assisting in classroom instruction as well as in the practical teaching of students. There shall be at least one qualified technologist instructor for each three students.

IV. Admission Requirements

It is suggested that preference should be given to applicants between the ages of 18 and 45 years of age. Candidates for admission should satisfy one of the following minimum requirements: (a) Completion of four years of high school or the passing of a standard equivalency test. Courses

in physics, chemistry, biology, algebra, geometry, and typing are strongly recommended. (b) Passing of a college entrance examination for admission to an accredited college or university.

V. Curriculum

1. The educational program shall be a minimum of 24 months. Adequate vacation periods should be allowed for each 12 months of training. The following suggested basic curriculum is presented as a guide:

Two-year course in radiologic technology with suggested order of presentation.

First Year-First Semester	Theory Clock Hours
Orientation and elementary radiation protection	5
Professional ethics	4
Anatomy and physiology	30
Physics	20
Darkroom chemistry and technique	10
Principles of radiographic exposure I	10
Radiographic positioning-section A	15
Medical terminology	10
Film critique	10
	114 hours

First Year-Second Semester	Theory Clock Hours
Physics (continued)	20
Radiographic positioning-section A (continued)	15
Principles of radiographic exposure (continued)	10
Common radiographic procedures using contrast media	8
Nursing procedures pertinent to radiology	10
Pediatric radiology	8
Film critique	20
	91 hours

Second Year-First Semester	Theory Clock Hours
Radiographic positioning-section B	30
Principles of radiographic exposure II	10
Protection of patients and personnel	10
Special radiographic procedures	20
Topographic anatomy	12
Film critique	20
Elective	4
	106 hours

Second Year-Second Semester	Theory Clock Hours
Radiation therapy*	10
Nuclear medicine technology	10
Intraoral radiography	8
A survey of medical and surgical diseases	15
Departmental administration	10
Equipment maintenance	6
Film critique	20
General review	20
	99 hours

Electives

Psychology

Photography

Principles of teaching

Research in relation to the radiologic technologist

Technical writing

Radiological mathematics for technologists

Civil defense

Journal club

*In the field of radiation therapy and nuclear medicine technology, it is required that at least ten hours of lectures be given by a radiologist or other qualified instructor. This may be supplemented by appropriate practical training and experience in the above fields.

Note: (a) All unalloted time during the training period is to be devoted to practice in the subjects listed above, whenever possible. (b) Group lecture series presented by radiologists, registered technologists or qualified specialists may be applied towards minimum theory hours provided that these lectures are included as an integral part of the training course.

2. The course is designed to be presented in a minimum of 410 teaching hours and should follow a planned outline similar to the Curriculum and Teacher's Syllabus in Radiologic Technology (1967) published by The American Society of Radiologic Technologists and approved by the Commission on Technologist Affairs of The American College of Radiology and The American Registry of Radiologic Technologists. The instruction should be accomplished by lectures, discussions, or seminars, demonstrations, film critiques, supervised practice, text assignments and suitable examinations and review. It is expected that some instructors will wish to concentrate didactic sessions during the early months of training. If so, this should be followed by less concentrated but regularly conducted teaching exercises-at least two a week-during the remainder of the two-year training period. If not, most teachers have found that one instructional session each day of one or more hour's duration, five days a week, forty or more weeks a year, is the most effective approach to adequate presentation of material. Film critiques may be counted as one of the five weekly teaching exercises.

It is especially urged that classes be held regularly and on schedule and during the normal day hours of operation of the department.

3. Adequate hospital experience shall be provided. A hospital used for training radiologic technologists shall be acceptable to the Council on Medical Education of the American Medical Association.

VI. Ethics

1. Excessive tuition or other student fees and commercial advertising shall be considered unethical.

2. Schools conducted primarily for the purpose of substituting students for paid staff technologists will not be considered for approval.

VII. Health

Applicants shall be required to submit evidence of good health and successful vaccination. All students shall be given a medical examination, as soon as practicable after admission, by a physician. This examination shall include a roentgen examination of the chest. There shall be adequate periodic medical examinations of the student.

VIII. Method of Application

1. Application for approval of schools of radiologic technology should be submitted to the Council on Medical Education of the American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610.

2. Inquiries regarding registration of qualified radiologic technologists should be addressed to The American Registry of Radiologic

Technologists, 2600 Wayzata Boulevard, Minneapolis, Minnesota 55405.

SURVEY SHEET #1

Name of hospital: _____

Person filling out form: _____

Date: _____

R. T. in charge: _____

M. D. in charge: _____

1. Minority Group Representation
   (number employed)
   Blacks: _____

   Spanish-Americans: _____

   American Indians: _____

   Caribbeans: _____

   Other-(Please specify national origin if possible): _____

   _____

2. Employment Opportunities

   Number of full time technicians currently employed: _____

   Male: _____

   Female: _____

   Number of above certified in: Nuclear medicine: _____

   Radiation therapy: _____

   Number of part time technicians currently employed: _____

   Number of above certified in: Nuclear medicine: _____

   Radiation therapy: _____

   What is the number of non-registered technicians? _____
   Full time: _____ Part time: ___

   Future

   How many technicians do you anticipate hiring during the following years?

1972: _____ Diagnostic: _____ Therapy: _____ Nuclear medicine: _____

1973:_____Diagnostic:_____Therapy:_____Nuclear medicine:_____

1974:_____Diagnostic:_____Therapy:_____Nuclear medicine:_____

1975:_____Diagnostic:_____Therapy:_____Nuclear medicine:_____

The purpose of this question is to determine future demands for x-ray technicians in this state. It is understood that these are only approximations on your part.

5. Compensation

Would you please indicate approximate starting salaries for qualified individuals in the following categories: (as stated at your hospital)

	Diagnostic	Nuclear medicine	Radiation therapy
Recent graduate, no experience:			
1-5 years experience:			
5-10 years experience:			
More than 10 years:			

Do you have a school of X-Ray Technology?_____

Number of first year students:_____

Number of second year students:_____

What is your opinion regarding present Associate Degree Programs in X-Ray Technology offered by the State Community College system?_____

_____

_____

Would it be a significant consideration in hiring a new technician?_____

In what ways do you think X-Ray technology education could be improved in this state?_____

_____

_____

Comments:_____

_____

Please be assured that opinions expressed on this sheet will be held in the strictest confidence.

SURVEY SHEET #2

Name of hospital: _____

Name of person filling out form: _____

Date: _____

M. D. in charge: _____

R. T. in charge: _____

Entrance requirements: _____

_____

_____

When do classes begin-what month? _____

Can students enter at mid-year? _____

Student capacity: _____

Number of present students: _____

Male: _____

Female: _____

Number of first year students: _____

Number of second year students: _____

Number of minority group students-first year: _____

Number of minority group students-second year: _____

Minority Group Representation-number employed:

Blacks: _____

Spanish-Americans: _____

American Indians: _____

Caribbeans: _____

Other-(Please specify national origin if possible) _____

_____

Employment Opportunities

Number of full time technicians currently employed: _____

Male: _____

Female: _____

Number of above certified in: Nuclear medicine: _____

Radiation therapy: _____

Number of part time technicians currently employed: _____

Male: _____

Female: _____

Number of above certified in: Nuclear medicine: _____

Radiation therapy: _____

What is the number of non-registered technicians? _____

Future:

How many technicians do you anticipate hiring during the following years?

1972: _____ Diagnostic: _____ Therapy: _____ Nuclear medicine: _____

1973: _____ Diagnostic: _____ Therapy: _____ Nuclear medicine: _____

1974: _____ Diagnostic: _____ Therapy: _____ Nuclear medicine: _____

1975: _____ Diagnostic: _____ Therapy: _____ Nuclear medicine: _____

The purpose of this question is to determine future demands for x-ray technicians in this state. It is understood that these are only approximations on your part.

Compensation

Would you please indicate approximate starting salaries for qualified individuals in the following categories:

Recent graduate, no experience: _____

1-5 years experience: _____

5-10 years experience: _____

More than 10 years experience: _____

Tuition: _____

Per year: _____

Per semester: _____

Room and board: _____

Other costs: _____

_____

_____

Stipend: _____

Scholarships available: _____

_____

College affiliation: _____

Length of program: _____

Clinical hours: _____

Class hours (didactic): _____

Internship required?: _____

Sick Time: _____

Vacation Time: _____

Holidays: _____

_____

Do students work holidays? Yes _____ No _____

Do students work weekends? Yes _____ No _____

Do students work nights? Yes _____ No _____

Curriculum: _____

_____

_____

_____

What non-technical courses are included in the curriculum? e.g. English _____

_____

_____

Do students receive special clinical training with an affiliated institution?

Yes_____ No_____ If yes, where? _____

What is the approximate cost to the hospital of the school? _____

Is the director of the school of X-Ray Technology, a full or a part time job? _____

How many instructors are employed? Full Time: _____

Part Time: _____

Do you see a need for affiliation with an Associate Degree Program? _____

Would you be interested in affiliation for an Associate Degree Program? _____

What is your opinion regarding present Associate Degree Programs in X-Ray Technology offered by the State Community College system? _____

_____

_____

_____

Would an Associate Degree be a significant consideration in hiring a new technician?

_____

In what ways do you think X-ray technology education could be improved in this state? _____

_____

_____

Comments: _____

_____

_____

Miscellaneous Facts

Tuition and Other Costs

The following is a composite picture of financial figures which were gathered from all 21 schools of x-ray technology in the state.

Tuition: Approximately half of the schools charge $200. for two years.

Books: At all schools, the cost of the x-ray technology textbooks only is from $55. to $85.

Uniforms: The range of prices for uniforms is from $75. to $100. for 6 uniforms with the additional cost of shoes.

Insurance and Benefits: At some schools, the students must take life insurance with the only quoted price for the students being $10. per year. One hospital pays for a $1,000. life insurance policy and for regular Blue Cross benefits.

Rooms: Rooms are available without board for a range in prices from $5. to $35. per week.

Scholarships: Most schools do not offer them, however there are a few specifically for use in x-ray technology programs.

Stipends: There are numerous variations in the payment of stipends to students in x-ray technology programs at different hospitals in the state. Some ranges of pay are as follows:

$.75 per hour for the first 6 months
$1.00 per hour for the next 6 months
$1.10 per hour for the next 6 months
$1.30 per hour for the next 6 months

0-6 months-none
6-12 months-$25. per week
12-18 months-$35. per week
18-24 months-$45. per week

Second year-$65. per month

After 6 months-$15. per week
Second year-$30. per week

Miscellaneous Facts-Continued

Structure of X-Ray Technology Schools

Clinical Hours: The A.S.R.T. requires 2400 hours of clinical work to be accomplished within a two year period. The range of actual time spent at this task at various schools is as follows: 1400 hours to 3200 hours for two years. The average, then, is approximately 2700 clinical hours.

Class Hours: The A.S.R.T. requires 410 hours of actual didactic classroom work over the two year span. Around the state at schools, one finds the range to be 431 hours to the high of 720 classroom hours. The average time spent in lecture work, then, is 500 hours for two years.

Entrance Requirements: The following is a general picture of different entrance requirements as requested at various institutions: High school diploma, top half of their graduating class, between the ages of 18 to 35, good character background, science and math background, character references, physical examination, good health, interview, I.Q. test, and S.A.T. scores.

Classes Begin: Either in July or September.

Enter at Mid-Year: Most schools will not allow students to enter at mid-year unless there is an exceptional reason.

Average length of program: Most of the x-ray schools run a program for a period of 24 months, however their schedule can last for 27 or 36 months.

Internship: An internship is a span of time following the regular time of instruction whereby the students spend an intensive period reinforcing what they have already learned either in regular diagnostic work or in a specialty as radiation therapy or nuclear medicine. This is usually not required, however a few hospitals have extra training which may last either for two months or 12 weeks.

Sick Time: This is the amount of time allowed students to be excused due to illness during a given year. The span of time is from 5 to 12 days with the stipulation that anymore missed time must be made up.

Vacation Time: The following schedule is used by various schools in determining time allowed off for vacations every year: ranges from 1 week or 8 days to four weeks off in the summer.

Holidays: At some hospitals, students work during holidays. However, the period of time allowed free is generally from 1 to 12 days per year. Most have state and federal holidays, and if they must work, they are compensated in some form for it.

Miscellaneous Facts-Continued

Training: During the months spent in training at the hospital, there usually is a period of time for two to four weeks whereby the students go to another institution and learn specialty work as in radiation therapy or nuclear medicine.

Cost to the hospital of x-ray schools: The range in cost of x-ray schools to the hospitals where they are established is from $1,500 to $33,000.

Savings to hospitals of x-ray schools: It has been found that at a few hospitals, the x-ray schools have saved the institution from $20,000 to $47,000. per year.

Curriculum: The majority of the schools adhere to the syllabus which is published by the American Society of Radiologic Technologists. At institutions where the x-ray school is affiliated with a community college, half of the curriculum consists of non-technical courses as follows: English Composition, Approach to Literature, Beginning Typing, College Algebra, College Trigeometry, Psychology, Abnormal Psychology, Electives.

Compensation Scales

State Salary Scales: All figures were quoted on a 35 hour weekly basis. In October, 1972, there will be an across the board increase of $300.

X-Ray Assistants
Salary Group 4
per year=$5,331-$6,447. with $186. annual inclement
per hour=$2.92-$3.53

X-Ray Tech. I
Salary Group 8
per year=$6,531.-$7,977. with $241. annual inclement
per hour=$3.58-$4.37

X-Ray Tech. II
Salary Group 10
per year=$7,055.-$8,627. with $262. annual inclement
per hour=$3.87-$4.73

The following are salary figures quoted by the Directors of X-Ray Schools in hospitals around the state.

Assistant of X-Ray School Program=$9-12,000. per year
Coordinator of X-Ray School Program=$12,00-18,000. per year

X-Ray Technologists

Diagnostic

Recent graduate
per hour=$2.92-$3.67
per week=$107.80-$140.
per year=$6,531. to $8,000.=State Tech. I

1-5 years experience
per hour=$3.11-$4.47
per week=$122.-$187.
per year=$6,800.-$10,000.

5-10 years experience
per hour=$3.22-$4.77
per week=$126.-$230.
per year=$6,800.-$12,000.

More than 10 years experience
per hour=$$3.40-$4.77
per week=$159.20-$200.
per year=$6,800.-$12,000.

Compensation Scales-Continued

Nuclear Medicine

Recent graduate:
per hour=$3.67-$3.97

1-5 years experience:
per hour=$4.47

5-10 years experience:
per hour=$4.77

Radiation Therapy

Recent graduate:
per hour=$3.67-$4.14

1-5 years experience:
per hour=$4.47

5-10 years experience:
per hour=$4.77

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IDENTIFIERS - *WASHINGTON STATE; EMPLOYMENT SKILLS

ABSTRACT - THIS REPORT IS INTENDED AS AN OCCUPATIONAL GUIDE TO FUTURE MANPOWER NEEDS TO BE UTILIZED BY BOTH MANPOWER PLANNERS AND PERSONS INTERESTED IN THEIR OWN VOCATIONAL ADVANCEMENT. RESEARCH INDICATES AN INCREASE OF 59,540 NEW POSITIONS AND 178,740 VACATED POSITIONS OVER THE 5-YEAR PERIOD STUDIED. THE GREATEST NUMBER OF JOBS AVAILABLE THROUGH 1975 WILL BE OCCUPATIONAL CATEGORIES UNDER THE SERVICE WORKER HEADING DUE TO EXPANSIONS IN RETAIL TRADE, MEDICAL AND EDUCATIONAL INSTITUTIONS, AND LOCAL GOVERNMENT. CLERICAL WORKERS WILL ALSO EXPERIENCE A LARGE INCREASE OF NEW JOBS GENERATED BY PRODUCT AND MARKET DIVERSIFICATION. PROFESSIONAL AND TECHNICAL WORKERS WILL BENEFIT FROM THE GROWING SERVICE ORIENTATION IN SOCIETY AND TECHNOLOGICAL ADVANCEMENTS. MANAGERS, PROPRIETORS, AND CRAFTSMEN EMPLOYMENT WILL CONTINUE TO RISE, BUT SEMISKILLED WORKERS, LABORERS, AND FARM WORKERS CAN EXPECT A DECREASING DEMAND FOR THEIR SERVICES. DOMINATING WASHINGTON'S ECONOMY IN THE EARLY PART OF THE FORECAST PERIOD IS THE DRAMATIC DECLINE IN THE AEROSPACE INDUSTRY. (KH)

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WASHINGTON STATE, 1970-1975

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Employment Security Department
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The Manpower Administration and
Bureau of Labor Statistics of
The United States Department of Labor

Daniel J. Evans
Governor

October 1971

Maxine E. Daly
Commissioner

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F O R E W O R D

Information on occupational demand is necessary for efficient management of human resources. Only with knowledge of occupational trends can government, schools, and industry direct their training in such a manner as to avoid costly inbalances in labor supply and demand. This report will provide individuals responsible for training programs with reasonably accurate projections of future trends. However, they are cautioned that trends sometimes change rapidly and that local demand may vary significantly from statewide demand.

This report was prepared in the Research and Statistics Branch of the Washington State Employment Security Department under the direction of Leo Neuschwander, Chief of Research and Statistics. The methodology used was developed by the U. S. Bureau of Labor Statistics. Initial employment projections for Washington State were furnished by the Bureau's computer services. The report was written by Peter O'Gorman, Research Analyst, under the supervision of Ronald Wahlers, Chief Labor Market Analyst. Valuable assistance of other members of the Research and Statistics Branch also helped to make the study possible.

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INTRODUCTION

This report is intended to serve as an occupational guide to future manpower needs. As such it is of benefit both to manpower planners and to persons interested in their own vocational advancement. Indeed, it has become highly important to many concerns to have reliable information correlating occupational trends with industrial trends on the statewide level. To the extent that labor supply cannot meet the demands of industry, we may expect an inhibition of employment growth among industries and greater job dissatisfaction or actual joblessness among workers. This problem is especially acute in Washington State because of the decline in aerospace and reductions in associated occupations. Employment growth in the near future will be largely in other industries not requiring the particular skills of aerospace workers in such great quantity. It is essential for these workers, as well as for returning servicemen, the disadvantaged, students, and any others seeking placement in a changing market, that vocational and educational training be consistent with the requirements of emerging demand.

Manpower needs are estimated for 148 occupational categories for the years 1960, 1970, and 1975. These categories were designated by the United States Bureau of Labor Statistics and are closely related to those in the U. S. Census. Total job opportunities are also projected for each occupation between 1970 and 1975, comprised of the number of new jobs expected to develop plus the replacement needs resulting from workers leaving the state's labor force. For maximum consistency between occupational and industrial data, the unit of study used is jobs rather than individuals. Transfers of workers between jobs within the state's labor force are not considered because they do not affect the net change in manpower needs.

The amount of demand for an occupation is a function first of the volume of employment in associated industries, and second of the relative significance of the occupation within these industries. Trends of occupational demand result from expansions or contractions in these pertinent industries and their changing occupational composition over time. The latter changes are primarily the product of increasing technical efficiency and a generally rising affluence. They take the specific forms of increased mechanization and automation, larger and better-ordered work places, greater emphasis on service-producing activities, an increased significance of decision-making roles, and so forth.

A cross-tabulation of the major occupational groups within the major industry categories is also provided for the years 1970 and 1975. The purpose of these tables is to provide an over-view of future trends and to elucidate the underlying patterns behind specific occupational projections.

Finally, the reader is cautioned against treating the data as precise. The nature and extent of available data and the necessity for partial use of a model based on national trends preclude precise estimates. These data are intended as an inter-related framework within which the direction and strength of different trends may be placed in perspective. In subsequent editions the precision itself will be improved, with the full results of the 1970 census becoming available and implications from industry data being drawn increasingly more finely.

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I. Highlights

Employment in Washington State will rise from an annual average of 1,288,150 jobs in 1970 to 1,347,690 in 1975, an increase of 59,540 new positions. Accompanying these will be another 178,740 available through workers retiring or otherwise separating from the state labor force. Obviously, successful vocational planning can only be possible given an understanding of which industries and occupational categories these gains will involve and to what extent.

As we now know, aerospace contractions will have dominated Washington's economy during the early part of the forecast period; employment in that industry will have dropped from an average of 61,700 in 1970 to well under 40,000 by the end of 1971. The adverse effects of these layoffs joined with others related to defense cutbacks and a quiescent national economy to produce a generally depressed status in most other industries as well. During 1972, however, aerospace losses are expected to level off, federal spending for peace-time purposes will continue to intensify, and national markets will steadily strengthen, resulting in a year of stabilization for the state. Through the remaining part of the forecast period the local economy will gradually revitalize.

Supplementing the economic resurgence will be rising affluence, a steady in-migration of people, an extending urbanization, and a generally more mechanized workplace and living environment. Consumers will become increasingly concerned with social, health, and environmental ideals, and increasingly enthusiastic about the broadening range of activities outside the home. Chain organizations will become more pervasive and businesses will sharpen competitive practices, resulting in a drive to improve worker output and intra-organizational efficiency. Among manufacturing industries, jobs are likely to be more closely connected with automation, involve greater worker responsibility, and include a more pliable set of duties. In service-producing industries, employment will focus on personalized services and will be brightest for those who can perform unique or highly technical functions. Also involved in the upturn will be a realignment of importance among various industries, as the nonmanufacturing sector gains in employment significance over the manufacturing, and lumber and wood, metals, and machinery replace aerospace as primary foundations for industrial growth. The implied adjustment in the work force is enormous. Many workers will not be able to take advantage of economic growth in this state until bolstering their skills through further strategic training.

The greatest number of jobs available through 1975 will be for occupational categories under the service worker heading. Anticipated are 16,090 new jobs plus 38,160 labor force separations for a total of 54,250 openings. New positions will stem largely from expansions in retail trade, medical and educational institutions, and local government, and will especially involve cooks, waiters and waitresses, practical nurses, hospital attendants, janitors, and policemen. Replacements will be very high in the domestics category, which alone will account for 11,000. Many private household workers are either schoolgirls or women approaching retirement age.

Clerical workers will experience the largest categorical increase of new jobs over the forecast period, gaining 18,310 as a result of growing organizational complexity and an extended volume of paperwork. Labor force separations will also be high among clerical workers, equalling 35,390 to total 53,700 openings. New positions in manufacturing will be generated by the necessity of product and market diversification and greater organizational efficiency. In trade, finance, insurance, and other nonmanufacturing industries, new positions will emanate from the proliferation of branch offices and increasing number of large, chain organizations. Jobs will be most abundant for cashiers, office machine operators, bookkeepers, banktellers, typists, stenographers, and secretaries. Only the spread of electronic data processing machines will inhibit employment of clerical workers to any great extent.

An estimated 14,350 new jobs will become available for professional and technical workers, who will benefit both from the growing service orientation in society and the demand for technological refinements by industry. Another 25,050 positions will arise as replacements for a total of 39,400. Many of these openings will be in the medical field. Health services must be greatly expanded in Washington in response to a growing, more health-conscious population, the increased ability of families to pay because of rising affluence and further extensions of medical coverage to the poor, and an expanded medical potential resulting from new drugs and techniques. Demand will be exceptionally urgent for physicians and surgeons, professional nurses, and medical technicians. Professionals in other fields expected to be in demand include workers in arts and entertainment, accountants and auditors, civil engineers, social and welfare workers, lawyers, and teachers on other than elementary school levels. However, most engineering professions will suffer losses in the early part of the forecast period due to their reliance on aerospace. Those most affected will include aeronautical, chemical, industrial, electrical, mechanical and metallurgical engineers.

Anticipated for managers and proprietors are 5,890 new jobs plus 17,540 replacements to total 23,430 openings. For sales workers, 6,700 new positions are expected and 12,610 labor force separations for a total of 19,310. The value of managers will increase to correspond with the number of autonomous units within organizations and the variety of functions performed by each unit. In retail and service establishments the gradual replacement of small independent businesses by chain organizations will create jobs for salaried managers at the expense of proprietors. Employment of sales workers will be stimulated by increased buying, heightened competition, and the development of new products and market techniques. At retail stores much of the demand will be absorbed by self-service systems and part-time help, but at manufacturing and wholesale firms a growing need will exist for career salesmen who are able to demonstrate practical usages of company products and processes to specific organizations.

Craftsmen employment will increase by 7,170 new jobs due to expansions of construction activity, the rising reliance on machinery in industry and by other consumers, increases of power usage throughout the state, and the general flexibility of many craftsmen duties in the face of technological innovations. Another 18,830 positions will be added through retirements for

a total of 26,000. Openings will be especially numerous for carpenters, plumbers and pipefitters, excavating and grading machine operators, linemen and servicemen, motor vehicle mechanics, and various repair specialties. The major obstacles to the employment of craftsmen will be aerospace layoffs, further mechanization or automation in production processes, and improved materials or tools. In this vein, significant contractions will be experienced by airplane mechanics, machinists, toolmakers and diemakers, and patternmakers.

Operative employment, however, will be thoroughly inhibited by aerospace layoffs and technological advances. The routine, repetitive nature of the duties of semiskilled workers make their jobs particularly susceptible to mechanical replacement. Of an anticipated 19,920 openings, only 1,910 will result from the creation of new jobs. Worst off will be semiskilled metalworking occupations, especially machine tool operators, class A and class B assemblers, and class B inspectors. Other operatives likely to experience contractions include railroad brakemen and switchmen, laundry and dry cleaning operators, and meat cutters. Only drivers and deliverymen will show any real potential for growth, profiting from increased trade without their positions being endangered by technological improvements.

The outlook for laborers is even more bleak. Approximately 5,620 jobs will be lost, primarily due to mechanization and automation advances and aerospace cutbacks, while only 6,190 labor force separations are expected for a net total of 570 openings. Losses of laborer jobs will be most severe in manufacturing and also substantial in the wholesale trade and transportation industries. Over-all, construction and retail trade seem to offer the best employment prospects for laborers, since the technical difficulties in mechanizing their functions are greatest in those industries.

Employment of farmers and farm workers will continue its long-range decline. Approximately 5,260 more jobs will be lost over the forecast period, although with 6,960 labor force separations, a net total of 1,700 openings will result. Large corporate farming will become more pervasive, accompanied by more extensive usage of existing technologies, an acceleration of mechanical innovations, a general gain in productivity, and the gradual disappearance of small, family farms. Only expanded acreage in eastern Washington will have a deterring effect on this decline.

II. Industrial Growth, 1970-1975

Industrial growth in Washington will have a unique character within the national pattern. Side by side with gross employment reductions in the state's dominant industry, aerospace, will be sizable gains in some of the others. Over a decade of reliance on aerospace is drawing to a close, with losses in that industry expected to equal about half its work force between 1970 and 1975, or 30,000 jobs. Lumber and wood products, which replaced aerospace as Washington's largest manufacturing industry in 1971, has not altered its job totals by more than a few thousand since 1960. As with many other industries, increased demand for products is partly met through improved mechanization, leaving lumber and wood products in no position to assume a dominant employment role in the future. Limited expansions in the metals and machinery industries will not be sufficient to save manufacturing as a whole from a loss of 13,000 jobs over the forecast period.

Nevertheless, Washington will experience a healthy population growth between 1970 and 1975, unemployment will eventually decline, and personal earnings will rise--all of which implies more and better services and products for consumers. Hence, the service and trade industries are expected to register substantial gains, with services employment expanding by almost 22,000 jobs and trade employment by almost 18,000. Also implied through 1975 are larger and more fully staffed schools, accounting for an anticipated gain of 13,000 jobs in government.

With the shift in emphasis from goods-producing to service-producing industries especially pronounced in Washington, the goods-producing industry expected to show the largest increase is contract construction. Gradual improvements in the state's economy and the return of a steady net in-migration should result in a long overdue rebound of this industry and a rise of approximately 10,000 new jobs.

Table 1

Employment by Industry, Washington State, 1960, 1970, and 1975
(in thousands)

	Calendar 1960	Calendar 1970	Calendar 1975	Change From 1970 to 1975	
				Number	Percent
TOTAL EMPLOYMENT	1,020.3	1,288.1	1,347.7	+ 59.6	+ 4.6
Agriculture	80.1	64.9	63.1	- 1.8	- 2.8
Nonagriculture	940.2	1,223.2	1,284.6	+ 61.4	+ 5.0
Employer, Unpaid, Domestics	127.6	139.1	140.0	+ .9	+ .6
Wage and Salary Workers	812.6	1,084.1	1,144.6	+ 60.5	+ 5.6
Manufacturing	216.6	240.5	227.4	- 13.1	- 5.4
Lumber and wood	44.4	41.8	45.9	+ 4.1	+ 9.8
Metals and machinery	25.3	35.8	42.5	+ 6.7	+ 18.7
Aerospace	57.8	61.7	31.0	- 30.7	- 49.8
Other transp. equipment	7.8	13.4	13.5	+ .1	+ .8
Other durable goods	10.5	12.5	13.3	+ .8	+ 6.4
Food products	27.1	29.5	30.1	+ .6	+ 2.0
Paper and allied	18.0	19.7	22.0	+ 2.3	+ 11.7
Chemicals and petroleum	12.0	7.3	8.0	+ .7	+ 9.6
Other nondurable goods	13.7	18.8	21.1	+ 2.3	+ 12.2
Nonmanufacturing	596.0	843.6	917.2	+ 73.6	+ 8.7
Mining	1.8	1.7	1.9	+ .2	+ 11.8
Construction	44.6	53.6	63.7	+ 10.1	+ 18.8
Transp., comm., & util.	61.3	72.7	78.4	+ 5.7	+ 7.8
Trade	180.0	242.4	260.3	+ 17.9	+ 7.4
Fin., ins., & real estate	38.3	58.2	63.0	+ 4.8	+ 8.2
Service	103.5	170.8	192.7	+ 21.9	+ 12.8
Government	166.5	244.2	257.2	+ 13.0	+ 5.3

Manufacturing

Employment among manufacturing industries is expected to decline from 240,500 in 1970 to 227,400 in 1975, or by 5.4 percent. Although the primary basis of this loss will be the elimination of over 30,000 positions in aerospace, manufacturing growth will also be inhibited by other sources more difficult to quantify. First, the recession in the state's economy is placing strong restraints on industries serving local markets. Second, many firms with a potential job expansion are improving productivity through more efficient mechanization. Unfortunately, steady employment gains for manufacturing as a whole are not likely until sometime after the forecast period.

Lumber and Wood

The job total in lumber and wood will rise from 41,800 to an estimated 45,900 between 1970 and 1975, an increase of 9.8 percent. Growth will emanate from increases in the national volume of home building, since the housing industry is the major market for lumber. However, the competition of other materials for use in construction and the continued technological improvements in the mills will act as moderating influences. In addition, logging activity cannot surpass the limited supply of forest land. The 1975 level in the industry will be no higher than in 1968.

Metals and Machinery

Also responding to national markets, metals and machinery employment is expected to increase from 35,800 to 42,500 jobs over the forecast period, representing an increase of 18.7 percent. In the metals industry demand is rising for both ferrous and nonferrous metals. Nonferrous metal employment will be bolstered further by the establishment of a new aluminum plant to be in full operation in mid-1971, and by the establishment of one or two magnesium plants by 1975. Machinery employment will not only be stimulated by national buying, but will also receive a local boost from renewed orders for lumber and wood machinery.

Aerospace

Aerospace employment is expected to decline by nearly one-half over the forecast period. The sparsity of defense contracts and slow recovery of airlines will have taken an immense toll in jobs. In addition, the loss of the SST contract will prevent any expansion into the supersonic realm. With few or no new government prototypes for development, plus delivery stretch-outs and order cancellations by private airlines, the number of jobs in aerospace will drop from 61,700 in 1970 to an anticipated 31,000 in 1975.

Other Transportation Equipment

Other transportation equipment will remain pretty much static in employment, increasing from 13,400 to 13,500. The improving market for trailer homes, campers, and pleasure craft will be offset by long-term decreases in shipbuilding corresponding to declining defense business.

Other Durable Goods

This category includes furniture and fixtures, stone-clay-glass products, and the production of some kinds of instruments. For the group as a whole, employment is expected to show a small increase from 12,500 to 13,300 over the forecast period. Since these industries primarily serve local markets, the moderate gains in each will reflect a gradual improvement of the state economy, increased spending by consumers, and a restored trend of net in-migration.

Food Products

Job totals in food and kindred will also show only minor expansion, increasing from 29,500 to 30,100. The bakery, beverage, and dairy segments will experience moderate gains as a result of population growth, but these will be partially offset by losses in canning and preserving due to mechanization. Although a few new canneries will become operational, they will be highly mechanized and may push less efficient plants out of operation.

Paper and Allied

Employment in paper and allied will rise from 19,700 jobs to 22,000, or by 11.7 percent. Demand for pulp and paper packaging products tends to fluctuate with national markets since it is tied to output in other industries. Along with the upswing in the national economy and increasing industrial demand, there is also growing consumer interest in readily disposable household items. Expansion will probably be accompanied by the closing of a few obsolete plants and replacement by newer, more efficient ones.

Chemicals and Petroleum

Chemicals and petroleum is expected to rise from 7,300 jobs in 1970 to 8,000 in 1975, representing an increase of 9.6 percent. Most of the gain will occur in the chemicals industry, whose output goes largely to other industrial concerns in a national market. Expansion in petroleum employment will result mainly from the development of new refineries to process Alaskan oil.

Other Nondurable Goods

The other nondurable goods category includes apparel and other textile products, printing and publishing, and rubber and plastics products. Responding to population growth and relaxed consumer spending practices, employment in these industries will rise from 18,800 to an estimated 21,100 over the forecast period, or by 12.2 percent.

Nonmanufacturing

Employment among nonmanufacturing industries is expected to increase from 843,600 in 1970 to 917,200 in 1975, a gain of 8.7 percent. An assorted group of industries, most are characterized by the tendency to respond to economic developments rather than to create them. For each the primary impetus for expansion is population growth and/or consumer spending. The only real exception would be mining. With a rapidly expanding population and gradual improvement in personal income over the forecast period, most nonmanufacturing industries will experience substantial gains in payrolls.

Mining

Mining employment has remained fairly static over time, although expected to rise from 1,700 to 1,900 jobs over the forecast period. Often being located in rural areas, mining activities may take a leading role in determining the prosperity of the local community. Stone and gravel quarrying accounts for most of the current employment, and will account for most of the gain. Among other minerals, the extraction of coal and crude petroleum will show small gains; while a loss is anticipated for metal mining because of the depletion of some present mines and the possibility of a decreasing market because of less use of lead in gasoline.

Construction

Construction will show a major employment gain from 1970 to 1975, rising from 53,600 jobs to an estimated 63,700, or by 18.8 percent. The greatest increase will be in home building, which will be stimulated by population growth, low interest rates, expanded public housing projects, and federal interest subsidies for low income housing. This momentum should be little more than slowed by the trend toward modular housing, which consists of separate, easily transportable units produced at a factory and assembled at the construction site. Nor should the growing trend toward smaller or mobile homes have a significant deterring effect over the forecast period. Commercial and public construction projects should show a moderate increase as the state's economy gradually improves, as should heavy building construction as government spending loosens on all levels for such projects as highways, bridges, sewer and water systems, and various improvements to satisfy ecological requirements.

Transportation, Communications, and Utilities

The job total in transportation, communications, and utilities will rise from 72,700 to an anticipated 78,400 over the forecast period. In the transportation segment, population growth will prompt expansions in trucking and air travel, while increasing trade with Japan and other Asian nations will enhance employment in water transportation. These gains, plus lesser ones in warehousing and transportation services, will more than offset continued losses in railroads. In communications, substantial gains will occur in the telephone sector; and in utilities, growth will remain steady in response to longer range population trends. Sometime in 1972 or 1973, a large steam electric plant will become operational in southwest Washington and will employ from 250 to 280 workers.

Trade

Employment in wholesale and retail trade is expected to increase from 242,400 to 260,300 jobs, an increase of 7.4 percent. With a growing population, strong employment gains are expected for food stores, eating and drinking places, service stations, automotive dealers, and many kinds of general merchandise stores. Much of the gain will be associated with new and expanding shopping centers in suburban areas. In wholesale trade, strong expansions are anticipated in motor vehicle and automotive equipment, machinery equipment and supplies, electrical goods, and hardware, plumbing, and heating equipment.

Finance, Insurance, and Real Estate

Job totals in finance, insurance, and real estate are expected to rise from 58,200 to 63,000 over the forecast period, an increase of 8.2 percent. All three industries will profit from population pressures and a more ready flow of money. With increased investment, greater activity will ensue for banking and credit agencies, ultimately resulting in a proliferation of new branch establishments. Demand for land and homes will bring about a resurgence of activity in real estate, especially in speculative building, and this activity will reciprocate with those in finance to stimulate employment in both industries. Insurance business will also be on the rise in response to a more insurance conscious public as well as the step-up in flow of money.

Services and Miscellaneous

Employment in the services group will rise from 170,800 jobs in 1970 to an estimated 192,700 in 1975, or by 12.8 percent. Almost all sectors of this industry will post substantial gains, and especially medical and other health services. Other employment expansions include those in hotels and other lodging places, theaters and motion pictures, private school education, and automotive repair and services. Population growth and returning financial stability form the major basis of the upsurge in demand for services, with an increasing public inclination for active recreation also contributing.

Government

Government payrolls are expected to expand from 244,200 to 257,200 over the forecast period. Most of the increase will be encompassed within public educational institutions, especially on the secondary school and college level. More schools and better facilities are necessary to reduce classroom size in the face of a growing student populace. With a partial recovery in the economy, school millage will find greater voter support. Better services will also be needed in other sectors; such as in protective services with the addition of more policemen and firemen in later years, and in administrative services with the provision of monetary and training aid to a greater number of disadvantaged. Federal employment, however, will continue to decline slowly from war-time peaks.

Employer, Unpaid, Domestics

This category is composed of employers, independent craftsmen, some salesmen, most doctors and lawyers, unpaid family workers, and any others whose income comes from the earnings of a business or from fees and commissions rather than wages and salaries. It also includes private household workers. Employment in this group is expected to remain pretty much static, rising from 139,100 to 140,000 jobs. The potential increase of nonsalaried workers corresponding to a larger labor force and more part-time employment will be tempered by the difficulty of small business in competing with chain organizations. Employment of private household workers will continue to decline.

Agriculture

The number of jobs in agriculture will decrease from 64,900 to an estimated 63,100, a loss of 2.8 percent. The long-range trend is definitely downward because of a sharp decline in number of farms and the gradual acceleration of mechanization in hops, asparagus, sugar beets, apples, and other crops. As farms become larger, more use can be made of chemical and mechanical means for cultivating or harvesting crops, eventually eliminating many small farm owners and their families from the business. A toll will also be taken among laborers. One new grape harvester alone can perform the work of 200 men, while efficient mechanical harvesters in asparagus and fresh market fruits are likely before 1975. However, increases in crop acreage will act as a partial inhibitor to this decline. Reductions of farm land in western Washington due to urban sprawl and freeway construction will be more than offset by the amount of new land brought under irrigation in the Columbia Basin and other eastern areas. In addition, more jobs will open for workers with specialized skills and technical knowledge.

III. Industrial Change and Occupational Demand

Demand for workers of a given occupational category may rise because of expansions in the industries employing them or as a result of an increased significance of their services within these industries. Hence, the relatively large employment growth anticipated in trade, services, government, and construction will stimulate demand for most occupations associated with them. Conversely, most occupations associated with aerospace will experience a surplus, especially with the utility of aerospace skills in other fields considered generally low. Alterations in the occupational composition of an industry may have its roots in technological improvements, the increasing pervasion of chain organizations, the rising complexity of administrative functions, or in shifts in the relative significance of industry segments. Occupations that are consistent with such trends are likely to assume greater importance, while those obstructing them face eventual obsolescence.

Tables 2-6 are presented in this section. Together these five tables form a basis for evaluating the effects of industry change on occupational demand. Although numerical values are stated as precise estimates, they were meant primarily as tools for identifying trends and inter-relating them in terms of direction and relative magnitude. Tables 2 and 3 are cross-classifications of general occupational categories within industries for the years 1970 and 1975, respectively. The differences for each cell are given in table 4. Tables 5 and 6 provide the percentage of workers by occupational category in each industry, again for 1970 and 1975 respectively.

The general occupational categories referred to are: professional-technical, managers, proprietors, clerical, sales, craftsmen, operatives, service workers, and laborers. The reader may locate the specific occupational components of these categories in the next section. Brief definitions of the broad occupational categories follow:

Professional-Technical

Workers who possess specialized skills requiring a knowledge gained through extensive education or training; includes engineers, scientists, technicians, teachers, medical workers and miscellaneous others.

Managers - Proprietors

Workers who are responsible for the success of part or all of an organization, and are involved in the formation of programs and policies and the supervision of their implementation.

Clerical

Workers who handle the paperwork and general office communications essential in an organization; includes secretaries, stenographers, typists, office machine operators, and a number of other specific categories.

Sales Workers

Workers who acquaint the consumer or other firms with the products or services of an organization.

Craftsmen

Workers who have acquired a high degree of manual competence through formal training or an apprenticeship program; includes construction craftsmen, printing tradesmen, transportation and public utilities craftsmen, mechanics and repairmen, and miscellaneous craftsmen.

Operatives

Workers who perform tasks that are of a repetitious and routine nature and often involve some kind of machine; includes drivers and deliverymen, transportation and public utility operators, semi-skilled metalworking occupations, semiskilled textile occupations, and other operatives.

Service Workers

Workers who provide a variety of basic services; includes food preparation and serving, building cleaning and servicing, private household help, protective services and other services.

Laborers

Workers who utilize no special skills in the performance of their jobs.

Table 2

Occuptation by Industry, Washington State, 1970

	Total All Occupational	Professional-Technical	Managers-Proprietors 2/	Clerical	Sales	Craftsmen	Operatives	Service Workers 3/	Laborers 4/
TOTAL ALL INDUSTRIES	1,288,100	201,900	158,300	208,700	99,300	192,600	179,900	166,300	81,100
Agriculture	64,900	3,500	32,500	1,500	400	1,500	2,300	900	22,300
Construction	53,600	3,800	4,800	3,400	200	26,500	7,000	400	7,500
Manufacturing	240,500	28,400	13,900	29,100	11,100	67,000	69,700	3,300	18,000
Transp., Comm., & Utilities	72,700	5,300	4,700	17,800	900	15,700	20,000	2,100	6,200
Trade	242,400	6,400	41,200	38,900	56,000	19,500	28,900	43,300	8,300
Finance, Ins., & Real Estate	58,200	2,700	12,800	23,100	14,200	1,700	700	2,200	800
Services 1/	172,500	48,900	14,600	30,200	1,300	22,000	15,500	34,800	5,400
Government	244,200	86,200	16,400	50,800	1,500	27,000	24,600	31,600	6,400
Self-employed, Domestics, etc.	139,100	16,600	17,400	13,900	13,700	12,100	11,200	48,000	6,200

1/ Includes mining.
2/ Includes farm owners and managers.
3/ Includes private household workers.
4/ Includes farm laborers.

Table 3

Occupation by Industry, Washington State, 1975

	Total All Occupational	Professional-Technical	Managers-Proprietors 2/	Clerical	Sales	Craftsmen	Operatives	Service Workers 3/	Laborers 4/
TOTAL ALL INDUSTRIES	1,347,700	216,300	159,800	227,000	106,000	199,800	181,800	182,400	74,600
Agriculture	63,100	3,900	30,000	1,800	500	1,700	2,600	1,000	21,600
Construction	63,700	4,900	5,600	4,300	400	31,500	8,500	600	7,900
Manufacturing	227,400	26,800	13,800	28,800	11,300	63,700	65,700	3,000	14,300
Transp., Comm., & Utilities	78,400	5,900	5,200	19,400	1,100	17,400	21,100	2,400	5,900
Trade	260,300	7,500	42,400	43,400	59,500	21,600	30,500	47,700	7,700
Finance, Ins., & Real Estate	63,000	3,300	13,900	25,300	15,400	1,600	700	2,100	700
Services	194,600	53,900	15,900	34,700	1,700	24,100	17,200	41,900	5,200
Government	257,200	91,500	17,000	54,600	1,600	25,600	23,900	37,400	5,600
Self-employed, Domestics, etc.	140,000	18,600	16,000	14,700	14,500	12,600	11,600	46,300	5,700

1/ Includes mining.
2/ Includes farm owners and managers.
3/ Includes private household workers.
4/ Includes farm laborers.

Table 4

Occupation by Industry, Net Change, Washington State, 1970-1975

	Total All Occupational	Professional-Technical	Managers-Proprietors 2/	Clerical	Sales	Craftsmen	Operatives	Service Workers 3/	Laborers 4/
TOTAL ALL INDUSTRIES	59,600	14,400	1,500	18,300	6,700	7,200	1,900	16,100	- 6,500
Agriculture	- 1,800	400	- 2,500	300	100	200	300	100	- 700
Construction	10,100	1,100	800	900	200	5,000	1,500	200	400
Manufacturing	-13,100	-1,600	- 100	- 300	200	-3,300	-4,000	- 300	- 3,700
Transp., Comm., & Utilities	5,700	600	500	1,600	200	1,700	1,100	300	- 300
Trade	17,900	1,100	1,200	4,500	3,500	2,100	1,600	4,500	- 600
Finance, Ins., & Real Estate	4,800	600	1,100	2,200	1,200	- 100	0	- 100	- 100
Services 1/	22,100	5,000	1,300	4,500	400	2,100	1,700	7,300	- 200
Government	13,000	5,200	600	3,800	100	-1,000	- 700	5,800	- 800
Self-employed, Domestics, etc.	900	2,000	-1,400	800	800	500	400	-1,700	- 500

1/ Includes mining.
2/ Includes farm owners and managers.
3/ Includes private household workers.
4/ Includes farm laborers.

Table 5

Occupational Composition of Industries in Percentages, Washington State, 1970 1/

	Total All Occupational	Professional-Technical	Managers-Proprietors 3/	Clerical	Sales	Craftsmen	Operatives	Service Workers 4/	Laborers 5/
TOTAL ALL INDUSTRIES	100.0	15.7	12.3	16.2	7.7	15.0	14.0	12.9	6.3
Agriculture	100.0	5.4	50.1	2.3	.6	2.3	3.5	1.4	34.4
Construction	100.0	7.1	9.0	6.3	.4	49.4	13.1	.7	14.0
Manufacturing	100.0	11.8	5.8	12.1	4.6	27.9	29.0	1.4	7.5
Transp., Comm., & Utilities	100.0	7.3	6.5	24.3	1.2	21.6	27.5	2.9	8.5
Trade	100.0	2.6	17.0	16.0	23.1	8.0	12.0	17.8	3.4
Finance, Ins., & Real Estate	100.0	4.6	22.0	39.7	24.4	2.9	1.2	3.8	1.4
Services 2/	100.0	28.3	8.5	17.5	.8	12.8	9.0	20.2	3.1
Government	100.0	35.3	6.7	20.8	.6	11.1	10.1	12.8	2.6
Self-employed, Domestics, etc.	100.0	11.9	12.5	10.0	9.8	8.7	8.1	34.5	4.5

1/ Do not always add to 100 percent due to rounding.
2/ Includes mining.
3/ Includes farm owners and managers.
4/ Includes private household workers.
5/ Includes farm laborers.

Table 6

Occupational Composition of Industries in Percentages, Washington State, 1975 1/

	Total All Occupational	Professional-Technical	Managers-Proprietors 3/	Clerical	Sales	Craftsmen	Operatives	Servi e Workers 4/	Laborers 5/
TOTAL ALL INDUSTRIES	100.0	16.0	11.9	16.8	7.9	14.8	13.5	13.5	5.5
Agriculture	100.0	6.2	47.5	2.9	.8	2.7	4.1	1.6	34.2
Construction	100.0	7.7	8.8	6.8	.6	49.5	13.3	.9	12.4
Manufacturing	100.0	11.8	6.1	12.7	5.0	28.0	28.9	1.3	6.3
Transp., Comm., & Utilities	100.0	7.5	6.6	24.7	1.4	22.2	26.9	3.1	7.5
Trade	100.0	2.8	16.3	16.7	22.9	8.3	11.7	18.3	3.0
Finance, Ins., & Real Estate	100.0	5.2	22.1	40.2	24.4	2.5	1.1	3.3	1.1
Services 2/	100.0	27.7	8.2	17.8	.9	12.4	8.8	21.5	2.7
Government	100.0	35.6	6.6	21.2	.6	10.0	9.3	14.5	2.2
Self-employed, Domestics, etc.	100.0	13.3	11.4	10.5	10.4	9.0	8.3	33.1	4.1

1/ Do not always add to 100 percent due to rounding.
2/ Includes mining.
3/ Includes farm owners and managers.
4/ Includes private household workers.
5/ Includes farm laborers.

AGRICULTURE

Employment Change By Broad Occupational Group, 1970-1975

Total Change 1970-1975	Professional Technical	Managers-Proprietors	Clerical	Sales	Craftsmen	Operatives	Service Workers	Laborers
-1,800	400	-2,500	300	100	200	300	100	- 700

In agriculture the trend is toward larger, more efficient farms and a higher proportion of workers living away from the farm. Mechanization improvements are changing the whole nature of farming, replacing personal toil with scientific technology. In apples, for instance, underground systems are coming into more extensive use for irrigation, fertilization, and crop control, and the possibility of a mechanical harvester is becoming increasingly real. Thus the long-range decline in agricultural employment, involving a reduction of 1,800 jobs between 1970 and 1975. This loss will exclusively involve farm owners and farm laborers, despite the anticipated gains in Washington's crop acreage. The small farmer is at a big disadvantage in competing against the efficiency of a large organization, and by the end of the forecast period there will be 2,500 fewer owners and managers in agriculture than at the beginning. The decline of farm laborers will not hit full force until later, since laborers will be in temporary demand to work the new acreage and to help fill the void left by retiring owners and unpaid family workers. Their number will decrease by only 700. As farming becomes increasingly mechanized, workers will be needed to operate and repair the new, specialized machinery going into use. In table 4 this is reflected by estimated gains of 300 operatives and 200 craftsmen. Also in demand will be various technical specialists, such as conservationists, inseminators, feed testers, and agricultural research scientists. This will result in a gain of 400 professional-technical workers. The number of clerical workers will rise by 300 and the number of salesmen by 100, as gains in these categories always accompany the growth of big business.

CONSTRUCTION

Employment Change By Broad Occupational Group, 1970-1975

Total Change 1970-1975	Professional Technical	Managers	Clerical	Sales	Craftsmen	Operatives	Service Workers	Laborers
10,100	1,100	800	900	200	5,000	1,500	200	400

An increase of 10,100 new jobs is anticipated for the construction industry, primarily as a result of accelerated home building activity. Close to two-thirds of construction employment in Washington is composed of craftsmen and operatives, and the reliance on the output of these workers will be manifest in gains of 5,000 and 1,500, respectively. In homebuilding, demand will be especially great for carpenters, painters, plumbers and pipefitters, brickmasons, tile setters, and cement and concrete finishers. With the moderate expansion of public and commercial construction, demand will rise for excavating and grading machine operators, repairmen, welders, asbestos and insulation workers, and blasters. The gain of 1,100 professional-technical workers will reflect the necessity of finding qualified specialists who are able to design projects of increasing complexity and interrelation. As community planning becomes more important, greater numbers of construction engineers, draftsmen, surveyors, and various special technicians will be needed. Also encompassed in the tide of activity will be gains of 900 clerical workers, 200 salesmen, and 200 service workers. Included among others will be secretaries, stenographers, bookkeepers, accountants, advertising agents, janitors, and cleaners. The small rise of 400 laborers will result purely from the momentum of activity in construction. With the slightest abatement, this industry will follow all others and begin losing laborers.

MANUFACTURING

Employment Change By Broad Occupational Group, 1970-1975

Total Change 1970-1975	Professional Technical	Managers	Clerical	Sales	Craftsmen	Operatives	Service Workers	Laborers
-13,100	-1,600	-100	-300	200	-3,300	-4,000	-300	-3,700

Manufacturing will be treated as a unit because of the overwhelming influence of aerospace layoffs on its overall employment. It should be borne in mind that these losses are projected from 1970; a major portion will have occurred by the end of 1971. The contraction of 31,000 jobs in aerospace will easily exceed the gains of all other manufacturing industries put together. In sum, the number of manufacturing jobs is expected to drop by 13,100 over the forecast period, and those specific occupations typically associated with aerospace will experience the brunt of the decline. Losses will be heaviest among operatives (3,300), craftsmen (4,000), and laborers (3,700). Especially affected among operatives will be metalworking assemblers, machine tool operators, and metalworking inspectors. Among craftsmen, machinists, sheet metal workers, toolmakers and diemakers, electricians, patternmakers, airplane mechanics, and foremen will be hardest hit. Gains of operatives and craftsmen in other manufacturing industries will not approach the magnitude of these layoffs. Jobs for laborers and operatives will become more scarce in practically all industries as machines rapidly replace persons in the performance of routine, repetitive functions. Aerospace employment has also been heavily weighted with engineers and draftsmen, and this will be reflected in the anticipated loss of 1,600 professionals and technicians. Especially affected will be aeronautical, industrial, electrical, and metallurgical engineers. Smaller increases in other manufacturing industries of engineers, scientists, technicians, and others will serve only to temper the overall decline of professional and technical workers in that sector. On the other hand, the losses of only 100 managerial jobs and 300 clerical will be of positive significance. Occurring in the midst of major losses in most other categories, they illustrate the growing dependence of manufacturing establishments on management specialists and beefed-up clerical staffs as a result of their increasing size and the expanding scope and complexity of their functions. As the quantity and variety of products expand, the competition for markets will become keener and the demand for salesmen greater. This will be especially true in the printing and publishing and food products industries, which employ the majority of manufacturer's salesmen, and both of which will experience moderate expansions over the forecast period. Overall, the number of salesman jobs will increase by 200.

TRANSPORTATION, COMMUNICATIONS, AND UTILITIES

Employment Change By Broad Occupational Group, 1970-1975

Total Change 1970-1975	Professional Technical	Managers	Clerical	Sales	Craftsmen	Operatives	Service Workers	Laborers
5,700	600	500	1,600	200	1,700	1,000	300	-300

Employment in transportation, communications, and utilities will increase by an estimated 5,700 jobs as business booms in trucking, air travel, and telephone communications, and rises steadily in public utilities. With growth largely expressed in the size and complexity of establishments, and volume and variety of services, gains of 1,600 clerical, 600 technicians and professionals, and 500 managerial jobs will be a necessary accompaniment. Clerical gains will be especially high in transportation among traffic agents, reservation clerks, and cashiers; in communications among telephone operators; and in all three industries among secretaries, stenographers, and accounting clerks. Expansions in trucking, warehousing, and air travel will have distinctive effects on the employment of operatives, sales workers, service workers, and laborers. Thus the anticipated gain of 1,000 operatives will primarily involve a host of local and over-the-road truck drivers. Increased competitiveness between modes of shipping and travel will result in a gain of 200 advertising agents and other salesmen; while the extra business in air travel will create jobs for 300 stewardesses, pantrymen, and other service workers. Again, the loss of 300 laborers will occur mainly at warehouses and terminals, where added business will justify improvements in loading and materials handling equipment. One distinctive result of gains in the communications industry will be the large percentage of servicemen included in the rise of 1,700 craftsmen. Transportation craftsmen experiencing gains will be crane, derrick, and hoistmen, trucking mechanics, inspectors, and foremen.

TRADE

Employment Change By Broad Occupational Group, 1970-1975

Total Change 1970-1975	Professional Technical	Managers	Clerical	Sales	Craftsmen	Operatives	Service Workers	Laborers
17,900	1,100	1,200	4,500	3,500	2,100	1,600	4,500	-600

Employment in trade will increase by approximately 17,900 over the forecast period as a result of expansions in food stores, eating and drinking places, service stations, many kinds of general merchandise stores, and in wholesale trade establishments. As chain organizations gradually extend their influence and a growing population achieves a higher level of income, the competition for sales will become intense. With the trade industry employing nearly 60 percent of all sales workers, a large increase of about 3,500 sales jobs is anticipated, although demand for full-time store clerks may begin to decline. Also indicated is an increased specialization in the range of products a salesman handles. As chain stores become more prevalent, the proportion of paid workers such as salesmen and cashiers will grow at the expense of proprietors and managers. Hence, a large rise of 4,500 clerical jobs will be another outcome, including gains in secretaries, typists, office machine operators, and cashiers, but the number of managers in trade will increase relatively moderately by 1,200. Substantial employment expansions among eating and drinking places will stimulate a gain of 4,500 service workers, primarily involving waiters and waitresses, cooks, bartenders, and counter and fountain workers. The addition of refreshment services at many general merchandise establishments, such as variety stores, will also facilitate this rise. Commensurate with the gains in trade as a whole, the increase of 1,100 professional-technical and 2,100 craftsmen jobs will be distributed between a variety of occupations, including accountants and auditors, personnel workers, layout men, professional entertainers, motor vehicle mechanics, office machine mechanics, carpenters, foremen, and many others. However, the rise of only 1,600 operative jobs indicates the existence of inhibiting factors. One will be the trend for wholesalers to centralize deliveries at fewer and larger retail chain establishments. Another factor will be the gradual reduction of meat cutters, as more are transferred to central locations, where weighing, pricing, and cutting can be performed more efficiently. The decrease of 600 laborers will stem from mechanization advances in wholesale trade, including packaging innovations, improvements in materials handling methods, and a greater use of computers for inventory control and billing operations.

FINANCE, INSURANCE, AND REAL ESTATE

Employment Change By Broad Occupational Group, 1970-1975

Total Change 1970-1975	Professional Technical	Managers	Clerical	Sales	Craftsmen	Operatives	Service Workers	Laborers
4,800	600	1,100	2,200	1,200	-100	0	-100	-100

Corresponding to population pressures and a freer flow of money, the number of jobs in finance, insurance, and real estate will rise by 4,800. Within these industries the trend is toward more exclusively white-collar employment, with blue-collar and service worker functions being contracted out to specialty firms. This will result in a complete absence of gains among the craftsmen, operative, and service worker categories. On the other hand, employment of managers will rise by 1,100 jobs, clerical workers by 2,200, salesmen by 1,200, and professionals by 600. Expansion in this industry group will be expressed in a proliferation of small branch establishments, each requiring a manager and at least one clerk. Hence, the rise of workers in these categories. Among clerical jobs, especially large increases are anticipated for secretaries, stenographers, office machine operators, cashiers, and banktellers. A somewhat inhibited growth will occur for accounting clerks, hand bookkeepers, billing clerks, account analysts, filing and posting clerks, and some others because of the expanded usage of electronic data processing equipment. The demand for real estate agents, securities salesmen, and insurance agents and brokers will be prompted by pressures for land and homes, more spirited investment, and a heightened consumer interest in insurance protection. Both real estate and insurance have about a third of their work force in sales. The smaller gain of professional workers will mainly involve accountants and auditors, plus a variety of specialists. As real estate agencies contract out more of the maintenance and service activities presently carried out by its own employees, a loss of about 100 laborers and 100 janitors, cleaners, and other service workers should ensue. Also affected will be a few repairmen and construction craftsmen. Craftsmen and operatives together compose less than four percent of the employment in finance, insurance, and real estate, and over the forecast period will be gradually declining.

SERVICES

Employment Change By Broad Occupational Group, 1970-1975

Total Change 1970-1975	Professional Technical	Managers	Clerical	Sales	Craftsmen	Operatives	Service Workers	Laborers
22,100	5,000	1,300	4,500	400	2,100	1,700	7,300	-200

The greatest employment expansion of any industry will occur in the services group, which will grow by 22,100 jobs. Solid employment increases will be experienced by garages and other automotive repair, hotels and other lodging places, business and engineering service firms, and medical and other health services. Of these, medical and other health services will display the most dynamic growth. Constituting almost a third of services employment, important changes in its occupational composition will be significant for the industry group as a whole. In hospitals and mental institutions, the most important occupational trend will be the proportional decline of medical and other health professionals. Modern medical devices are taking over increasingly more of the analytical functions performed by professionals, while nonprofessional personnel are performing many of the less technical duties. Thus, the largest employment gain in the services group will be of 7,300 service workers, and will primarily involve practical nurses, nurse and psychiatric aides, orderlies, kitchen workers, and porters. Demand for service workers in other segments will be scattered throughout a variety of occupations. The demand for professional and technical workers will rise by 5,000. Any further inhibition of growth will be tempered by the expanding range of special services health institutions will provide, the need for technical specialists to work with the new medical machinery, and the continued high requirements for professional nurses. The gains of 1,300 managers and 400 sales workers will occur primarily in other segments and will stem from increases in the number, size, and competitiveness of establishments. The gain of 2,100 craftsmen will especially involve mechanics and repairmen in automotive and other repair segments. Operative employment will rise by 1,700, but will be hampered by a steady decline of workers in laundries and dry cleaners due to self-service laundromats, permanent-press clothing, and the substitution of disposable plastic and paper materials for cloth. Despite absolute gains in all other categories, the number of jobs for unskilled laborers will decline by 200 as mechanization gradually advances in all segments of services.

GOVERNMENT

Employment Change By Broad Occupational Group, 1970-1975

Total Change 1970-1975	Professional Technical	Managers	Clerical	Sales	Craftsmen	Operatives	Service Workers	Laborers
13,000	5,200	600	3,800	100	-1,000	-700	5,800	-800

Government employment will increase by 13,000 jobs over the forecast period in the areas of education, administration, protective services, and postal services. The number of professional-technical workers in government employ will rise by 5,200, especially including secondary school and college teachers, social workers and others involved in the war on poverty, and medical personnel. As population growth and urbanization continue, a fuller staffing of protective and other service workers will be necessary, resulting in a gain of 5,800 firemen, guards, law enforcement officials, and others. Government functions on all levels will be characterized by increasing administrative complexity, partially accounting for the 3,800 new clerical jobs. Also, the expansion of postal services will require more postal clerks and mail carriers. The gains of 600 managers and 100 sales workers will be proportional to total government growth, with the former emanating from the rising specialization of administrative functions. Reduced defense spending and the general shift from war-time to peace-time emphases will largely be responsible for the losses of 1,000 craftsmen, 700 operatives, and 800 laborers. Especially affected will be electricians, structural metal workers, machinists, sheet metal workers, welders and flamecutters, metal-working assemblers, and machine tool operators.

SELF-EMPLOYED, UNPAID, DOMESTICS

Employment Change By Broad Occupational Group, 1970-1975

Total Change 1970-1975	Professional Technical	Proprietors	Clerical	Sales	Craftsmen	Operatives	Service Workers	Laborers
900	2,000	-1,400	800	800	500	400	-1,700	-500

Despite an expanding labor force and a gradually improving economy, employment will rise by only 900 jobs in the self-employed, unpaid family worker, and domestics group. One major factor will be the continuation of a long-term decline in demand for domestic help. Reducing the total in the service worker category by 1,700, it stems from time-saving household innovations and the expanding group services of day-care centers. The trend also relates to a growing resistance among workers to assume some of the roles associated with domestic employment. Another major inhibiting factor will be the difficulty small entrepeneurs will have in competing against chain organizations. The operational efficiency of these large firms will discourage price competition by independents, resulting in an eventual decline of 1,400 proprietors. Many will not actually go out of business, but will be forced to expand their financial base through incorporation, thus changing their occupational classification to salaried manager. The occupational category to show the greatest expansion over the forecast period will be the professional, rising by 2,000 jobs. More doctors, dentists, lawyers, entertainers, and a variety of others will be needed to accommodate the growing, relatively affluent population. In response to the deluge of new products and buyers, a gain of 800 sales jobs is anticipated. Especially in retail trade, insurance, and real estate, there will be need for the salesman who can search out his own contacts and arrange meetings at times and places convenient to his host. Growth in the volume and complexity of business activity will result in a tremendous extension of paperwork and an urgent need for clerical workers to perform it. Since much of this kind of work can be done outside the office, and since housewives are preferring ever-greater economic autonomy, the outcome should be a substantial increase of independent clerical agents. The increases of 500 craftsmen and 400 operatives will primarily involve construction trades, mechanics and repairmen, service station and parking attendants, taxicab drivers, and deliverymen.

IV. Occupational Demand, 1970-1975

Average Employment 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expan-sion	Replace-ment	Total
Total all Occupations	1,020,280	1,288,150	1,347,690	59,540	178,740	238,280

Total occupational demand is the sum of new job openings plus replacement needs. The previous sections dealt with the industrial determinants behind an anticipated increase of 59,540 new jobs between 1970 and 1975. This was given a central position in the narrative because training programs must be consistent with the direction of industrial progress if they are to have a long-range utility to the trainee and if they in turn are to contribute to further industrial growth. However, replacement needs are also important, especially in time of a recessionary economy and in occupational categories with a large number of workers. Over the forecast period, approximately 178,740 workers will separate from the labor force because of retirement or death. Transferees are not considered because they usually remain within the same occupational category and do not alter over-all employment trends. Generally, separation rates will be higher in categories with female rather than male workers and older rather than younger workers. Withdrawal due to marriage is also a major factor affecting female separation rates, especially for women aged 14-29. Of the total demand of 238,280 openings between 1970 and 1975, about three-fourths will result from replacement needs and only one-fourth from the creation of new jobs.

In this section are presented estimates of employment for the years 1960, 1970, and 1975, and projections of demand over the period 1970-1975 for 148 specific occupational categories and the larger groupings of which they are a part. The larger groupings will correspond to those discussed earlier with the exception that farmers and farm workers will compose an independent unit. Accompanying these data statements for each category will be a verbal description. This will include a capsule definition of job duties, a percentage breakdown of the industries the category will be found in, and a suggestion of where hiring and layoffs will be occurring and the reasons why. The definition of job duties is meant only as a broad indicator and is not intended as a complete statement of duties. For fuller information the reader is referred to the Dictionary of Occupational Titles or to the Occupational Outlook Handbook. Approximate percentage breakdowns refer to the year 1975 since that year forms the target point of this report, and specifically to the state of Washington. These breakdowns would only show a significant difference in 1970 for industries with rapidly changing employment, such as aerospace. The reasoning behind the suggestions of which industries will be hiring a particular occupation and which will not is based on the application of national trends to economic realities and industrial trends peculiar to the state of Washington. Although projections were derived in accordance with procedures set forth by the Bureau of Labor Statistics and were based on a national model, care was taken not to sublimate the state to the nation.

Table 7

Average Employment of Broad Occupational Groups, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs, 1970-1975		
	1960	1970	1975	Expansion	Replacements	Total
TOTAL ALL OCCUPATIONS	1,020,280	1,288,150	1,347,690	59,540	178,740	238,280
Professional-Technical	137,750	201,900	216,250	14,350	25,050	39,400
Managers, Officials, and Proprietors	102,180	125,250	131,140	5,890	17,540	23,430
Clerical and Kindred	154,700	208,670	226,980	18,310	35,390	53,700
Sales Workers	79,140	99,320	106,020	6,700	12,610	19,310
Craftsmen	155,690	192,650	199,820	7,170	18,830	26,000
Operatives	149,290	179,880	181,790	1,910	18,010	19,920
Service Workers	120,150	166,320	182,410	16,090	38,160	54,250
Laborers	63,070	67,790	62,170	-5,620	6,190	570
Farmers and Farm Workers	58,310	46,370	41,110	-5,260	6,960	1,700

PROFESSIONAL, TECHNICAL, AND KINDRED

Table 8

Average Employment in Subgroups, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Expan-	Replace-	
	1960	1970	1975	sion	ment	Total
TOTAL	137,750	201,900	216,250	14,350	25,050	39,400
Technical Engineers	21,950	33,630	31,640	- 1,990	1,860	- 130
Natural Scientists	2,590	4,030	4,300	270	210	480
Technicians, exc. Med.-Dent.	12,220	19,090	19,780	690	970	1,660
Medical, Other Health	24,060	29,450	34,800	5,350	5,240	10,590
Teachers	32,590	46,850	49,740	2,890	7,770	10,660
Social Scientists	450	620	690	70	60	130
Other Prof., Tech., Kindred	43,890	68,230	75,300	7,070	8,940	16,010

Employment of professional and technical workers will rise from 201,900 in 1970 to 216,250 in 1975, an increase of 14,350 jobs. Increasing population, rising business activity and prosperity, continued technological innovations, and an emphasis on social, health, and environmental improvements rate as major factors behind the size of the gain. Most in line with these forces and therefore to show the greatest proportional employment growth will be medical and other health workers, social scientists, and most of the specialties in the miscellaneous group. The duties of engineers, natural scientists and technicians are also consistent with the direction of events, but the association of these groups with the aerospace industry is too close to allow a really significant expansion. The plight of most engineering categories is most dismal, as a substantial contraction has occurred since 1970. Openings in the teaching profession will continue to expand, but at a slowed pace as school populations are affected by the dropping birth rate of the 1960's. Retirement replacements among engineers, natural scientists and technicians tend to be exceptionally low because the recent expansion in most of these fields attracted a large share of the educated or highly trained males just entering the market. Replacement needs for medical and other health workers and teachers are much higher because of the high percentage of female workers. In all, an anticipated 25,050 positions will result from retirements, adding on to the 14,350 new jobs to total 39,400.

Obviously, many who have lost their jobs in aerospace or defense will have to make major occupational changes in order to find employment. In this direction the Employment Security Department is participating in a nationwide Job-Search and Training Assistance Program for unemployed engineers, scientists and technicians. An important phase in this program is the Skill Conversions Study conducted by the National Society of Professional Engineers. In this project a study team of formerly unemployed engineers and scientists, working closely with the Employment Security Department in Seattle, are evaluating the potential for converting their skills to more available occupations in other industries.

Table 8a

Average Employment of Technical Engineers, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacement	Total
TOTAL	21,950	33,630	31,640	- 1,990	1,860	- 130
Aeronautical Engineers	4,700	4,900	3,410	- 1,490	160	-1,330
Chemical Engineers	720	970	940	- 30	60	30
Civil Engineers	4,330	7,160	7,780	620	560	1,180
Electrical Engineers	4,090	6,740	6,290	- 450	310	- 140
Industrial Engineers	2,150	4,160	3,700	- 460	240	- 220
Mechanical Engineers	3,820	5,520	5,150	- 370	290	- 80
Metallurgical Engineers	340	560	530	- 30	40	10
Mining Engineers	60	60	70	10	0	10
Other Technical Engineers	1,740	3,560	3,770	210	200	410

Employment of technical engineers will decline from 33,630 in 1970 to 31,640 in 1975, a decrease of 1,990 jobs. Retirement replacements will equal 1,860 persons, however, for a net loss of 130 positions. The principal employers of technical engineers are aerospace, the federal government, the metals and machinery industries, and engineering and business service firms. Engineering occupations closely associated with aerospace employment (aeronautical, chemical, industrial, electrical, mechanical, and metallurgical engineers) will suffer losses over the forecast period regardless of expanding demand for them in other industries. The only engineering occupation to show a significant gain will be that of civil engineering, in which demand is determined completely by levels of construction activity. Replacement needs for engineers run exceptionally low because relatively few people are employed in these occupations and most are fairly young in age.

Aeronautical Engineers

Aeronautical engineers design, develop, and test various types of aerospace products and the methods by which they are produced. Approximately 85 percent will be employed by the aerospace industry and 10 percent by the federal government. Massive layoffs of aeronautical engineers in aerospace will be accompanied by smaller defense and space-related ones by the federal government to total an estimated deficit of 1,490 positions. Attracting career-minded male workers recently out of college, few retirements are anticipated, equaling 160 persons and reducing the overall loss to 1,330. Despite increasing emphasis on engineers in aerospace as the line of products becomes more diverse, long-run prospects are necessarily interwoven with an over-all recovery in that industry.

Chemical Engineers

Chemical engineers design the chemical plants and equipment required to manufacture chemicals and chemical products, and determine the most efficient chemical operations in the manufacturing process. Approximately 35 percent will be employed in the chemicals industry, 10 percent in aerospace, 10 percent in educational institutions, and 5 percent each in metals, petroleum, and business services. Smaller numbers will be employed in government agencies and engineering service firms, a few will be self-employed, and most of the remainder will be scattered throughout manufacturing. Substantial layoffs of chemical engineers in aerospace will be partially countered by steady hiring in the chemicals industry and in university research laboratories, and by gradual hiring in the others, to result in an anticipated contraction of only 30 positions. Being a relatively young field, replacement needs will be low, totaling 60 persons for a net gain of 30 openings. The long-run prospects for chemical engineers are considerably more favorable, especially in the chemicals industry. In chemicals a demand for their services may be anticipated throughout and beyond the forecast period in association with the design and development of new chemicals in the manufacture of consumer goods, expansions in the nuclear field, resin adhesives for use in area plywood and board particle plants, organic chemicals for synthetic fabric and plastic producers, and fertilizers and pesticides for Northwest farmlands.

Civil Engineers

Civil engineers design and supervise major construction projects. Included are structural, highway, hydraulic, and sanitary engineers. Approximately 45 percent will be employed by government for planning and maintenance purposes, 20 percent by construction firms, 15 percent by engineering firms, and 5 percent will be self-employed. As a result of expansions in construction activity, demand for civil engineers will continue to increase rapidly. Much of new government hiring will be associated with improving the urban environment, such as water and sewage systems, air and water pollution, and urban re-development. Hiring by private construction firms will focus on the practical application of broader improvement schemes, primarily involving highway, dam, apartment and industrial building, and house construction. Anticipated are 620 new jobs plus 560 retirement replacements for a total of 1,180 openings.

Electrical Engineers

Electrical engineers design, develop, and supervise the manufacture of electrical and electronics equipment. Approximately 20 percent will be employed by aerospace; 10 percent each in business services, electrical and other machinery manufacturing, telephones and other communications, and various federal agencies; and 5 percent each in engineering service firms and educational institutions. Another 5 percent will be self-employed. Large layoffs of electrical engineers will merely be tempered by smaller gains in other industries, as the contraction totals an estimated 450 jobs. Being a relatively new field in terms of importance in this state, replacement needs will equal only 310 persons, reducing the loss to 140 positions. Prospects beyond the forecast period will depend primarily on the stabilization of aerospace employment. Nevertheless, employment for electrical engineers is

definitely expanding in electrical machinery plants and business service firms, as automatic control of production processes continues to advance. In addition, consumer requirements for electrical and electronic goods will also increase.

Industrial Engineers

Industrial engineers determine the most effective methods of using and combining manpower, machines and materials. They are involved in quality control, material scheduling, and production planning. Approximately 30 percent will be employed by aerospace; 10 percent each by metals, machinery, business services, and government agencies; 5 percent by nonaerospace transportation equipment manufacturers; and 5 percent will be self-employed. Large layoffs in aerospace will only be tempered by the smaller gains in other industries, resulting in an anticipated contraction of 460 jobs. Replacement requirements will involve only 240 persons, reducing the overall loss to 220. Although the outlook for industrial engineers is ultimately tied to stabilization of the aerospace industry, demand for their services in machinery, aluminum refining, and fabricated metal plants is solidly rising as a result of the increasing complexity of industrial operations and the expansion of automated production in the plants to be supplied.

Mechanical Engineers

Mechanical engineers are concerned with the production, transmission, and use of mechanical power. Approximately 25 percent will be employed in aerospace, designing and developing internal combustion engines, and jet and rocket engines; another 10 percent each will be employed in shipbuilding and other nonaerospace transportation equipment manufacturing, metals, machinery, engineering firms, and federal agencies; while 5 percent will be in business service firms, and 5 percent will be self-employed. Large layoffs in aerospace and smaller ones in shipbuilding will have a greater effect on the employment of mechanical engineers than hirings in other industries, culminating in an estimated loss of 370 jobs. With a relatively low 290 retirement replacements, the overall deficit will still equal 80 jobs. Long-range prospects for the employment of mechanical engineers must hinge on the stabilization of the aerospace industry, although demand for their services is gradually rising in various industries. In machinery plants and engineering service firms, the increasing technological complexity of industrial machinery and processes will create openings, as will the expanded use of numerically controlled and other power machine tools.

Metallurgical Engineers

Metallurgical engineers develop methods of processing and converting metals into useful products. Approximately 50 percent will be employed in aluminum, copper, and ferrous refineries; 20 percent in aerospace; and 5 percent each in machinery manufacturing, business services, and federal government employment. Layoffs of metallurgical engineers in aerospace will surpass the more gradual staffing in the metals industry and others, culminating in an anticipated loss of 30 positions. Retirements will run exceptionally low, equaling only 40 persons and bringing about a net gain of 10 openings. Long-range employment

hopes rest to a large extent on stabilization in the aerospace industry, where metallurgical engineers are necessary for developing and applying light-weight metals to extremely high and low temperature flight circumstances. In the aluminum industry demand for metallurgical engineers is rising rapidly, since growth in that industry depends largely on developing new adaptations of aluminum alloys for local aerospace usage and for national industrial markets.

Mining Engineers

Mining engineers are responsible for locating minerals and designing the methods for extracting them and preparing them for use by manufacturing industries. Approximately 20 percent will be employed in engineering service firms; 15 percent by federal agencies; 10 percent each in petroleum refining, metal mining, and nonmetallic quarrying and mining; and 5 percent each in coal and petroleum mining, business services, and metal manufacturing. Another 15 percent will be self-employed. Openings for mining engineers will rise only gradually, in line with the slow expansion of mining activities in the state. Despite the fact that depletion of some present deposits will necessitate a search for others and stimulate research on more efficient methods for mining low grade ore, no more than 10 new positions are anticipated. Beyond the forecast period, ecological pressure for cleaner offshore drilling and generally more conservational mining procedures may create extra jobs for mining engineers. No retirements are expected over the forecast period due to the sparse number of workers in this category, so total demand will remain at 10 openings.

Other Technical Engineers

Included in this category are all technical engineering specialties not subsumable above. The largest classification, sales engineers, involves salesmen of highly technical products who present practical solutions to the problems they perceive in manufacturing firms in terms of the line of products the salesman represents. However, this category is primarily composed of a variety of different engineering specializations that have emerged in the wake of a growing emphasis on technological efficiency and relate to specific functions in specific industries. Approximately 20 percent will be employed in engineering service firms; 10 percent each in business service firms, wholesale outlets, and federal agencies; and 5 percent each in aerospace, other transportation equipment manufacturers, metals, machinery, and educational institutions. Another 10 percent will be self-employed. Expansions in engineering and business services, wholesale trade, and metals will create more jobs for these engineers as a whole than will have been lost in aerospace and other defense-related activities. Anticipated is a gain of 210 new positions plus 200 retirement replacements for a total of 410 openings. Demand for sales engineers will rise fastest in wholesale trade, where a shortage seems imminent in view of the tremendous number of new products and processes that wholesalers will be introducing to retailers and other users. For the various other engineering specializations in this category, employment prospects are most promising for those attached to the metals or machinery industries, for those associated with service-oriented segments of industry, and for those whose talents utilize the most contemporary engineering principles. For those whose skills relate only to aerospace or whose training is partially obsolete, the future is necessarily dimmer.

Table 8b

Average Employment of Natural Scientists, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacement	Total
TOTAL	2,590	4,030	4,300	270	210	480
Chemists	1,050	1,560	1,630	70	90	160
Agricultural Scientists	440	650	750	100	20	120
Biological Scientists	390	600	710	110	50	160
Geologists, Geophysicists	200	330	350	20	20	40
Mathematicians	140	230	220	- 10	10	0
Physicists	310	570	560	- 10	20	10
Other Natural Scientists	60	90	80	- 10	0	- 10

Employment of natural scientists will rise from 4,030 jobs in 1970 to 4,300 in 1975, an increase of 270 new positions. With a relatively young average age in these occupations, only 210 retirements are anticipated, for a total of 480 openings. Due to the theoretical or longer-range value of some of the output associated with natural science, the principal employers will be educational institutions, the federal government, and aerospace. Over the forecast period, tight federal funding and aerospace layoffs will result in a contraction of jobs for mathematicians, physicists, and the miscellaneous natural scientist category, and will considerably reduce the potential gains for geologists and chemists. The magnitude of the gain anticipated for chemists reflects the obvious practical value of their services to the chemicals industry and a host of others. Solid expansions of employment for agricultural and biological scientists will reflect rising government expenditures for medical progress, wildlife and wilderness conservation, and improvement of the food supply.

Chemists

Chemists investigate the properties and composition of substances with an emphasis on practical usages. Approximately 25 percent will be employed in the chemicals industry; 10 percent each at educational institutions, pulp and paper mills, and government agencies; and 5 percent each in medical institutions, aerospace, and nonprofit organizations. Openings for chemists in chemical plants, pulp and paper mills, and universities will surpass contractions in aerospace and other defense-related activities, resulting in a net gain of about 70 new jobs.

Most chemists are relatively young, and retirements will be correspondingly low, equaling only 90 persons for a total of 160 openings. Demand for chemists at chemical plants will rise steadily as the use of chemical products is expanded among manufacturing industries, in agriculture, and by the public. In addition, emphasis on research and development is growing, partially funded by the federal government and partially by the industries themselves. At pulp and paper mills, for instance, an emphasis on recycling processes and less polluting air and water disposal will open some positions for chemists. At universities, federal grants will subsidize some research on local resource protection toward the goal of ensuring that present and future needs are met with an eye toward conservation as well as profit.

Agricultural Scientists

Agricultural scientists apply scientific knowledge to the betterment of cultivated or wilderness areas. Primarily included in this category in Washington are agronomists, conservationists, and foresters. Approximately 30 percent will be employed by the government, 20 percent by educational institutions, 10 percent in the forestry industry, and 5 percent each in agricultural services and business services. Another 5 percent will be self-employed. A growing subsidization of agricultural scientists by the government will be assured by an increasing emphasis on the protection of wildlife and our natural resources to prevent their needless exhaustion or destruction. In addition, the federal government may be expected to sponsor continued research on methods of improving yield per acre and on the discovery of more efficient kinds of nourishment or sources of food supply. In all, an increase of 100 new positions is anticipated, to be accompanied by 20 replacements for a sum of 120 openings.

Biological Scientists

Biological scientists study living organisms and their relation to the environment. Primarily included in this category are biologists, microbiologists, and fish culturalists. Approximately 35 percent will be employed by educational institutions, 25 percent by the state and federal government, 20 percent by medical institutions, and 5 percent by fisheries. Strong demand for biological scientists will exist at educational institutions in response to rising government expenditures on research into life processes, while steady demand will exist at medical institutions in response to the continued emphasis on improved medical techniques. Those employed directly at government agencies will mainly be concerned with the problems of fish and wildlife conservation. In all, an increase of 110 new jobs is anticipated plus 50 retirements for a total of 160 openings.

Geologists, Geophysicists

Geologists study the structure, composition, and history of the earth's crust, while geophysicists focus on the earth's physical characteristics. Approximately 35 percent will be employed by the government, 20 percent by educational institutions, 10 percent by business service firms, and 5 percent each in aerospace, petroleum, and engineering services. Another 5 percent will be self-employed. Increased state and federal interest in the problems of water supply,

mineral resources, flood control, and related areas will create some research positions at government agencies and universities despite the general tightness of funds. However, private employment will be hampered by contractions in aerospace and a slow growth in the mining and petroleum industries, which in turn will limit demand for geologists at business service firms. Anticipated are 20 new jobs along with 20 replacements to total 40 openings.

Mathematicians

Mathematicians develop mathematical theories, discover relationships between mathematical forms, and apply the resulting principles to practical problems in science or industry. Approximately 25 percent will be employed in aerospace; 15 percent each in educational institutions, government agencies, and business service firms; and 5 percent in engineering service firms. Losses of mathematician positions in aerospace will be largely offset by hiring in other industries, resolving in a net loss of 10 jobs. Since relatively few workers are employed as mathematicians, only 10 retirements are estimated, bringing total demand to zero. Universities will be the principle source of new openings over the forecast period, as a growing need exists for specialists who can combine a high level of mathematical competence with an understanding of the subject matter in some other field to enhance scientific procedure within it. At universities the emphasis will be on practical rather than pure mathematics in the near future, as it always has been in business services and aerospace. Ultimately, employment prospects for mathematicians depend on stabilization in the aerospace industry, an emphasis on investment among private concerns, and a heightened federal spending for theoretical research.

Physicists

Physicists analyze matter and energy and the relationship between them. Approximately 50 percent will be employed in educational institutions, 15 percent at federal agencies, 10 percent by business service firms, and 10 percent by aerospace. Layoffs of physicists in aerospace and in defense or space-related federal activities will just surpass the steady hiring in educational institutions, resolving in a contraction of 10 openings. With a relatively small and exceptionally young work force, retirements among physicists will equal only 20 persons, bringing about a net total of 10 openings. The rapid pace at which the body of knowledge in physics is being expanded assures a rising level of federal funding for research at universities, although the specifications attached to these grants are likely to be more closely defined. Not until defense and space spending is re-emphasized by the federal government will employment for physicists begin expanding again.

Other Natural Scientists

This category includes those scientists not already mentioned who are concerned with the physical world and life processes. Included among others are oceanographers, meteorologists, astronomers, and a number of life science specialties. Approximately 45 percent will be employed at educational institutions, 20 percent by the federal government, 15 percent by medical institutions, and 5 percent by aerospace. Employment for these scientists will be adversely affected by aerospace layoffs and a tightening of funds for federal agencies and nonmedical research at universities. Despite an increase of research positions for life scientists at medical and educational institutions, a net loss of 10 jobs is anticipated for the group as a whole. Since few persons are employed in this category, no retirements are expected. Nevertheless, employment growth will be restored beyond the forecast period by a loosening of federal funds and a stabilization in the aerospace industry.

Table 8c

Average Employment of Technicians, except Medical and Dental, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacement	Total
TOTAL	12,220	19,090	19,780	690	970	1,660
Draftsmen	3,250	4,020	4,050	30	230	260
Surveyors	1,060	1,850	2,130	280	80	360
Air Traffic Controllers	340	310	300	- 10	20	10
Radio Operators	520	740	840	100	40	140
Technicians, Other	7,050	12,170	12,460	290	600	890

Employment of technicians outside the medical and dental realms will rise from 19,090 to 19,780 between 1970 and 1975, an increase of 690 jobs. The principal employers will be the government, engineering service firms, construction firms, and aerospace. The strongest impetus for growth in these occupations will lie in expanding construction activity and a greater use of technicians in the production process. Most of the new openings for draftsmen, surveyors, and miscellaneous technicians will be due to these factors. The major inhibition to growth will be contractions in aerospace, which in turn will have a moderating effect on gains for draftsmen and miscellaneous technicians. Gains for radio operators will result from expanded local government protective services, growing urbanization, and increasing water traffic; while losses of air traffic controllers will be due to improvements in control automation. Retirement replacements will be low throughout technician occupations because of the young average age in these categories, equaling 970 persons over the forecast period for a total of 1,660 openings.

Draftsmen

Draftsmen translate the specifications of engineers, architects, and designers into working plans to be used in production. Approximately 30 percent will be employed in engineering and architectural service firms; 10 percent each in aerospace, machinery production, construction firms, and business services; and 5 percent in government agencies. Another 15 percent will be self-employed. Demand for draftsmen will rise along with expanding construction activity and increased mechanization in manufacturing plants. Nevertheless, general aerospace losses will hold the gain to only 30 new jobs. The use of electronic drafting equipment and photo-reproduction of drawings will eliminate some of the more routine tasks for draftsmen, but extra technical work will be created by the rising complexity of design problems in modern products and processes. Retirement replacements will add 230 jobs for a total of 260 openings.

Surveyors

The primary task of the surveyor is to determine the precise measurements and locations of surface points and the distances between them. Approximately 25 percent will be employed in engineering service firms, 25 percent by construction firms, 10 percent in government agencies, and smaller numbers in public utilities and the transportation industry. Another 15 percent will be self-employed. Heightened construction activity will create openings for surveyors both in construction firms and engineering services, especially in connection with highways, water resources, and commercial buildings. The significance of surveying work within these activities will grow as urbanization and urban planning make precise boundry lines and exact knowledge of contours increasingly important. In all, a rise of 280 new jobs is anticipated. Replacement needs will be low due to the exceptionally young average age of surveyors, equaling only 80 persons and bringing the total to 360 openings.

Air Traffic Controllers

Air traffic controllers instruct, advise, and inform pilots by radio on air and ground conditions at or near airports. All will be employed by the Federal Aviation Administration. Growing air traffic late in the forecast period will result in the construction of a number of new air towers, but this will be accompanied by the installation of more automated control devices which will gradually be extended to reduce overall employment of controllers. A reduction of 10 jobs is expected along with only 20 replacement openings for a net total of 10 openings.

Radio Operators

Radio operators transmit messages concerning directions, positions, or conditions from station personnel to mobile units. Approximately 50 percent will be government employed, 25 percent by various transportation industry segments, and 10 percent by the communications industry. Demand for law enforcement and fire dispatchers will rise markedly as protective services are expanded, especially as rising urbanization results in more complex pinpoint locations and problems of co-ordination. In transportation, demand for radio operators will be greatest in shipping firms, as the growing trade and pleasure traffic enhances navigational problems and the need for closer ship-to-shore communications. In all, an increase of 100 new jobs is anticipated along with a relatively low replacement requirement of 40 persons for a sum of 140 openings.

Other Technicians

Included in this category are all workers with special nonmedical technical functions not classified above. Primarily involved are engineering technicians and workers specializing in the use of various electronic or electrical devices. Approximately 15 percent will be government employed; 15 percent by educational institutions; 10 percent each in aerospace, construction, and business services; and 5 percent each in machinery and engineering services. Another 5 percent will be self-employed. As products and the methods by which they are manufactured become more complex, increasing numbers of technicians will be required to assist engineers in production planning and to maintain a liason between engineering departments and actual production processes. In addition, the large number of automatic control devices in use will require the periodic presence of a technician to ensure proper maintenance. In university research and development, technicians will be needed to explore various adaptations of automation to scientific procedure. However, aerospace contractions will inhibit the overall gain, holding it at 290 new positions. With so many workers in this category, retirement replacements will involve another 600 jobs for a total of 890 openings.

Table 8d

Average Employment of Medical and Other Health Workers, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacements	Total
TOTAL	24,060	29,450	34,800	5,350	5,240	10,590
Dentists	1,750	2,090	2,420	330	310	640
Dieticians, Nutritionists	450	490	520	30	110	140
Professional Nurses	11,290	13,160	15,300	2,140	2,720	4,860
Optometrists	350	370	400	30	10	40
Pharmacists	1,790	2,070	2,300	230	310	540
Physicians and Surgeons	3,630	4,640	5,560	920	500	1,420
Psychologists	240	440	550	110	40	150
Technicians, Med. and Dent.	2,480	3,920	5,300	1,380	740	2,120
Veterinarians	430	540	640	100	30	130
Other Medical, Health W.	1,650	1,730	1,810	80	470	550

Employment of medical and other health workers will rise from 29,450 jobs in 1970 to 34,800 jobs in 1975, an increase of 5,350. Retirement replacements will equal another 5,240 jobs for a total of 10,590 openings. Almost all will either be self-employed or work in medical institutions. Health services in the state must be greatly expanded in response to a growing, more health-conscious population; increased ability of families to procure services because of rising affluence and further extensions of medical aid to the poor; and an expanded medical potential resulting from new techniques and drugs. Growth will be most dynamic for physicians and surgeons, professional nurses, and medical technicians, since these categories will be intimately associated with the most technically complex of medical advances. Also, openings for dentists, dental technicians, optometrists, psychologists, pharmacists, and veterinarians will expand at a rapid rate. However, technological innovations at hospitals will edge some of the miscellaneous health occupations toward obsolescense; while the standardization of nutritional principles will make them more amenable to practical application by nonprofessional personnel, hampering the growth of dietician and nutritionist jobs at schools and medical institutions.

Dentists

Dentists locate and repair irregularities and damages in the teeth and gums. Approximately 95 percent will be self-employed. The few remaining will be

employed by the government, educational institutions, or hospitals. Demand for dentists will rise due to an expanding population, a growing awareness of the importance of dental care, and the extension of dental service to the poor. On the other hand, employment growth will be somewhat inhibited by generally improved dental hygiene, fluoridation of community water supplies and new dental equipment and techniques. In all, 330 new jobs are anticipated along with 310 replacements to sum 640 openings.

Dieticians, Nutritionists

Nutritionists plan meals for specific persons or groups to help them recover or maintain good health. Dieticians specialize in weight control. Approximately 60 percent will be employed in medical institutions, 20 percent in educational institutions, and 5 percent by nonprofit welfare organizations. Another 5 percent will be self-employed. Demand for dieticians and nutritionists will be assured by a growing population, expanding medical services and facilities, a more health-conscious public, and the extension of community health programs in poor areas. However, the number of new openings will be tempered by the trend in medical and educational institutions to leave the rudimentaries of dietary planning to service workers, relying on professionals only for broad designs and more technical aspects, thus making full use of narrow budgets. In all, 30 new jobs are expected. Labor force separations will be high due to the preponderance of female workers, reaching 110 persons for a total of 140 openings.

Professional Nurses

Professional nurses interpret and fulfill the medical treatment plans prescribed by doctors. Approximately 55 percent will be employed in hospitals, 35 percent in other medical and health institutions, and 5 percent in educational institutions. Expanding medical services to meet the requirements of a growing, more health-conscious population assure the continuance of an accelerated demand for professional nurses. At hospitals their duties will become increasingly more technical and judgmental as they are called upon to relieve doctors of more of their routine functions and as they in turn relegate more of their routine duties to practical nurses and nurse aides. An increase of 2,140 new jobs for professional nurses is anticipated. Labor force separations will equal another 2,720 jobs due to the predominantly female composition of the category for a total of 4,860 openings.

Optometrists

Optometrists identify vision defects and prescribe nondrug treatments, such as eyeglasses or corrective exercises. The great majority of optometrists will be self-employed and most of the remainder will work for retail optical firms or medical institutions. Demand for optometrists will continue to rise in response to the growing population, an increasing proportion of older people and white-collar workers, a wider recognition of the importance of good vision, and a greater appreciation of eyeglasses as an article of style. Anticipated are 30 new openings and 10 retirement replacements for a total of 40 openings.

Pharmacists

Pharmacists compound and dispense drugs and medicines, and provide information on their use. Approximately 65 percent will be employed in drug stores, 25 percent will have their own pharmacies, and 5 percent will be employed in medical institutions. Although a significant expansion will occur among drug stores, this will not directly relate to employment of pharmacists. First, the importance of compounding as a function of pharmacists is on the decline, since many drugs are produced by manufacturers in the final form to be used by the consumer. Second, consumers are becoming more aware of the uses and dangers of many drugs, and the Federal Drug and Food Administration is requiring more complete information to be printed on the exteriors of containers. In addition, small pharmacies will experience the same difficulties in competing with large, chain organizations as do other kinds of retail stores. Nevertheless, prescriptions will still be filled by pharmacists, drug stores will by definition require the services of at least one pharmacist, and not all information will be handily available to consumers, resulting finally in 230 new jobs. Retirement replacements will involve another 310 for a total of 540 openings.

Physicians and Surgeons

Physicians diagnose diseases and injuries, and prescribe and administer treatment; surgeons specialize in preventative or corrective internal operations. Approximately 80 percent (primarily physicians) will be self-employed, and 15 percent will be employed in medical institutions. The tremendous expansion of medical services required by the public will tax medical facilities to the fullest. Among private practitioners a partial solution will lie in gradually discontinuing unnecessary house calls, subscribing to the latest innovations in drugs and techniques, and in participating in the more efficient arrangement of group practice. At hospitals a partial solution will also be possible through increasing dependence on laboratory technicians for analyses and on professional nurses for administration of treatment. But a significant shortage in the number of physicians and surgeons will still exist. Over the forecast period an increase of 920 new positions is expected along with 500 retirements for a total of 1,420 openings.

Psychologists

Psychologists study the behavior of individuals and groups and aid individuals in achieving satisfactory adjustment to their environment. Approximately 65 percent will be employed in educational institutions, 15 percent in medical institutions, and 10 percent in government agencies. Universities, colleges, and school systems will gradually extend their staffing of psychologists as the student population expands and as the awareness grows that testing and counseling is essential at all levels of education. Also, federal expenditures for laboratory research into mental health and retardation will continue to rise, as will state and federal spending on mental institutions late in the forecast period. An increase of 110 new positions for psychologists is anticipated along with 40 retirement replacements to total 150 openings.

Technicians, Medical, and Dental

Medical and dental technicians perform analyses or produce appliances in the laboratory according to written specifications. Almost all are employed in medical institutions or dental laboratories. The great expansion of medical services will assure a high demand for technicians who can relieve doctors of some of their analytical functions. As medical technology advances, greater numbers and varieties of tests will be performed, and physicians will become increasingly dependent on them as the fastest, most accurate means of diagnosis. This will especially be true with respect to technologists having training in biochemistry, microbiology, immunology, or virology. The expansion of existing hospital facilities will be increasingly related to expansions in the scope of medical technology. Dental technicians will profit from the growing acceptance of artificial dentures by the public, the increased ability of people to afford them, and the rising proportion of older people. In addition, more of the work involved in producing dentures will be handled by technicians rather than dentists. In all, an increase of 1,380 new positions is expected for medical and dental technicians, which will be supplemented by a replacement requirement of 740 persons to give a total of 2,120 openings.

Veterinarians

Veterinarians diagnose, control, and treat diseases and injuries to animals. Approximately 70 percent will be self-employed; 10 percent will be employed in agricultural service firms, 10 percent in government agencies, and 5 percent in educational institutions. Demand for veterinarians will rise steadily as the amount of farmland in Washington grows and as farmers become increasingly more scientific in raising and breeding livestock. Demand will also be stimulated by the increasing population, especially in the suburbs, which will result in a larger number of pets. Anticipated are 100 new positions for veterinarians plus 30 retirement replacements for a total of 130 openings.

Other Medical, Health Workers

Included in this category are osteopaths, student nurses, physical therapists, chiropractors, and scattered other medical and health occupations not listed above. Osteopaths diagnose, prescribe remedies, and treat diseases of the body, paying particular attention to impairments of the muscular-skeletal system. Physical therapists plan and conduct programs of health rehabilitation for mentally or physically disabled patients. Chiropractors specialize in treatment by manual manipulation of the spinal column and other parts of the body. Approximately 60 percent of the workers in this miscellaneous category will be employed in medical institutions, 30 percent (osteopaths and chiropractors, mainly) will be self-employed, and 5 percent will be employed in educational institutions. Demand for these workers will follow the general trend for all medical and health occupations. With rapidly expanding health services and a public awareness of therapeutic possibilities, an increase in their numbers is assured; but growth will be inhibited in some occupations by technological gains, the allocation of more routine duties to nonprofessionals, and increased training requirements for practitioners. Since some of the more obscure specialties in this category will gradually approach obsolescence, the net number of new positions for the group as a whole will equal only 80 jobs. Retirement replacements will equal 470, however, bringing the total to 550 openings.

Table 8e

Average Employment of Teachers, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacements	Total
TOTAL	32,590	46,850	49,740	2,890	7,770	10,660
Elementary Teachers	17,740	21,900	22,180	280	4,250	4,530
Secondary Teachers	9,350	15,500	16,830	1,330	2,190	3,520
College Teachers	3,110	5,890	6,800	910	690	1,600
Other Teachers	2,390	3,560	3,930	370	640	1,010

Employment of teachers will rise from 46,850 to 49,740, an increase of 2,890 jobs. In addition, retirement replacements will be fairly high because of the large percentage of female teachers, especially on the elementary level and among special teachers, and will equal 7,770 persons. Demand will therefore total 10,660 openings. Growth of the teaching profession will relate to the rising population in Washington, and in the latter part of the forecast period to a rising affluence and community willingness to invest more in school levies. It will also relate to an emphasis on individualized instruction, which is already stimulating the growth of special schools and special job-related training and will eventually result in smaller classroom sizes. Corresponding to birth rate patterns, secondary school enrollments are expanding and elementary school enrollments slightly contracting, creating a greater number of new jobs in the former. Corresponding to the continued importance of higher education, faculty positions will continue to open at colleges and universities.

Elementary School Teachers

Elementary school teachers conduct programs of education for groups of children between kindergarten and sixth grade. Almost 95 percent will be employed in public schools and the remainder in private. Despite an expanding population, the number of children in elementary schools will decline slightly over the forecast period. The number of children of ages 5-10 in Washington between 1960 and 1970 averaged about 378,000, but between 1970 and 1975, it will average approximately 372,000. In 1970, approximately 381,900 children aged 5-10 lived in Washington, but in 1975 the number will only equal about 359,400. This decline will correspond to gradually lowering birth rates during the 1960's. Nevertheless, another strong trend in the school system is the drive toward conditions permitting smaller classroom size and more individualized instruction. Slightly smaller enrollments will provide the opportunity to approach optimum conditions without unduly inflated levies. Anticipated therefore are 280 new positions for elementary school teachers. With a preponderance of women teaching these grade levels, a high 4,250 labor force separations are expected for a total of 4,530 openings.

Secondary School Teachers

Secondary school teachers instruct several classes per day in particular subjects to groups of students in junior and senior high schools. Approximately 95 percent will be employed in public schools and the remainder in private. The secondary school population will increase over the forecast period, as the number of youth aged 11-18 in Washington rises from an average of about 492,000 between 1960 and 1970 to about 521,000 between 1970 and 1975. In 1970, approximately 522,500 children of ages 11-18 lived in Washington, but after a temporary dip the number will rise to about 525,100 by 1975. This increase will be due to some in-migration of families late in the forecast period as the economy gains momentum, and it will more than offset the effects of gradually declining birth rates in the late 1950's and 1960's. In addition, the trend toward smaller classroom size, special teaching aides, an expanded curriculum, and generally more individualized instruction will provide further impetus for employment growth among secondary school teachers. An anticipated 1,330 new jobs will open along with 2,190 labor force separations to total 3,520 openings.

College Teachers

College and university instructors are engaged primarily in teaching rather than research, including preparing and delivering lectures, composing and grading tests, counseling, and intra-faculty functions. Approximately 85 percent will be employed in public colleges, the rest in private. Steady population growth and the rising significance of college education assure a continued demand for instructors. Presently an ideological conflict exists on college campuses regarding the purposes of higher education. On the one hand, there are strong economic pressures toward an even closer connection of university training with preparation for a career. Yet, on the other, there are strong social pressures for an emphasis on the university as a milieu for expanding cultural awareness and intellectuality per se. The ultimate resolution will necessarily involve an extension of present facilities and the consequent expansion of faculty employment. An increase of 910 new jobs is anticipated plus 690 retirements for a total of 1,600 openings.

Other Teachers

Included in this category are teachers in special schools, technical instructors for job-related training, and other instructors apart from elementary, secondary, and college teachers. Approximately 70 percent will be employed in educational institutions, 10 percent in government agencies, 5 percent in medical institutions, and 5 percent in retail trade. Rising population growth, the increasing importance of technical training, and an emphasis on special training for the disadvantaged will all contribute to a demand for teaching specialists. However, this demand will be tempered by the development of more efficient learning aides, the centralization of special teaching resources, and the use of nonprofessional tutors in the home or in neighborhood organizations. Nevertheless, a gain of 370 new jobs is anticipated along with 640 retirement replacements to total 1,010 openings.

Table 8f

Average Employment of Social Scientists, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expan-sion	Replace-ments	Total
TOTAL	450	620	690	70	60	130
Economists	160	240	280	40	20	60
Statisticians and Actuaries	260	340	350	10	40	50
Other Social Scientists	30	40	60	20	0	20

Employment of social scientists will rise from 620 to 690 over the forecast period, an increase of 70 positions. With few workers employed in a purely social scientific capacity, only 60 retirements are expected, for a total of 130 openings. The two principle employers of social scientists will be government agencies and educational institutions. Employment in government agencies will be primarily associated with attempts to combat unemployment and alleviate poverty, whereas in educational institutions it will mainly involve research projects. Private industry will use some economists, statisticians and actuaries over the forecast period, but the potential will not approach that which existed in the late 1960's until aerospace stabilizes and a continual flow of business investment returns.

Economists

Economists study the economy, make forecasts, and plan the most efficient use of resources and materials in providing services and goods. Approximately 35 percent will be employed by government agencies, 20 percent by business service firms, 10 percent in the finance industry, 10 percent in wholesale trade outlets, and 5 percent by educational institutions. A significant rise of 40 new jobs is anticipated as the level of business activity in the private sector expands in response to a revitalizing economy, and as the level of expenditures on the government level intensifies for reducing unemployment and poverty. The sheer volume and complexity of modern business operations will force finance and wholesale managers into an increased reliance on central economists for specifying the proper scientific methods of analyzing trends, forecasting sales, and planning purchasing and production operations. Federal and state agencies must respond to the rising level of their operations through a more extensive volume of data collection and a precise evaluation of this data for indications of trends and results as procedurally specified by economists. Another 20 positions will emerge due to retirement replacements, bringing the total number of openings to 60.

Statisticians and Actuaries

Statisticians collect, develop, analyze, and interpret data based on a knowledge of statistics in a particular field. Actuaries are responsible for designing insurance and pension plans and for maintaining these programs on a sound financial basis. Approximately 25 percent will be employed by government agencies, 15 percent by aerospace, 15 percent by insurance companies, and 5 percent each by finance firms, business services, wholesale trade outlets, and educational institutions. Layoffs of statisticians and actuaries in aerospace will be almost equal to gains in other industries, resulting in a net increase of 10 new jobs. Demand for their services at government agencies will be tempered by the increasing centralization of procedure, which lends itself handily to computer analysis of data. However, openings for actuaries at insurance companies will accelerate as the number, variety, and extent of coverage in policies rises. Beyond the forecast period, the re-vitalization of the aerospace industry will improve the outlook for statisticians considerably, especially since their usage will be expanded in analyzing business conditions, diversification operations, and in assisting engineers in research and development. During the forecast period, retirement replacements will total 40 persons, bringing the total number of openings for statisticians and actuaries to 50.

Other Social Scientists

Included in this category are sociologists, political scientists, geographers, historians, anthropologists, and any other social science occupations not listed elsewhere. Approximately 45 percent will be employed in government agencies, 35 percent by educational institutions, 10 percent by nonprofit organizations, and 5 percent by the printing and publishing industry. For occupations of use in the war on poverty, the government will be the most promising employer. Both Manpower Development and Training programs and Area Redevelopment programs will need personnel who are aware of the social and cultural implications of economic procedures as well as the monetary. For the group as a whole, and especially for those having gained some eminence in their field, educational institutions will hold the best employment promise. Employment at a university might involve being a special consultant, departmental organizer, special graduate lecturer, or a research director. Anticipated is an increase of 20 new positions, but with few workers in the category, no retirement replacements are forecast.

Table 8g

Average Employment of Other Professional, Technical, and Kindred, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacement	Total
TOTAL	43,890	68,230	75,300	7,070	8,940	16,010
Accountants and Auditors	9,090	13,360	14,260	900	1,650	2,550
Airplane Pilots and Navigators	950	1,750	1,970	220	120	340
Architects	970	1,760	2,110	350	170	520
Workers in Arts, Entertainment	8,440	12,630	13,900	1,270	2,150	3,420
Clergymen	3,370	3,710	3,790	80	480	560
Designers, exc. Design Drafts	700	1,170	1,370	200	70	270
Editors and Reporters	1,440	1,690	1,800	110	220	330
Lawyers and Judges	3,260	4,070	4,440	370	620	990
Librarians	1,930	2,710	2,970	260	640	900
Personnel and Lab. Relations Workers	1,790	2,800	2,980	180	350	530
Photographers	900	930	900	- 30	90	60
Social and Welfare Workers	1,730	2,660	3,170	510	450	960
Professional, Technical, Kindred, etc.	9,320	18,990	21,640	2,650	1,930	4,580

Employment of other professional and technical workers will rise from 68,230 jobs in 1970 to 75,300 in 1975, an increase of 7,070. Replacement requirements will equal another 8,940 for a total of 16,010 openings. As with many occupations, employment growth for this group will be stimulated by the rising population, growing affluence, the resurgence of business activity, the increasing complexity of production processes and business organizations, and intensified programs aimed at aiding the disadvantaged. Social and welfare workers, designers, airplane pilots and navigators, and workers in arts and entertainment will display the most dynamic growth. Steady gains will be displayed by editors and reporters, lawyers and judges, and librarians. Demand for accountants and auditors will also be steady despite the automation of some of their more time-consuming duties, as will demand for personnel and labor relations workers despite layoffs in aerospace. Employment of clergymen will show relatively little change. Finally, employment of photographers will be restricted by the development of new camera equipment for nonprofessionals, which allow consumers to satisfy many of their camera needs without resorting to the expense of studios and professionals.

Accountants and Auditors

Accountants compile and analyze business records and prepare financial reports. Auditors specialize in reviewing financial records and reports, and evaluating their reliability. Approximately 25 percent will be employed in accounting and bookkeeping firms, 20 percent in government agencies, and 5 percent each in finance, insurance companies, wholesale trade outlets, and aerospace. Another 10 percent will be self-employed, and the rest will be scattered through various industries. Demand for accountants and auditors will rise rapidly in both the private sector and government as organizational complexity grows and because of the increasing reliance of managers on precise accounting information for determining policy, the complex and changing tax and benefit systems, and the mounting specialization of various accounting phases. Yet, at the same time, the output per worker will be increased by the gradual substitution of electronic data systems for manual preparation of accounting records and financial statements. However, the effect of this trend plus that of layoffs in aerospace will merely be to hold the number of new positions to 900. Retirement replacements will add another 1,650 for a total of 2,550 openings.

Airplane Pilots and Navigators

Airplane pilots operate the controls and perform other tasks necessary for flying a plane on course and landing it safely. Navigators monitor the operation of the different mechanical and electrical devices aboard. Together they generally compose the flight crew. Approximately 65 percent will be employed by airlines, 15 percent by the government, 5 percent by aerospace, and 5 percent by agricultural service firms for crop-dusting, frost control, and related activities. Hiring of pilots and navigators by airlines late in the forecast period will more than offset losses in aerospace, resolving in a net gain of 220 positions. The development of larger, faster, more efficient planes will not so much inhibit job growth as aid it, since a greater use of airplanes in shipping will be feasible and a broader range for travel. In addition, their increased size and complexity will make three-man flight crews more commonplace. Retirement replacements will equal another 120 persons, bringing total demand to 340 openings.

Architects

Architects plan and design buildings and other structures on the basis of their purpose, requirements, and cost limitations, and in view of the client's preferences as to style and plan. Approximately 55 percent will be employed by engineering and architectural firms, and 35 percent will be self-employed. Both the volume and complexity of nonresidential buildings are on the rise, and these buildings form the major basis for architectural employment. In the lesser area of homebuilding, demand for architectural services will remain about constant as the favorable effects of growing suburban interest are offset by increased construction of simple, low-cost dwellings. In all, 350 new jobs are anticipated, along with 170 replacements due to retirement for a total of 520 openings.

Workers in Arts, Entertainment

Included in this category are actors, artists and art instructors, athletes, authors, dancers and dance instructors, musicians and music instructors, sports trainers and officials, and all others involved in entertainment or the arts. Approximately 55 percent will be employed in educational institutions, 15 percent by amusement or recreational service groups or establishments, 10 percent by nonprofit organizations, 5 percent in restaurants and night spots, 5 percent in other retail trade establishments, and 5 percent in aerospace. Another 10 percent will be self-employed. Steady openings are assured for workers in arts and entertainment at educational institutions because of expanding enrollments, although the volume will be inhibited by doubts as to the necessity of some of the traditional recreational programs and by the transference of many college-oriented cultural activities onto noncampus sites with commercial interests. However, the possibilities for sports arenas, concert halls, and playhouses will grow as the state becomes more urbanized, more of a cultural center, and more capable of supporting organized sports. Also, the significance of live musical entertainment at retail establishments will continue to rise as sophisticated nonlive entertainment becomes a commonplace home luxury for more people. In all, a substantial gain of 1,270 new jobs for workers in arts and entertainment is anticipated along with 2,150 replacements due to retirement to total 3,420 openings.

Clergymen

Clergymen serve the spiritual needs of others and lead their congregation in religious activities. They may be part of the ministry, priesthood, or rabbinate. Approximately 98 percent will be directly involved with religious services, and most of the remainder will be performing administrative capacities at religious education institutions. The number of clergymen will rise by 80 over the forecast period, combining with 480 retirement replacements to total 560 new entrants. The slowing rate of growth in the clergyman occupation corresponds to expanding opportunities for providing spiritual assistance outside of organized religion. Many spiritually sincere young people will be lured away from organized religion simply by the greater resources secular agencies have to offer toward relieving human suffering. The relatively lower earnings of clergymen will not be a major factor, since most prospective clergymen are not especially concerned with monetary rewards.

Designers (Exc. Draft Designers)

The two major components of this category are industrial designers and interior designers. Industrial designers are responsible for improving the appearances and functional design of machine-made products. Interior designers plan the functional arrangement of interior space and coordinate the selection of furniture, fabrics, floor coverings, and accessories. Approximately 20 percent will be employed in engineering and architectural service firms, 15 percent in business services, 10 percent in shipbuilding and repair, 5 percent in construction firms, and 5 percent in furnishings and related retail stores.

Another 10 percent will be self-employed, and the rest will be scattered throughout various industries. A growing emphasis on design services for commercial establishments and suburban homes will join in effect with a substantial increase in construction activity to assure a rising demand for interior designers and to a certain extent for industrial designers. Employment prospects for industrial designers will, however, be adversely affected by general layoffs at shipyards corresponding to the tightening of defense spending. Beyond the forecast period, prospects will be brighter as work progresses on modernization of the merchant fleet and there is more federal spending on design improvements for military vessels. With constant developments in technology and concepts, great emphasis will be placed on designing ships of greater speed and efficiency to compete successfully against foreign vessels in productivity and cost. During the forecast period, an estimated 200 new jobs will open for industrial and interior designers along with a low 70 retirement replacements for a total of 270 openings.

Editors and Reporters

Reporters gather information on current events and compose articles for publication. Editors gather and prepare material for public consumption. Approximately 45 percent will be employed in the printing and publishing industry, 10 percent in advertising and other kinds of business service firms, and 5 percent each by radio and television, theaters and motion pictures, general merchandise stores, nonprofit organizations, and government agencies. Another 5 percent will be self-employed. Steady gains in the printing and publishing and most other employing industries will assure demand for editors and reporters, culminating in 110 new positions. Retirement replacements will equal another 220 persons for a total of 330 openings. Newspapers are by far the most important employer of these workers in the state of Washington, and circulations will definitely increase. Becoming possible will be higher quality newspapers and more specialized reporting and editing. However, mergers will check employment gains in areas where localized identities are being lost in broader urban units.

Lawyers and Judges

Lawyers protect the legal rights and obligations of clients and represent them in court when necessary. Judges arbitrate, advise, and administer justice in court. Approximately 65 percent will be self-employed, 20 percent will be government employed, and 15 percent will be employees in legal service firms. All judges, of course, are government employed. A growing emphasis on legal protection will create 370 new positions for lawyers and judges. Factors behind the expansions in legal activity will include population growth, rising business activity, the growing complexity of business and government activities, and the burgeoning of activities related to providing legal services to the poor. Lawyers will continue to be commissioned both by community action programs associated with the Economic Opportunity Act and by a host of private civic interest groups. Retirement replacements will add another 620 jobs for a total of 990 openings.

Librarians

Librarians select and organize collections of books, magazines, and other written materials, and assist readers in their use. Approximately 90 percent will be employed by educational institutions, and the remainder will mainly be at public libraries, special government libraries, and medical institutions. A rising population in and out of school, a continued flood of new written materials, and constant civic pressure to maintain an up-to-date collection will all contribute to an increase of 260 librarian jobs. At universities the employment outlook is especially favorable, as growing numbers of nonstudents join students in relying on various campus branches for source materials on factual subjects. Retirement replacements will be relatively high due to the large proportion of older, female librarians, equaling 640 persons and bringing the total number of openings to 900.

Personnel and Labor-Relations Workers

Personnel workers develop recruiting and hiring procedures, and interview job applicants to determine which one(s) are best suited to specified positions. Labor-relation workers are concerned with employee morale, disciplinary problems, and the proper classification of jobs in terms of wage and salary scales. Approximately 40 percent will be employed by the government, 20 percent throughout manufacturing, and 5 percent each in business service firms, retail trade, educational institutions, and finance-insurance. Layoffs of personnel and labor-relations workers in aerospace and to a lesser extent in federal employment will be offset by hiring in other industries, resulting in a net gain of 180 new jobs. Retirement replacements will add another 350 jobs for a total of 530 openings. Their significance will rise in almost all industries because the instigation of new functions, procedures, or policies requires a re-evaluation of the obligations and rights associated with positions and the qualifications and personal qualities essential for successful performance of duties.

Photographers

Photographers photograph persons, situations, or objects with a certain end in mind. Approximately 20 percent will work for the printing and publishing industry, 15 percent for personal and commercial photography studios, 10 percent for government agencies, and 5 percent each for educational institutions, medical institutions, aerospace, and motion pictures. Another 10 percent will be self-employed. Demand for studio photographers will be hurt by the development of sophisticated equipment that can easily be used by non-professionals to take pictures of exceptional quality according to desired specifications. Some layoffs of photographers will also occur in the aerospace industry. The brightest outlook for hiring is at newspapers, where increased circulation will lead to an expanded realm of photographic possibilities and a generally bolstered staff. These gains plus lesser ones in some of the other industries will reduce the net job loss for photographers to 30. Retirement replacements will equal 90 persons, resulting in an overall plus of 60 openings.

Social and Welfare Workers

Social and welfare workers provide social services to persons unable to handle their monetary requirements or personal problems without assistance. Approximately 70 percent will be employed in government agencies, 15 percent by nonprofit organizations, 10 percent in medical institutions, and 5 percent in educational institutions. Steady expansions of state and local services to the poor assure future demand for social and welfare workers in the long run, especially as the emphasis continues to shift toward helping disadvantaged individuals achieve positive economic and social roles, rather than merely allocating benefits to groups of recipients. As the range of government services expands, the function of private organizations will shift more to providing financial backing and practical information on business management and related concerns, limiting their practical use for social and welfare workers. Nevertheless, with the growth in government staffing, a substantial increase of 510 positions is anticipated, accompanied with 450 replacements due to retirement to total 960 openings.

Professional, Technical, Kindred, Nec.

Included in this category are all professions or technician specialties not elsewhere classified. As a miscellaneous group, its employment pattern will represent a general resultant of the forces acting on professional and technical employment as a whole. Approximately 30 percent will be employed in educational institutions, 20 percent in manufacturing, 15 percent in government agencies, 10 percent in nonprofit organizations, and 5 percent in communications. Another 5 percent will be self-employed. Demand for professional and technical specialists will be rising rapidly in most industries as research and development activities are expanded, the volume and variety of services are increased, and as a broader awareness of social and environmental problems develop. In manufacturing industries their significance will grow the fastest, since continual improvements in productivity are now essential to keep pace with rising labor and materials costs. In all, losses associated with general aerospace layoffs will be more than offset by gains in other manufacturing and service industries, resolving in a gain of 2,650 new positions. Retirement replacements will equal another 1,930 persons for a total of 4,580 openings.

MANAGERS, OFFICIALS, AND PROPRIETORS

Table 9

Average Employment in Categories, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacement	Total
TOTAL	102,180	125,250	131,140	5,890	17,540	23,430
Conductors, Railroad	670	650	650	0	70	70
Creditmen	860	1,270	1,470	200	210	410
Officers, Pilots, Engineers, Ship	1,820	2,270	2,650	380	270	650
Purchasing Agents	2,470	2,890	2,880	- 10	380	370
Postmasters and Assistants	610	600	600	0	100	100
Managers, Officials, Prof. Nec.	95,750	117,570	122,890	5,320	16,510	21,830

Employment of managers and proprietors will rise from 125,250 in 1970 to 131,140 in 1975, an increase of 5,890 jobs. Managers are necessary in all industries and will become increasingly valuable as the number of autonomous units within an organization grows and as the harmony between the activities of these units becomes more essential. As competition sharpens, so must inter-and intra-departmental efficiency. One of the most promising areas for salaried managers will be in large manufacturing firms, where management specialists are needed to inter-relate production aspects within specified units, generally enhance productivity within those units, and to time output with the changing capacities of other units. Employment prospects for independent entrepeneurs will gradually decline as competition with large chain organizations becomes more difficult. Prospects for creditmen are favorable for the latter part of the forecast period when the volume of business investment will reach appreciable levels; and employment of officers, pilots, and engineers aboard ship will improve as trade with other coastal states and the Far East becomes more profitable. Demand for postmasters and assistants will be inhibited by automation within post offices, while demand for railroad conductors will be damaged by declining passenger services. Finally, employment for purchasing agents will be adversely affected by aerospace contractions. Retirement replacements for managers and proprietors will equal 17,540 persons, adding on to the 5,890 new positions for a total of 23,430 openings.

Conductors, Railroad

Conductors are responsible for seeing that railroad trains are moved according to instructions and that passengers and cargo are transported safely. The slow decline of the railroad industry will be countered in effect by the necessity for conductors to assume extra duties on the train and in the yards as the number of brakemen are reduced. No change in employment is anticipated, but a requirement of replacing 70 retirements will exist.

Creditmen

Creditmen estimate the degree of risk involved in extending credit or lending money to firms or individuals, and recommend action in cases of delinquent repayment. Approximately 25 percent will be employed in the finance industry, 15 percent in wholesale trade, 15 percent in general merchandise stores, 10 percent by automotive dealers, 5 percent in apparel and accessory stores, and 10 percent in all other types of retail stores. In banks and credit agencies the need for creditmen will rise markedly as the volume of business investment expands. The complexity of investments will stimulate the use of centralized files and electronic computers to generate a more complete set of data from which to draw conclusions. In wholesale and retail outlets, scientific planning and co-ordination of credit activities will be stimulated by rising consumer spending, the steady expansion of chains through branch establishments, and a closer inter-relation between wholesale and retail inventories. In all, a substantial rise of 200 new positions is anticipated for creditmen accompanied with 210 retirement replacements to total 410 openings.

Officers, Pilots, Engineers, Ship

Licensed ship professional and supervisory personnel are responsible for determining and maintaining the course of the ship and for supervising and coordinating the activities of the crew. Approximately 80 percent will be employed by private shipping lines, 10 percent by the government, and 5 percent by fisheries ships. Steady expansions in shipping activity guarantee openings for officers, pilots, and engineers, as growing use of modernized containerships, barge trailers, and others will increase the efficiency of water transportation to the point where Washington firms can compete very successfully for trade with other coastal states and the Far East. Technological innovations will alter rather than destroy professional and supervisory functions aboard ship over the forecast period. Anticipated is a substantial gain of 380 new positions along with 270 retirement replacements to total 650 openings.

Purchasing Agents

Purchasing agents are responsible for maintaining inventories, purchasing goods and services at the lowest cost consistent with required quality. Approximately 20 percent will be employed in aerospace, 10 percent in lumber and wood, 25 percent total in other manufacturing industries, 10 percent in

wholesale trade, 10 percent in government agencies, and 5 percent in retail trade. Major layoffs of purchasing agents in aerospace will just exceed their hiring in other employing industries, as a net loss of 10 positions is anticipated. However, retirement replacements will equal 380 for a net total of 370 openings. Beyond the forecast period, the outlook for purchasing agents is more favorable; their importance in all industries will rise on the basis of new products and sources of supply, the increasing complexity and specialization of business functions, and competition among manufacturers for new, improved, and less costly goods, raw materials, and services.

Postmaster and Assistants

Postmasters are responsible for the general adequacy of post office operations. At large offices, postal supervisors direct the work of clerks and mail handlers. Rising postal services will be countered by the continued mechanization of postal facilities and equipment to result in the elimination of a few offices and a reduction of the extent of supervision in the larger ones. No new jobs are expected for postmasters and assistants over the forecast period, although a requirement will exist for replacing 100 retirements.

Managers, Officials, Proprietors, Nec.

Included in this category are the vast range of salaried managers and proprietors not elsewhere classified. Managers on the lower level generally have supervisory functions only, those on the middle level are in charge of complete units or departments, while upper level managers have responsibility for inter-departmental efficiency or for the operation of the entire organization. Proprietors manage a business they own. In Washington about 85 percent of this general manager-proprietor category will be salaried; of which approximately 30 percent will be employed in retail trade, 15 percent in service establishments, 15 percent in government agencies, 10 percent in manufacturing, 10 percent in wholesale trade, 5 percent in finance, and 5 percent in construction. The other 15 percent will be proprietors; of which approximately 50 percent will own retail establishments, 15 percent service establishments, 10 percent small construction companies, and 5 percent each will own wholesale outlets, real estate agencies, and independent insurance agencies. Employment prospects for proprietors will drop steadily as small entrepeneurs find it increasingly difficult to compete with chain organizations. However, the significance of salaried managers will rise in almost all industries as organizations become larger and more complex. The resulting problems of control and communication will accelerate the number of autonomous units, each having to be headed by a specialist. Anticipated are 5,320 new openings for managers and proprietors over the forecast period, and with so many workers already in this category, a high 16,510 retirement replacements are expected for a total of 21,830 openings.

CLERICAL AND KINDRED

Table 10

Average Employment in Subgroups, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacements	Total
TOTAL	154,700	208,670	226,980	18,310	35,390	53,700
Stenos, Typists, and Secretaries	35,820	50,890	55,000	4,110	11,750	15,860
Office Machine Operators	5,110	7,580	9,190	1,610	1,680	3,290
Other Clerical and Kindred	113,770	150,200	162,790	12,590	21,960	34,550

Employment of clerical and kindred workers will rise from 208,670 in 1970 to 226,980 in 1975, an increase of 18,310 jobs. A major factor behind this rise will be the growing complexity of production processes, inter-unit communications, and business organization in general. This will be especially true in retail and wholesale trade, the finance and insurance industries, and other service-producing industries, where there will be a proliferation of branch offices and an increasing number of large, modern establishments erected in suburban areas. Among manufacturing firms a major increase in paperwork may be expected as a product of the trend toward diversification of products and markets and greater intra-organizational efficiency. In all industries the number of secretaries, stenographers, and typists will rise to handle the extra office work, as will the number of office machine operators to run the mechanical devices installed to enhance office efficiency. Most of the categories in the other clerical and kindred group will experience corresponding increases. The only inhibition to demand for clerical workers will be the rising use of electronic data processing machines, which eliminate much of the work now done manually. Labor force separations will be quite high among clerical workers because of the large proportion of female workers, many of whom are young, single women, and will equal 35,390 persons. Total demand will therefore reach 53,700 openings.

Table 10a

Average Employment of Stenographers, Typists, and Secretaries, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacements	Total
TOTAL	35,820	50,890	55,000	4,110	11,750	15,860

Typists produce typed copies of handwritten and printed materials; stenographers take dictation and then transcribe their notes on a typewriter; secretaries, in addition to their stenographic work, relieve their employers of numerous routine duties and often handle a variety of business details on their own initiative. Approximately 20 percent will be employed by government agencies, 15 percent by educational institutions, 15 percent by manufacturing firms, and 5 percent each in retail trade, wholesale trade, finance, insurance, medical institutions, and nonprofit organizations. About 5 percent will be self-employed. Although some layoffs of secretaries, stenographers, and typists will occur in aerospace, hiring in other industries will accelerate, resulting in a net gain of 4,110 new jobs. Due to the predominantly female composition of this category and the large proportion of young single women, labor force separations will be exceptionally high, equaling 11,750 persons and bringing the total number of openings to 15,860. The importance of secretaries, stenographers, and typists is rapidly rising in all industries as business organization becomes more complex. The volume of office work will be such that an overflow of typing to be done outside the office on a commission basis may be expected. In educational institutions the outlook is especially promising because of the growth in student population and expanded curricula and school facilities.

Table 10b

Average Employment of Office Machine Operators, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacements	Total
TOTAL	5,110	7,580	9,190	1,610	1,680	3,290

Office machine operators are responsible for operating the various machines used to speed the paperwork in business offices. These machines include billing, bookkeeping, adding and calculating, duplicating, mail handling, and computer-related machines. Approximately 15 percent each will be employed by manufacturing firms, government agencies, wholesale outlets, and finance companies; 10 percent each will be in insurance companies and retail outlets; and 5 percent will be in transportation. Expansions of activity in these industries and a generally rising volume of paperwork will guarantee demand for office machine operators. New kinds of mechanical equipment will be installed to enhance office efficiency, and office procedures will become increasingly oriented around the use of these machines. In some industries, such as finance, the spread of automated recordkeeping systems and other advances in office automation could reduce demand for some kinds of operators, but primarily the trend will be toward greater use of manually-operated machines. A consequent rise of 1,610 operators may be anticipated, and with a high proportion of young, female workers, labor force separations will reach 1,680 persons for a total of 3,290 openings.

Table 10c

Average Employment of Other Clerical and Kindred, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacements	Total
TOTAL	113,770	150,200	162,790	12,590	21,960	34,550
Accounting Clerks	6,440	7,550	7,830	280	1,440	1,720
Hand Bookkeepers	11,910	14,440	16,000	1,560	2,750	4,310
Banktellers	2,380	4,070	5,220	1,150	620	1,770
Cashiers	7,430	13,020	15,950	2,930	2,290	5,220
Mail Carriers	3,030	4,200	4,860	660	300	960
Postal Clerks	3,280	4,550	5,230	680	490	1,170
Shipping, Receiving Clerks	2,960	3,140	3,090	- 50	300	250
Telephone Operators	5,400	6,380	6,990	610	1,520	2,130
Clerical and Kindred, Nec.	70,940	92,850	97,620	4,770	12,250	17,020

Employment of other clerical and kindred workers will rise from 150,200 in 1970 to 162,790 in 1975, an increase of 12,590 jobs. Since most of these categories are composed predominantly of female workers and some also of young, single women, labor force separations will be exceptionally high, equaling 21,960 persons and bringing the total to 34,550 openings. Almost all industries staff a substantial number of clerks, and with a growing, more affluent population, an improved goods-producing climate, and an increased rate of financial exchange, the prospects for employment growth are favorable in almost all categories. New jobs for mail carriers, postal clerks, telephone operators, and cashiers will most directly result from the rising number of people in Washington. For cashiers, the resumption of freer spending habits by consumers in the latter part of the forecast period will also create openings. For accounting clerks, hand bookkeepers, and banktellers, the outlook is promising in view of the expected improvements in financial flow within the state. However, employment for shipping and receiving clerks will be hurt by aerospace layoffs and technological innovations that improve their output. Finally, demand for the miscellaneous category of clerical workers will be higher with respect to expanding business activity, rising consumer spending, and an increased volume of paperwork, but many of the specific occupations contained within the category will be especially susceptible to technological replacement.

Accounting Clerks

Accounting clerks perform a variety of routine calculating, posting, and typing duties involved in keeping a complete set of books. Approximately 20 percent will be employed by government agencies, 15 percent in wholesale outlets, 10 percent in retail trade, 10 percent in manufacturing firms, and 5 percent each in construction, transportation, and insurance. Another 10 percent will be self-employed. The rising volume of office activity in these industries will temporarily assure demand for accounting clerks, even though electronic data processing equipment and mechanized bookkeeping machines are performing increasingly more of their routine functions. Anticipated are 280 new jobs plus a high 1,440 labor force separations for a total of 1,720 openings.

Hand Bookkeepers

Hand bookkeepers record the financial transactions of an organization, preparing summaries of money received and paid at regular intervals. Approximately 20 percent will be employed in retail stores, 15 percent in the finance industry, 10 percent each in manufacturing firms and wholesale outlets, and 5 percent each in construction and in accounting and bookkeeping service firms. Another 10 percent will be self-employed. Rising business activity in these industries assure continued demand for hand bookkeepers, resulting in an anticipated 1,560 new jobs. With a high 2,750 labor force separations, a total of 4,310 openings are expected. The importance of hand bookkeepers will rise in retail trade because of expansion in establishment size and variety of goods, but in finance organizations and many manufacturing firms the means will be readily available for installing machines to process bookkeeping data, thus inhibiting the opening of new jobs.

Banktellers

Banktellers receive and release money in banks and record these transactions. A rising volume of banking activity corresponding to increased business investment and growing personal affluence later in the forecast period will open 1,150 new positions for banktellers. Another 620 will result from replacements to total 1,770 openings. Many of these will be part-time, however, as banks continue to increase their reliance on peak-hour help and specialists whose services are only occasionally needed.

Cashiers

Cashiers receive payments from customers for goods and services and record the amount of money in each transaction. Approximately 40 percent will be employed at food stores; 10 percent each at eating and drinking places, general merchandise stores, and other retail stores; and 5 percent in banks and credit agencies. Rapid expansions of retail outlets corresponding to a growing, more affluent population will assure a substantial demand for cashiers. The growing use of self-service and other merchandising techniques to make retail outlets more efficient will tend to focus the employment structure more around the cashier, who will be expected to assume many supplementary duties beyond money transactions. In all, an increase of 2,930 new jobs is anticipated along with 2,290 retirement replacements for a total of 5,220 openings.

Mail Carriers

Mail carriers collect and deliver mail along designated routes. Steady extensions of postal services will open 660 new positions for mail carriers. With 300 retirement replacements, a total of 960 openings may be anticipated. Expansion of population area and density, especially in the suburbs, will create a number of new routes, but the increased use of motor vehicles in mail delivery will enlarge the output per carrier.

Postal Clerks

Postal clerks sort incoming and outgoing mail in post offices, and may provide window services to the public. With expansions of population and business activity, the volume of mail to be sorted at post offices will rise, but technological improvements in the sorting process will limit the consequent employment growth. In all, 680 new jobs are anticipated accompanied by 490 retirement replacements for a total of 1,170 openings.

Shipping, Receiving Clerks

Shipping and receiving clerks keep track of the transference of goods from one place to another. Approximately 50 percent will be employed by manufacturing firms, especially in the metals, food products, machinery, aerospace, and apparel industries; another 20 percent will be in wholesale trade outlets; 15 percent in retail establishments; and 5 percent in government agencies. Employment prospects for shipping and receiving clerks will be hurt by layoffs in aerospace and defense-linked federal agencies. Damaging also will be the modernization of many manufacturing and wholesaling warehouses with automated bookkeeping equipment and more extensive conveyor belt systems. However, a generally rising flow of goods in most industries employing shipping and receiving clerks will partially counter these negative effects, and a contraction of only 50 jobs is anticipated over the forecast period. Since 300 jobs will be available from retirements, a net total of 250 openings is expected.

Telephone Operators

Telephone operators provide assistance in placing the calls that otherwise cannot be placed. They may work at central office switchboards for a telephone company or they may be at private branch exchange (PBX) switchboards in business offices or other establishments. Approximately 60 percent will be employed by telephone companies; and the other 40 percent will be in PBX installations, especially at educational institutions, government agencies, business service firms, medical institutions, hotels, and finance organizations. As business activity rises and the population grows, the volume of calls handled by telephone company operators and PBX operators will also increase. Employment expansion will be tempered only slightly by the extension of direct dialing and other technological innovations, and a gain of 610 new jobs for telephone operators is forecast. Having a large proportion of young, single women, separations from the labor force will be quite high, equaling 1,520 persons and raising the total number of openings to 2,130.

Clerical and Kindred, Nec.

Included in this category are all the various kinds of clerks not elsewhere classified. Among others, there are payroll clerks, stock clerks, messengers, file clerks, receptionists, ticket agents, and bill collectors. Approximately 15 percent will be employed in manufacturing firms; 15 percent in government agencies; 10 percent each in educational institutions, medical institutions, and retail establishments; and 5 percent each in transportation, insurance, and wholesale trade. Another 5 percent will be self-employed. Layoffs of various kinds of clerks in aerospace will be more than matched by sizable staffing in most other industries. Demand for clerks will be especially high at educational institutions, where rapidly rising enrollments and an expanded number of functions will result in growing administrative complexity. It will also be strong at retail trade outlets, where an increase in the volume of paperwork is assured by the trend toward larger, more modern stores which operate as branches of nation-wide chains. On the other hand, demand for clerks will be somewhat inhibited in large firms by the installation of computers and other mechanized devices to process routine and repetitive payroll, inventory, and billing work. Nevertheless, the overall significance of clerks will rise steadily in most industries, and with increased business activity an anticipated 4,770 new jobs will open, along with 12,250 retirement replacements to total 17,020 openings.

SALES WORKERS

Table 11

Average Employment 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacements	Total
TOTAL	79,140	99,320	106,020	6,700	12,610	19,310

Sales workers sell merchandise or services to individuals or establishments, basing their approach on a detailed understanding of their product. Approximately 50 percent will be employed at general merchandise stores and other retail establishments, 15 percent by wholesale firms, 10 percent by manufacturing firms, and 5 percent each at insurance companies and real estate agencies. Another 15 percent will be self-employed. Population growth and the return of economic stability will stimulate buying, both by firms and by individuals, resulting in a definite demand for sales workers. At retail establishments the added business will be handled partially through the instigation of more self-service units and an emphasis on part-time, peak-hour employment among sales clerks. The technical training required of these workers will also be extended. The most promising area of sales work will be at manufacturing firms, where the development of new products and improved market techniques will stimulate demand for informed salesmen who are able to demonstrate a practical application of highly technical company products to other organizations. Another profitable and related area will be that of wholesale selling, since the flood of new products and processes on the market will force retail establishments to rely increasingly on wholesale dealers as a central informational source. Employment prospects for independent salesmen will focus more and more around real estate and insurance as the technical training necessary in other areas reduces the feasibility of short-term or part-time selling ventures. In all, an estimated 6,700 new jobs will open for sales workers along with 12,610 labor force separations to total 19,310 openings.

CRAFTSMEN

Table 12

Average Employment in Subgroups, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacements	Total
TOTAL	155,690	192,650	199,820	7,170	18,830	26,000
Construction Craftsmen	46,960	53,550	54,900	1,350	5,590	6,940
Foremen, Nec.	18,000	24,300	24,400	100	2,390	2,490
Metalworking Craftsmen	17,520	17,290	15,720	-1,570	1,710	140
Printing Trade Craftsmen	3,650	3,970	4,070	100	450	550
Transportation and Public Utilities Craftsmen	7,240	8,230	9,600	1,370	560	1,930
Mechinics and Repairmen	41,120	59,510	63,260	3,750	5,360	9,110
Other Craftsmen and Kindred	21,200	25,800	27,870	2,070	2,770	4,840

Employment of craftsmen will rise from 192,650 jobs in 1970 to 199,820 in 1975, an increase of 7,170. Positive factors affecting employment include, among others, the anticipated expansion of construction activities, a rising reliance on machinery in industry and by other consumers, increases of power usage throughout the state, and the general flexibility of many craftsman duties around the direction of technological advance. Negative factors include lay-offs in aerospace, the imminence of further mechanization or automation in production processes, and enhanced efficiency in power tools and materials. A strong demand may be expected for mechanics and repairmen, public utilities servicemen, and many of the occupations in the miscellaneous group; a moderate demand will exist for construction craftsmen, foremen, and printing tradesmen; whereas a contraction will occur among metalworking craftsmen jobs. Retirement replacements will add 18,830 jobs to the 7,170 new ones for a total of 26,000 openings over the forecast period.

Table 12a

Average Employment of Construction Craftsmen, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacements	Total
TOTAL	46,960	53,550	54,900	1,350	5,590	6,940
Carpenters	18,080	18,560	18,850	290	2,120	2,410
Brickmasons and Tile Setters	1,880	2,130	2,220	90	160	250
Cement, Concrete Finishers	750	1,020	1,190	170	100	270
Electricians	7,110	8,440	8,150	- 290	770	480
Excavating, Grading Machine Operators	5,220	6,510	7,140	630	640	1,270
Painters and Paper Hangers	5,520	5,660	5,730	70	710	780
Plasterers	410	460	480	20	50	70
Plumbers and Pipe Fitters	5,290	6,890	7,270	380	720	1,100
Roofers and Slaters	880	1,070	1,160	90	100	190
Structural Metal Workers	1,820	2,810	2,710	- 100	220	120

Employment of construction craftsmen will rise from 53,550 in 1970 to 54,900 in 1975, an increase of 1,350 jobs. Retirement replacements will add another 5,590 positions to total 6,940 openings. The principal employer of construction craftsmen will be construction contractors, although shipbuilding and repair yards will also employ a good number. Openings for excavating and grading machine operators will show the most dynamic growth because of the rising level of highway construction and the more varied usage of heavy machinery in all types of projects. Demand for plumbers and pipefitters will also be strong due to the increased use of piping in homes, commercial buildings, and ships, and because the type of duties performed are relatively secure from technological innovations. Growth of the cement and concrete finishing, roofing, and slating trades will continue steadily on the basis of rising construction activity; but employment for carpenters, brickmasons and tile setters, painters and paperhangers, and plasterers will suffer from improvements in building methods designed to reduce the amount of work necessary on the site. Losses among structural metal workers will result from gradual shipyard reductions as well as technological innovations, while contractions of electricians will involve the added onus of aerospace layoffs.

Carpenters

Carpenters construct, install, and repair structures of wood and related materials using handtools and power tools. They compose the largest category of building trades workers. Approximately 60 percent will be employed by the construction industry, 10 percent in shipbuilding and repair yards, and 5 percent in lumber mills. Another 15 percent will be self-employed. The increase of construction activity will assure demand for carpenters, although their output will rise with the development of new construction methods, tools, and materials. In residential home building, the growing use of modular housing will hamper employment of carpenters, since floors, partitions, and stairs are designed for easy and speedy installation. Gradual declines in shipyards due to reduced government defense spending will also cost carpentry jobs. In all, the pluses will outweigh the minuses, but not significantly, as the number of new jobs will reach only 290. However, retirement replacements will equal 2,120 to bring the total to 2,410 openings.

Brickmasons and Tile Setters

Brickmasons and stonemasons construct walls, partitions, chimneys, and other structures from brick or stone. Marble setters, tile setters, and terrazzo workers cover interior or exterior walls, floors, or other surfaces with marble, tile, or terrazzo. Approximately 75 percent of the overall group will be employed by construction firms, and 15 percent will be self-employed. Demand for brickmasons will be steady due to the increased volume of construction activity, although the amount of brickwork per structure will lessen. Along with improved framing methods, mortar, and mortar application devices, there will be growing replacement of brick and stone with factory-cast concrete units. Prospects for tile setters and related occupations stand somewhat better, as improvements affecting their duties will be in the form of more versatile materials and colorful patterns, both of which create more room for craftsmanship. In all, 90 new openings for brickmasons and tile setters are anticipated, along with 160 retirement replacement positions for a total of 250 openings.

Cement, Concrete Finishers

Cement masons finish the exposed concrete surfaces on many types of construction projects. Approximately 80 percent will be employed by construction firms, and 15 percent will be self-employed. Demand for cement and concrete finishers will rise markedly because of increased construction activity and the substitution of concrete for brick and other materials in many kinds of building. However, the potential increase will be tempered by the development of precast concrete products that do not require finishing and by other improved methods and equipment on the site. Anticipated is an increase of 170 jobs accompanied by 100 retirement replacements to total 270 openings.

Electricians

Electricians assemble, install, and test electrical fixtures, apparatus, and wiring used in electrical systems. Approximately 35 percent will be employed in construction firms; 10 percent each in shipbuilding and repair yards,

aerospace, other manufacturing firms, and general government maintenance and repair; and 5 percent in the transportation industry. Employment of electricians will be hurt by major layoffs in aerospace and more gradual ones in shipyards and other sites affected by defense spending. On the brighter side, strong increases in construction activity and scattered hiring throughout manufacturing will salvage some of the loss. The rising importance of electrical equipment in homes and electronic equipment in business establishments will more than compensate for technological improvements limiting the use of electricians, such as pre-assembled switchboxes, ceiling units, and other components. In all, an estimated loss of 290 jobs is imminent, but the requirement to replace 770 retirements will bring the total to a net 480 openings.

Excavating, Grading Machine Operators

Operators of excavating and grading machines excavate and level areas of dirt, gravel, and stone. Approximately 55 percent will be employed by construction contractors, 15 percent will be employed in road maintenance, and 5 percent by logging firms. Another 15 percent will be self-employed. Expansions in construction activity will create a big demand for excavating and grading machine operators. Improvements in heavy equipment machines to make them larger, faster, and more mobile, and to allow them to combine the features of several conventional machines may reduce the number of operators per project, but will create the possibility of performing other projects that would otherwise have been impossible under time and cost considerations. In highway construction and urban renewal this will be especially true. A substantial rise of 630 new jobs is anticipated along with 640 retirement replacements to total 1,270 openings.

Painters and Paper Hangers

Painters prepare the surfaces of buildings and other structures and then apply paint or some other coating to them. Paperhangers cover room interiors with paper fabrics or some similar material. Approximately 55 percent of painters and paperhangers will be employed by construction firms, 5 percent in shipbuilding and repair yards, and 5 percent in government maintenance. Another 15 percent will be self-employed. The strength of expansions in construction will open a number of jobs for painters and paperhangers despite their gradually declining significance on the site and despite some general layoffs at shipyards. The importance of painters at construction sites is being reduced by the trend toward use of factory pre-assembled items already covered with a prime or final coat of paint. Paperhangers will be affected adversely by the declining popularity of wallpaper and the development of wallpapers that can be applied more easily. Nevertheless, on the basis of the expected volume of construction starts, 70 new jobs are anticipated for painters and paperhangers. With retirement replacements equaling 710 persons, a total of 780 openings will be reached.

Plasterers

Plasterers apply plaster to interior walls and ceilings to form fire-resistant and relatively sound-proof surfaces which may then be painted or wallpapered. Approximately 80 percent will be employed in construction firms, and 10 percent will be self-employed. Rising construction activity will create some jobs for plasterers, although the number will be inhibited by the growing use of modular and mobile homes and the general popularity of nonplaster construction. Changes in plastering materials and improved methods of application will not damage employment of plasterers because of the consequent possibilities for ornamental plastering and other expressions of craft. Anticipated are 20 new jobs plus 50 retirement replacements for a total of 70 openings.

Plumbers and Pipe Fitters

Plumbers and pipefitters install or repair pipe systems that carry liquids or gases needed for sanitation, industrial production, or other uses. Approximately 50 percent will be employed by construction contractors, 15 percent by shipbuilding and repair yards, 5 percent in public utility work, and 5 percent in other government maintenance. Another 10 percent will be self-employed. Demand for plumbers and pipefitters will rise with the volume of construction starts. The trend toward more adequate heating and cooling systems and homes with more than one bathroom and a host of appliances will about offset the growing availability of prefabricated assemblies and improved piping materials. Some losses will occur at shipyards, but these will be minimal since the modernization and maintenance of merchant ships at private yards rely heavily on the repair and rerouting of plumbing and heating systems. In all, a gain of 380 new jobs for plumbers and pipefitters is anticipated, along with the need to replace 720 retirements for a total of 1,100 openings.

Roofers and Slaters

Roofers and slaters apply tile, slate, and other materials to roofs, and waterproof and dampproof building surfaces. Approximately 85 percent will be employed by construction contractors, and 10 percent will be self-employed. Expanded construction activity will create some jobs for roofers and slaters. On the site their significance will remain about constant, as the effects of improved roofing materials, tools, and techniques will be offset by an increased emphasis on dampproofing and waterproofing in new construction and maintenance. An estimated 90 new jobs will emerge along with 100 retirement replacements to total 190 openings.

Structural Metal Workers

Structural metal workers raise, place, and unite structural steel members to form frameworks or complete structures. Approximately 60 percent will be employed in shipbuilding and repair yards and 35 percent in construction firms.

Gradual, but steady layoffs of structural metal workers in shipyards will surpass the number of jobs associated with expansions in construction activity. Ultimately, their employment will depend on the ability of manufacturers to develop new alloys and new uses of steel to improve its competitiveness against other metals as a construction material. Over the forecast period, the development of lightweight specialty steels will result in increased use of steel in smaller buildings and make it more amenable for ornamental work. On the other hand, pre-assembled steel frames, short-span bridges of prestressed concrete, and the use of prefabricated reinforcing mats will inhibit employment of structural metal workers in different kinds of construction. In all, a loss of 100 jobs is anticipated, but the requirement to fill 220 retirement positions will result in a net gain of 120 openings.

Table 12b

Average Employment of Foremen, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacements	Total
TOTAL	18,000	24,300	24,400	100	2,390	2,490

Foremen supervise and coordinate the activities of blue-collar workers. They interpret and communicate instructions from higher up to workers, grant them recognition for superior work performance, and are often responsible for the safety of workers and equipment. Approximately 20 percent will be employed in durable manufacturing industries, 20 percent in nondurable manufacturing, 20 percent in various government maintenance and repair, 10 percent in construction firms, 10 percent in wholesale and retail trade, 5 percent in the service industry, and 5 percent in transportation. In manufacturing, losses of foremen positions associated with aerospace, shipyards and others tied to federal spending will far exceed hiring in metals, machinery, lumber and wood, food products, and other expanding industries. Similarly, state and local maintenance projects will hire a number of foremen, but federal projects related to defense expenditures will experience reductions. In manufacturing the outlook is brighter beyond the forecast period, since aerospace employment will stabilize and more careful supervision will be required by the increased complexity of industrial production processes. During the forecast period most openings will occur in construction and trade. In both employment will be rising, and in both the significance of foremen will increase. At construction sites, foremen versed in specific stages of development will be in demand because of the rising complexity of industrial designs, the variety of new building techniques, and the rapid pace at which construction will proceed. In trade, the expanding number of new services and products and the increasing inter-relation of wholesaling and retailing operations will create a need for more foremen aware of the broader stringencies in operations. In all, gains will barely outweigh losses, as only 100 new jobs are anticipated for foremen. However, with the large number of workers in this category, 2,390 retirements are expected for a total of 2,490 openings.

Table 12c

Average Employment of Metalworking Craftsmen, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacements	Total
TOTAL	17,520	17,290	15,720	-1,570	1,710	140
Machinists and Related Occupations	8,790	8,100	6,770	-1,330	840	-490
Blacksmiths, Forgemen, Hammermen	420	320	300	- 20	70	50
Boilermakers	710	890	860	- 30	110	80
Millwrights	1,860	2,150	2,340	190	200	390
Molders, Metal, exc. Coremakers	350	430	450	20	40	60
Patternmakers, Metal, Wood	730	630	510	- 120	90	- 30
Rollers and Roll Hands	200	230	240	10	30	40
Sheet Metal Workers	3,000	3,110	2,960	- 150	230	80
Toolmakers and Diemakers	1,460	1,430	1,290	- 140	100	- 40

Employment of metalworking craftsmen will decline from 17,290 in 1970 to 15,720 in 1975, a decrease of 1,570 jobs. However, retirement replacements will provide 1,710 positions to resolve in a total of 140 openings. The relation of these occupations with aerospace, shipyards, and technological improvements will be the primary cause of the lack of employment growth. In this vein, machinists and related occupations will suffer the severest decline, followed by patternmakers, and toolmakers and diemakers. The relatively less severe losses for blacksmiths and forgemen, boilermakers, and sheet metal workers will result largely from the utility of these occupations to the construction industry, where expansion will be strong. On the other hand, prospects for millwrights are definitely promising, as employment in this category will be stimulated by mechanization and automation. Finally, the small pluses for molders and rollers will stem from their attachment to the metals industry. Actually, metals and machinery firms will be important employers of all these occupations, but technological improvements will advance pretty much as rapidly as business expands.

Machinists and Related Occupations

Machinists produce metal parts through use of machine tools. Approximately 20 percent will be employed by machinery manufacturers, 20 percent by aerospace, 15 percent by shipbuilding and repair yards, 15 percent in the metals industry, 5 percent in railroads, and the remainder will be scattered throughout a variety of industries. Massive layoffs of machinists in aerospace and gradual reductions in shipbuilding will far exceed the relatively minor gains in metals and machinery. In addition, the significance of machinists will decline in almost all employing industries as technological developments increase output per worker. Of greatest impact will be the rising use of numerically controlled machine tools, in which the tool is programmed by engineers to perform patterned actions automatically once inserted by the machinist. Of additional impact will be automated machinery lines, increased tool speeds, and increased use of powdered metal and new alloys that reduce the amount of machining needed to turn out a product. The overall contraction will involve an estimated 1,330 jobs for machinists. Retirement replacements will compensate for 840 positions, but the net loss will still reach 490.

Blacksmiths, Forgemen, Hammermen

Blacksmiths make and repair various metal articles, and shape hand and machine tools. Forgemen join pieces of glowing hot metal by hammering them together. Approximately 25 percent of blacksmiths, forgemen, and hammermen will be employed in the metals industry, 15 percent in shipbuilding and repair yards, 10 percent by construction firms, 10 percent by repair service firms, and 5 percent each in aerospace, machinery manufacturing, and railroads. Another 10 percent will be self-employed. Layoffs of these workers in aerospace and shipyards will not quite be offset by gains in other industries. Demand will be limited in metals and repair service firms as a variety of articles formerly hand-shaped by them are mass produced at forge shops, as other specialized workers assume many of their functions, and as it becomes cheaper to replace many articles once repaired. However, demand at construction sites will rise along with the increased precision of workmen's tools and the pace at which projects must progress, since these will require that maintenance and repair be constant and on the spot. In all, a loss of 20 positions may be anticipated for blacksmiths, forgemen, and hammermen, although with the advanced average age of these workers a requirement for filling 70 retirements will occur, resulting in a net total of 50 openings.

Boilermakers

Boilermakers erect and repair boilers and other vessels used to hold liquids and gases under pressure. Approximately 45 percent will be employed in shipbuilding and repair yards, 15 percent by construction firms, and 5 percent each in the metals industry, repair service shops, railroads, public utilities, and other government maintenance services. Another 10 percent will be self-employed.

Gradual layoffs of boilermakers will occur at shipyards in association with defense-related cuts and as more efficient production techniques and equipment are continually developed. A more favorable outlook exists in the construction industry, where demand for boilermakers will be enhanced by the increased volume of construction activity, the rising use of boiler products, and a trend toward larger, more complex, custom-made boilers to be erected on the site. Nevertheless, in view of the stronger effects of shipyard reductions, an overall loss of 30 jobs is anticipated over the forecast period. Retirement replacements will equal 110 to result in a net total of 80 openings for boilermakers.

Millwrights

Millwrights install, maintain, and repair heavy industrial machinery and other equipment. Approximately 30 percent will be employed in the printing and publishing industry, 25 percent in lumber mills, 10 percent by construction contractors, and 5 percent each in metals, transportation equipment, and paper products. Gradual expansions in printing and publishing will assure some jobs for millwrights in that industry, although the level of mechanization is already so high that millwrights will be afforded little extra significance. More promising are the prospects at lumber mills, where a strong increase in activity is expected and where there is strong emphasis on more efficient mechanization. Also in construction, rising activity and a growing emphasis on heavy machinery in plants to be constructed promise a number of openings for millwrights. Anticipated is a gain of 190 new positions along with 200 retirement replacements for a total of 390 openings.

Molders, Metal, Exc. Coremakers

Molders make the sand mold into which metal is poured in casting. Approximately 65 percent will be employed in the metals industry, 10 percent in shipbuilding and repair yards, 10 percent in machinery manufacturing, and 5 percent in various government maintenance. Expansion of business for metals and machinery firms will create more jobs for molders than will be lost in gradual shipyard reductions. However, the significance of molders in refining plants is lowering due to a greater instrumentation in the areas of basic oxygen steelmaking and continuous casting. Nevertheless, an increase of 20 new jobs is estimated along with 40 retirements to total 60 openings.

Patternmakers, Metal, Wood

Patternmakers lay out and construct a metal or wood pattern in the shape of the desired casting. Approximately 20 percent will be employed in aerospace; 15 percent in the metals industry; 10 percent each in shipbuilding and repair, machinery plants, miscellaneous manufacturing firms, and various government projects; and 5 percent in business service firms. Substantial layoffs of patternmakers in aerospace plus more gradual ones in shipyards and other defense-related sectors will only partially be countered by gains in metals, machinery, and miscellaneous manufacturing firms. In addition, as metal patterns gradually replace wooden ones, it will become possible to use the same pattern over and over to make identical molds, further reducing the need for patternmakers. Anticipated is a drop of 120 jobs over the forecast period, although the requirement of filling 90 retirements will lower this to a net loss of 30.

Rollers and Roll Hands

Rollers and roll hands operate the primary mill to roll hot metal ingots into blooms, slabs, billets, or beam blanks as required. Approximately 90 percent will be employed in the metals industry and 5 percent at federal projects. Demand for rollers and roll hands will rest completely on the market for primary metals and fabricated metal products, since little further automation is likely to occur in the near future affecting their work functions. With a rising need for structural metal products in construction activities and improved means of shipping high value per pound metals, some added need for rollers must occur. Anticipated is a solid gain of 10 new jobs along with 30 retirement replacements for a total of 40 openings.

Sheet Metal Workers

Sheet metal workers fabricate and install a wide variety of products made from thin metal sheets, especially ducts used in ventilating, air-conditioning, and heating systems. Approximately 20 percent each will be employed in aerospace, construction firms, and shipbuilding and repair; and 5 percent each in metals, airplane and railroad transportation, and federal projects. Another 5 percent will be self-employed. Substantial layoffs of sheet metal workers in aerospace plus smaller ones in shipyards, railroads, and defense-related federal projects will be countered only partially by hiring in construction firms and others. As the prefabrication of standardized ducts and fittings becomes more pervasive, the significance of these workers will decline further in aerospace, while their highly specialized experiences may limit job opportunities elsewhere. Only in the construction industry will employment prospects for sheet metal workers actually be bright, since in it prefabrication will be limited by the need to tailor ducts and fittings to meet a wide variety of structural conditions. The growing popularity of year-round central air-conditioning systems in work places and homes will also stimulate demand in construction, as will the use of large refrigeration systems in a growing number of food handling plants. Nevertheless, the overall outlook is poor, and a loss of 150 jobs is anticipated. With only 230 retirements expected, a net total of only 80 openings will occur.

Toolmakers and Diemakers

Tool and die makers make the tools, dies, and special guiding and holding devices used in mass production. Approximately 30 percent will be employed in aerospace and 5 percent in other transportation equipment; 25 percent will be employed in machinery firms, 20 percent in metals, and 5 percent in government projects. Substantial layoffs of tool and die makers in aerospace will reduce the overall number of jobs despite moderate hiring in metals and machinery. Employment will also be diminished by the expanded use of electrical-discharge machines and numerically controlled tools requiring fewer of the special devices produced by tool and die makers. On the brighter side, their generally broader knowledge of machinery and instrument making will be of use in putting many technological innovations into effect. Nevertheless, a loss of 140 positions is anticipated, although 100 retirement replacements will reduce the net loss to 40.

Table 12d

Average Employment of Printing Tradesmen, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacements	Total
TOTAL	3,650	3,970	4,070	100	450	550
Compositors and Typesetters	2,370	2,280	2,150	-130	280	150
Electrotypers, Stereotypers, Engravers	220	200	210	10	20	30
Photoengravers, Lithographers	270	480	610	130	50	180
Pressmen and Plate Printers	790	1,010	1,100	90	100	190

Employment of printing tradesmen will rise from 3,970 jobs in 1970 to 4,070 in 1975, an increase of 100. Retirement replacements will equal another 450 for a total of 550 openings. Steady expansions of printing activity will almost completely be handled by more automated control of the printing process, more efficient methods of materials processing, and a number of other technological advances. Fuller automation of the compositing and typesetting functions will cause the most severe decline; whereas employment totals for electrotypers, stereotypers, and photoengravers will range around even. Rising demand for engravers will reflect the relative recency of reproducing color and calligraphic printing on mass scale, while that for pressmen will also largely be in relation to newer, more complex printing assignments. The one dynamic growth occupation will be that of lithographers, who are specialists in the offset printing method. Offset printing is used to special advantage in the reproduction of photographs, drawings, illustrations, and color in general.

Compositors and Typesetters

Hand compositors fashion type forms and position them before they are transferred to a mat. Typesetters operate semi-automatic machines to set type more rapidly than by hand. Approximately 65 percent of compositors and typesetters will be employed in printing and publishing firms, 10 percent in paper product companies, and the remainder in government presses, educational institutions, general merchandise chains, and independent presses. Demand for typesetters and

compositors will be inhibited by the increased use of automatically operated typesetting machines and the widespread replacement of metal type by photo-composition, which is easier and faster to set. Gradual expansions in printing activity will not be sufficient to prevent a loss of 130 jobs. However, with these workers composing the largest printing trade category, retirement replacements will equal 280 jobs for a net total of 150 openings.

Electrotypers, Stereotypers, Engravers

Electrotypers and stereotypers make duplicate press plates of metal, rubber, and plastic for letterpress printing; electrotypers are used mainly in book and magazine work, stereotypers chiefly in newspaper work. Engravers operate the equipment to engrave decorative designs or lettering. Approximately 60 percent will be employed by the printing and publishing industry, 10 percent by paper and allied products, 5 percent by government presses, and the remainder will be scattered in metals, machinery, aerospace, special item manufacturing firms, and independent presses. Demand for electrotypers and stereotypers will decline gradually as automated plate casting eliminates many steps in plate-making, and as plastic and rubber plates are used increasingly outside the electrotyping and stereotyping shops. In addition, the increasing use of offset printing will detract from their employment because of the use of other kinds of plates. On the other hand, the significance of engravers will rise due to the expanded use of artistic decoration and calligraphic printing on advertise-ments, writing paper, children's stories, and a host of other items. Technological improvements in equipment will merely temper this rise. With the gain in engraving jobs surpassing the losses in electrotyping and stereotyping, an increase of 10 new positions is anticipated for the group as a whole. Retire-ments will add another 20 for a total of 30 openings.

Photoengravers, Lithographers

Photoengravers make metal printing plates of illustrations and other copy that cannot be set up in type. Lithographers are involved in offset printing. Approximately 85 percent will be employed in publishing and printing firms, and most of the remainder will be in government presses or will be self-employed. Demand for lithographers is rising rapidly because of the growing popularity of offset printing, particularly in commercial work. It has special advantages when photographs, drawings, or paintings are to be reproduced, since the rubber blanket which transfers the image from the plate to the surface to be printed permits greater flexibility in the type of paper that can be used. Demand for photoengravers will hold about steady as expanded use of illustrations in printed materials will be accompanied by the introduction of more rapid etching techniques, the application of electronics to engraving and to color separation, and more use of offset printing, which requires no photoengravers. In all, an anticipated 130 jobs will emerge for lithographers and photoengravers along with 50 retirement replacements for a total of 180 openings.

Pressmen and Plate Printers

Printing pressmen prepare type forms and press plates for final printing and tend the presses while in operation. Approximately 75 percent will be employed in the printing and publishing industry and 10 percent by paper product companies, while most of the remainder will work for government presses, business service firms, or will be self-employed. Demand for pressmen will rise as increases in the use of color and in the total amount of printing will require larger and more complex processes, but the gain will be tempered by further improvements in the speed and efficiency of equipment. Anticipated are 90 new jobs plus 100 retirement replacements to total 190 openings.

Table 12e

Average Employment of Transportation and Public Utilities Craftsmen 1960, 1970, and 1975, and Worker Needs 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacements	Total
TOTAL	7,240	8,230	9,600	1,370	560	1,930
Linemen and Servicemen	5,420	6,860	8,300	1,440	320	1,760
Locomotive Engineers and Firemen	1,820	1,370	1,300	- 70	240	170

Employment of transportation and public utilities craftsmen will rise from 8,230 in 1970 to 9,600 in 1975, an increase of 1,370 jobs. Growth of the servicemen and linemen category will account for all of this rise, stemming from steady expansions in telephone and electric utility services due to population and new business growth. Employment prospects for locomotive engineers and firemen are relatively poor as railroads continue to trim their services and become more automated. Retirement replacements will add another 560 jobs for a total of 1,930 openings.

Linemen and Servicemen

Linemen construct and maintain the cables or powerlines connecting central telephone offices or generating plants to consumers. Servicemen install and repair telephones or PBX systems. Approximately 65 percent will be employed by telephone companies and 25 percent in electric utilities. Solid expansions in both telephone and public utility services will open jobs for servicemen and linemen. Within the telephone industry the significance of servicemen will rise on account of the growing number of phones and PBX systems to be serviced and repaired, the growing popularity of extension phones, the increased use of specialized phone equipment, and the development of improved but more complex equipment. However, the significance of linemen will gradually decrease in both telephone and electric utility services as labor-saving mechanical improvements reduce the necessary size of a line crew. Nevertheless, an overall gain of 1,440 jobs for linemen and servicemen is anticipated along with 320 retirement replacements to total 1,760 openings.

Locomotive Engineers and Firemen

Locomotive engineers are responsible for running the locomotive safely and efficiently. Firemen are responsible for the fueling and proper functioning of the engine. Nearly all engineers and firemen are employed by railroads. Decreasing passenger services will have adverse effects on the employment of both, while the development of more fully automated diesels will reduce the need for firemen still further. In all, a decline of 70 jobs is anticipated, almost all firemen. However, retirement replacement needs will be relatively high because of the advanced average age in these occupations, equaling 240 for a net total of 170 openings.

Table 12f

Average Employment of Mechanics and Repairmen, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacements	Total
TOTAL	41,120	59,510	63,260	3,750	5,360	9,110
Airplane Mechanics and Repairmen	6,690	6,230	5,210	-1,020	300	- 720
Motor Vehicle Mechanics	11,240	16,240	17,450	1,210	1,200	2,410
Office Machine Mechanics	570	930	1,110	180	100	280
Radio and TV Mechanics	1,800	2,270	2,390	120	120	240
Railroad and Car Shop Mechanics	730	720	720	0	80	80
Other Mechanics and Repairmen	20,090	33,120	36,380	3,260	3,560	6,820

Employment of mechanics and repairmen will rise from 59,510 in 1970 to 63,260 in 1975, an increase of 3,750 jobs. Retirements will provide another 5,360 positions for a total of 9,110 openings. The primary basis of this expansion will be the volume and variety of machinery being used by consumers and in industry, which will require more maintenance and repair work. Motor vehicle mechanics will experience the greatest employment growth in direct response to increases in population and consumer affluence, while gains by office machine mechanics will result from the rising use of machinery in offices. Increases of radio and television mechanics and of miscellaneous repairmen will result from a combination of both of these factors. Railroad mechanics will find employment hindered by the declines in railroad passenger service, while airplane mechanics will be affected by major layoffs in aerospace.

Airplane Mechanics and Repairmen

Aircraft mechanics maintain operational safety and efficiency on airplanes, either performing major inspections and repairs at overhaul bases or making emergency repairs at terminals. Approximately 35 percent will work for the aerospace industry, 30 percent for airlines, and 20 percent for the government. Gradual hiring of airplane mechanics late in the forecast period will amount to little in the face of major aerospace layoffs earlier. In addition, demand will be reduced by the use of monitoring and testing systems to locate malfunctions, the development of improved handtools, and other labor-saving innovations. In all, a loss of 1,020 jobs is anticipated. Since the average age of airplane mechanics is relatively low, only 300 retirements are expected for a net loss of 720.

Motor Vehicle Mechanics

Motor vehicle mechanics perform maintenance and repairs on automobiles, trucks, buses and construction equipment. Approximately 35 percent will be employed by automotive and accessory dealers, 25 percent by garages and other automotive repair specialists, 10 percent by gas stations, and 5 percent by trucking firms. Another 20 percent will be self-employed. Growth in population and affluence will result in more vehicles on the road and a corresponding need for more mechanics. Demand for mechanics at automobile and accessory dealers will increase as more people buy new cars with warranties and as complete replacement of damaged parts becomes more popular. Mechanics will be needed at gas stations, where a specialization in quick diagnosis and minor repairs will develop and where the overflow of major repair work from other places will be handled. However, the capacity of garages to invest in sophisticated diagnosing equipment and power tools will increase output per mechanic to the point of inhibiting further staffing. The relative expense of major repairs compared to replacements or trade-ins will also have an adverse effect at garages. Nevertheless, an estimated 1,210 new jobs will emerge for motor vehicle mechanics along with 1,200 retirement replacements to total 2,410 openings.

Office Machine Mechanics

Office machine mechanics maintain and repair the machines used in a variety of office functions. Approximately 60 percent will be employed by machinery and equipment wholesale firms, 10 percent in retail outlets, and 10 percent in business service firms. Another 10 percent will be self-employed. More extensive use of office machines for duplicating, recording, processing, calculating, and a host of other functions will assure demand for office machine mechanics. In addition, the sensitive precision of many advanced machines will require more intensive maintenance. Anticipated is an increase of 180 new jobs along with 100 retirement replacements for a total of 280 openings.

Radio and TV Mechanics

Radio and television mechanics install and repair televisions, radios, stereos, public address systems, and other communication devices. Approximately 25 percent will be employed by repair service firms, 15 percent by furniture and appliance stores, 10 percent by the government, 5 percent in general merchandise stores, and 5 percent in shipbuilding and repair yards. Another 25 percent will be self-employed. The expanding use of consumer electrical equipment and the increasing complexity and miniaturization of these products will easily create more jobs for radio and television mechanics than will be lost through improved product reliability, the replacement of tubes with transistors, and the substitution of solid-state amplifiers for those using vacuum tubes. More of these mechanics will be hired at special repair stores as the variety and complexity of repairs surpass the capabilities of retail store shops. A few jobs will be lost at shipyards and other places connected with defense electronics. But in all, an estimated 120 new positions will emerge for radio and television mechanics plus 120 retirement replacements to total 240 openings.

Railroad and Car Shop Mechanics

Railroad mechanics build, maintain, and repair railroad vehicles and equipment. Approximately 95 percent will be employed directly in the railroad industry, and most of the remainder will be employed by railroad equipment manufacturing firms. Declines in railroad passenger services will be offset in effect by increases in the significance of repairmen within the industry. Much of the newer automated equipment will require frequent adjustments and maintenance, whereas much of the very old is being repaired rather than replaced to cut costs. With the effects about counter-balancing, no change in employment is anticipated for railroad mechanics, although 80 positions will be available from retirements.

Other Mechanics and Repairmen

Included in this category are air-conditioning, heating, and refrigeration mechanics, instrument repairmen, vending machine repairmen, farm equipment mechanics, and all other repair specialties not listed above. Approximately 15 percent will be employed in retail and wholesale trade outlets; 15 percent in general government maintenance; 15 percent in food products, logging and lumbering, metals, and other manufacturing industries; and 5 percent each in construction, business service firms, educational institutions, and public utility work. Another 10 percent will be self-employed. Expansion in almost all the industries and a generally rising significance of specialty repairmen assure solid demand for miscellaneous mechanics. Factors include the use of more complex machinery and equipment in most industries, more complicated mechanical equipment in households, a growing business and consumer reliance on various appliances, and the general pervasion of machinery in all areas for all purposes. An increase of 3,260 new jobs for miscellaneous mechanics and repairmen is anticipated along with 3,560 retirement replacements to total 6,820 openings.

Table 12g

Average Employment of Other Craftsmen and Kindred, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacements	Total
TOTAL	21,200	25,800	27,870	2,070	2,770	4,840
Bakers	1,730	1,780	1,740	- 40	220	180
Cabinetmakers	1,530	1,620	1,640	20	180	200
Crane, Derrick, Hoistman	2,630	3,560	4,070	510	300	810
Glaziers	380	530	630	100	170	270
Jewelers and Watch Makers	710	700	680	- 20	80	60
Opticians, Lens Grinders	320	390	420	30	40	70
Inspectors, Log and Lumber	2,070	2,320	2,700	380	220	600
Inspectors, Other	1,320	1,530	1,630	100	160	260
Upholsterers	990	1,230	1,310	80	130	210
Craftsmen and Kindred Workers, Nec.	9,520	12,140	13,050	910	1,270	2,180

Employment of other craftsmen and kindred will rise from 25,800 in 1970 to 27,870 in 1975, an increase of 2,070 jobs. Retirement replacements will provide another 2,770 positions for a total of 4,840 openings. Prospects for the various occupations vary according to the relationship of their duties to technological change and the extent to which scope remains for expression of craft. The most dynamic growth will be experienced by log and lumber inspectors, crane and derrickmen, and glaziers. Log and lumber inspectors perform functions not amenable to mechanization and are employed in an industry with a solid potential for expansion. Cranemen, derrickmen, and glaziers are also employed primarily in expanding industries, and perform duties enhanced by technological progress. Opticians, other inspectors, and upholsters will be relatively unaffected by technological change, neither favorably or unfavorably, and will show steady gains. However, bakers, cabinetmakers, jewelers and watchmakers, and lens grinders will find employment growth inhibited by their involvement in mass production, where mechanization proceeds fastest. Finally, steady gains for miscellaneous craftsmen will represent a resolution of the operations of all these factors.

Bakers

Bakers mix and bake ingredients to recipe to produce baked goods. Approximately 40 percent will be employed by bakeries, 15 percent by eating and drinking places, 10 percent by food and dairy stores, and 10 percent by educational institutions. Another 10 percent will be self-employed. Demand for bakers at bakeries will gradually decline. The trend toward prepared mixes and the instigation of such innovations as automated dough mixing will reduce manual operations while increasing production capacity. Also, with distribution of products a major problem, more frozen doughs and pies are likely, which are cheaper to ship and which eliminate the need for continuous baking. Demand for bakers at supermarkets will be reduced by the popularity of these mixes and frozen goods, since they enhance self-service in the bakery sections. The most promising prospects for bakers will be at restaurants, where the tastes of a more affluent service-minded populace will require a variety of freshly baked goods, and at school lunchrooms and college cafeterias. The overall loss of bakers will amount to only 40 jobs over the forecast period, while 220 positions will become vacant through retirements for a net total of 180 openings.

Cabinetmakers

Cabinetmakers construct and repair wooden articles using woodworking machines and handtools. Approximately 15 percent each will be employed in woodworking mills, furniture and fixture manufacturin[illegible]ants, and furniture stores; 10 percent will be in lumber building ma[illegible]l stores; and 10 percent in construction firms. Another 20 percent w[illegible]lf-employed. Demand for articles produced by cabinetmakers will ris[illegible]lily as the population grows and becomes more affluent. In firms mass-producing identical articles, such as in woodworking mills and furniture plants, the importance of the cabinet-making craft is declining. Standardized mechanical operations will take care of almost all functions formerly performed by cabinetmakers. But at lumber building material stores, on construction sites, and in small independent businesses, craftsmanship will remain crucial because of the unique nature of each assignment. In all, a small gain of 20 new jobs is anticipated along with 180 retirements to total 200 openings.

Crane, Derrick, Hoistmen

Workers in this category operate cranes, derricks, or hoists with various attachments to hoist, move, and place heavy objects. Approximately 20 percent will be employed in the metals industry; 15 percent in logging camps and saw-mills; 15 percent in construction firms; 10 percent each in wholesale trade outlets, shipbuilding and repair yards, and shipping docks; and 5 percent in various government projects. In almost all employing industries substantial gains in activity will combine with a rising emphasis on efficient methods of handling bulk objects. As more advanced machinery is constructed, the operator will have to be acquainted with a greater number of operations and will assume more the status of a specialist in the working of his particular machine. A solid gain of 510 new positions is anticipated along with 300 retirement replacements for a total of 810 openings.

Glaziers

Glaziers cut, fit, and install glass, mirrors, and special items such as leaded glass panels. Approximately 30 percent will be employed in construction firms, 25 percent in hardware and building material stores, 10 percent by wholesale dealers, 5 percent in woodworking mills, and 5 percent in government. Another 15 percent will be self-employed. Solid expansion of activity for construction firms and building material stores will assure need for more glaziers. Due to the individualized nature of the work, little improvement is likely in equipment or procedures, and increasing emphasis on the lighting and ornamental features of glasswork will stimulate possibilities for further display of craft. Anticipated are 100 new jobs plus 170 retirement replacements to total 270 openings.

Jewelers and Watchmakers

Jewelers make or repair rings, pins, necklaces, bracelets, and other precious jewelry items. Watchmakers make, repair, and adjust timepieces. Approximately 55 percent will be employed in retail shops dealing in jewelry or timepiece items, 20 percent in repair shops, and 5 percent by manufacturing firms. Another 15 percent will be self-employed. Demand for jewelers and watchmakers will gradually decline as large chain organizations become more pervasive and focus their emphasis on salesmanship, preferring to send repair work to central locations rather than perform it themselves. At repair shops more efficient methods will reduce the time necessary in affecting repairs, just as in clock manufacturing, more mechanization is imminent. A loss of 20 jobs for jewelers and watchmakers is anticipated over the forecast period, although 80 retirements will bring the net total to 60 openings.

Opticians, Lens Grinders

Dispensing opticians prescribe lens grinding operations and assemble the finished product into frames fitted to the patient's facial contours. Lens grinders grind and polish lenses according to prescription specifications. Nine out of ten workers in this category will be dispensing opticians, and of these 70 percent will be employed in optical shops and 25 percent will be self-employed. Employment of dispensing opticians will continue to rise with increasing emphasis on good vision, a rising ability for people to afford eyeglasses, and the broadened range of tailored styles. Lens grinders will be about equally employed at instrument manufacturing plants and wholesale distributors. Demand for their services will decline as production methods become more efficient at a more rapid pace than business expands. For the optician and lens grinder category as a whole, a net gain of 30 jobs is anticipated along with 40 retirement replacements to total 70 openings.

Inspectors, Log and Lumber

Log and lumber inspectors examine lumber for defects, and grade and mark it according to standards. Approximately 90 percent will be employed at logging camps and sawmills, and 5 percent at pulp and paper mills. Demand for inspectors will be assured by upcoming expansions in the logging and lumbering industry, the relative security of inspectors from mechanical replacement, and the need for a larger proportion of inspectors to handle the work under the faster pace set by highly mechanized mills. A big rise of 380 new jobs is expected along with 220 retirement replacements to total 600 openings.

Inspectors, Other

Inspectors in general ensure that incoming or outgoing products meet the desired specifications. Approximately 25 percent will be employed by the railroads, 20 percent by construction firms, 10 percent by medical institutions, and 5 percent each in other transportation segments, public utilties, wholesale and retail trade, business services, shipbuilding and repair, and the government. Expansions of activity in construction, medical services, and others will easily outweigh lesser declines in railroads and shipyards. In railroads the employment of inspectors will be further hindered by the development of more powerful and reliable diesel locomotives and the extensive use of machines for rail line upkeep. Yet in construction, the growing complexity of building projects and the necessity for meeting stiffer safety and health regulations will increase the significance of inspectors. In practically all other industries demand for inspectors will gradually rise as regulatory and competitive standards sharpen. Anticipated is a gain of 100 new jobs plus 180 arising through retirement for a total of 260 openings.

Upholsterers

Upholsterers replace worn fabric, repair broken frames, and may operate sewing machines to form new upholstery covers. Approximately 20 percent will be employed in upholstery repair shops; 15 percent each in furniture-making plants and furniture stores; and 5 percent each in aerospace, automobile and accessory dealers, and automobile repair services. Another 15 percent will be self-employed. Gradual expansions in furniture-related employment will easily create more jobs for upholsterers than will be lost in aerospace. The most promising prospects will be at furniture stores, since rises in new furniture sales with their accompanying warranties assure demand for upholsterers. Demand will be limited at repair shops due to the economies of replacing rather than repairing old furniture, and it will be inhibited at manufacturing plants by the steady progress of mechanization in production. As new automobile sales rise, some openings for upholsterers will emerge at dealer shops. In all, an estimated 80 positions will open over the forecast period along with 130 retirement replacements to total 210 jobs.

Craftsmen and Kindred, Nec.

Included in this category are all workers with a craft not elsewhere classified. A few would include decorators and window dressers, tailors, stationary engineers, millers, and motion picture projectionists. Of the great variety of specific occupations, approximately 25 percent will be employed in retail trade, 20 percent in various government maintenance and repair, 10 percent in construction, and 5 percent each in aerospace, metals, food products, and theaters and motion pictures. The significance of the services of craftsmen will gradually rise in most of these industries, since most craftsmen have functions molded around improved technology rather than conflicting with it. With solid expansions expected for both retail trade and construction, these must be viewed as the most promising employers. In retail trade, heightened competition will open positions for workers who are aware of the latest technological or aesthetic trends and who can work with materials available to approach comparable results. In construction, the need for stationary engineers and others will be high because of the extent that turbines, pumps, boilers, and other kinds of machinery will be used on the site. In all, 910 new jobs for miscellaneous craftsmen are anticipated accompanied by 1,270 retirements for a total of 2,180 openings.

OPERATIVES

Table 13

Average Employment in Subgroups, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacements	Total
TOTAL	149,290	179,880	181,790	1,910	18,010	19,920
Drivers and Deliverymen	35,680	43,370	46,640	3,270	3,050	6,320
Transportation and Public Utility Operatives	4,440	4,770	4,900	130	390	520
Semiskilled Metalworking Occupations	12,360	13,970	12,720	-1,250	1,240	- 10
Semiskilled Textile Occupations	1,770	2,430	2,680	250	810	1,060
Other Operatives	95,040	115,340	114,850	- 490	12,520	12,030

Employment of operatives will rise from 179,880 jobs in 1970 to 181,790 in 1975, an increase of only 1,910. However, 18,010 retirements are expected for a total of 19,920 openings. Operative employment will be adversely affected by layoffs in aerospace and steady technological advances. Mechanization will occur in all industries, especially in connection with duties that are routine and repetitive. These advances will be greater in manufacturing, but will gradually extend through others, from wholesale trade and transportation warehousing to construction and retail trade. Semiskilled metalworking occupations will be worst off, since they will be susceptible both to aerospace layoffs and technological elimination. To a lesser extent the same will be true for the miscellaneous operatives group. Employment in semiskilled textile occupations will be pretty much static except for sewers and stitchers in apparel, who will show a fair gain. Transportation and public utility operatives will also show a fair gain as requirements for power and shipping outstrip mechanization advances in the industries employing these workers. Only among drivers and deliverymen will there be a real potential for growth, since these categories will profit from increased production without themselves being vulnerable to mechanical replacement.

Table 13a

Average Employment of Drivers and Deliverymen, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacements	Total
Drivers and Deliverymen	35,680	43,370	46,640	3,270	3,050	6,320
Drivers, Bus, Truck, Tractor	27,920	32,860	34,900	2,040	2,380	4,420
Deliverymen	7,760	10,510	11,740	1,230	670	1,900

Employment of drivers and deliverymen will rise from 43,370 jobs in 1970 to 46,640 in 1975, an increase of 3,270 positions. Another 3,050 will be created through retirements for a total of 6,320 openings. The principle causes of this expansion will be population growth and rising affluence, the resurgence of business activity and trade, the attempt by trucking companies to expand over-the-road services with improved vans, a closer unity between wholesaling and retailing operations, and increased reliance of suburban, working mothers on the delivery and informational services of routemen. Substantial growth of employment for both drivers and deliverymen will be inevitable.

Drivers, Bus, Truck, Tractor

Drivers are responsible for the efficient and safe loading, transporting, and unloading of merchandise or persons. Approximately 25 percent will be employed by trucking firms; 10 percent each by wholesale outlets, construction firms, and logging and lumbering companies; and 5 percent each in retail trade, local and other government, and food products. Another 5 percent will be self-employed. Expansions in the construction and wood products industries, and generally heightened business activity and spending will assure strong demand for drivers. In trucking, the development of larger, more efficient trucks will enhance the possibility of broadening national markets in a number of industries, and especially in food products. In construction, the transporting of pre-assembled and other units will assume greater significance as mechanization proceeds in that industry. In logging and lumbering, declines in the feasibility of transporting logs by rail will create added motivation for road services. Only in wholesale trade will the hiring of drivers be at all inhibited, and this will result from the expansion of large retail chains, which will allow for delivery of a greater volume of goods per store. In all, an estimated 2,040 new jobs will emerge for drivers along with 2,380 retirement replacements to total 4,420 openings.

Deliverymen and Routemen

Deliverymen and routemen drive panel or light trucks over assigned routes, selling and delivering goods and providing informational services to retail establishments or the consumer. Approximately 25 percent will be employed in wholesale trade, 20 percent in retail trade, 20 percent directly for food product manufacturers, 10 percent as taxicab drivers, and 10 percent for the government. Another 5 percent will be self-employed. With a growing and more affluent population, requirements for food services will accelerate. In addition, the number and variety of new products will bring about the need for a practical informational system by which retailers and consumers can be advised about the merits of each. Wholesale deliverymen will assume this function increasingly more with respect to retail stores, and retail routemen will assume it with respect to consumers. Demand for retail routemen will also rise rapidly as more housewives enter the labor market and wish to cut down the time spent in grocery shopping. Anticipated are 1,230 new jobs for deliverymen and routemen along with 670 retirement replacements to total 1,900 openings.

Table 13b

Average Employment of Transportation and Public Utility Operatives, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expan-sion	Replace-ments	Total
TOTAL	4,440	4,770	4,900	130	390	520
Brakemen and Switchmen, RR	2,130	2,180	2,150	- 30	160	130
Power Station Operators	980	1,140	1,230	90	100	190
Sailors and Deck Hands	1,330	1,450	1,520	70	130	200

Employment of transportation and public utility operatives will rise from 4,770 in 1970 to 4,900 in 1975, an increase of 130 jobs. Retirement replacements will add another 390 for a total of 520 openings. On the basis of growing consumer and industrial needs for power, prospects will be most promising for power station operators. Sailors and deck hands will also experience a gain as a result of rising trade with other Pacific states and the Far East. However, the outlook for brakemen and switchmen is dim in view of declining railroad business. All three occupations will be adversely affected to some extent by technological advances.

Brakemen and Switchmen, RR

Brakemen ensure that proper signals are displayed to protect the train in motion and at stops. Switchmen assist in joining and uncoupling trains in the yards. Approximately 95 percent of brakemen and switchmen will be employed by the railroads, and most of the remainder will be at lumber mills and other manufacturing concerns. Declining railroad activity will have a negative effect on employment of brakemen and switchmen. In addition, more fully automated trains will eliminate many of the duties of brakemen, and more mechanized switch systems in the yards will reduce the amount of manual labor by switchmen. Anticipated is a loss of 30 jobs for brakemen and switchmen over the forecast period, although 160 retirements are expected for a net total of 130 openings.

Power Station Operators

Power station operators control and record the operation of various kinds of power plant equipment. Approximately 60 percent will be employed in electric, gas and steam, and water power plants; and 5 percent each in irrigation plants, pulp and paper mills, and water transportation. Expanded requirements for electric and other power in the state will necessitate the building and subsequent operation of a number of new generating plants. However, many of these plants will contain larger and more efficient equipment, allowing for increases in generating capacity without much extra need for operators. Nevertheless, as a result of the sheer quantity of added power which will be necessary, an estimated 90 new jobs will emerge for operators. With 100 retirement replacements, the total will reach 190 openings.

Sailors and Deck Hands

Sailors and deck hands perform the general labor and maintenance aboard ship. Approximately 80 percent will be employed by shipping companies, and 15 percent by state and federal water transportation operations. Solid expansions in shipping activity will be tempered by the modernization of merchant ships, which will result in the elimination of many manual duties. Since modernization projects are not likely to gain full steam until after the forecast period, a gain of 70 new jobs at least is anticipated for sailors and deck hands. With another 130 positions arising through retirements, the total will reach 200 openings.

Table 13c

Average Employment in Semiskilled Metalworking Occupations, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacements	Total
TOTAL	12,360	13,970	12,720	-1,250	1,240	- 10
Furnacemen, Smeltermen, Pourers, & Heaters	630	780	850	70	80	150
Welders and Flamecutters	4,910	7,110	7,280	170	580	750
Assemblers, Metalworking, Class A	620	550	420	- 130	50	- 80
Assemblers, Metalworking, Class B	1,650	1,440	1,110	- 330	130	- 200
Inspectors, Metalworking, Class B	810	750	560	- 190	60	- 130
Machine Tool Operators, Class B	3,400	3,030	2,200	- 830	310	- 520
Electroplaters and Helpers	340	310	300	- 10	30	20

Employment of semiskilled metalworking occupations will decline from 13,970 jobs to 12,720 between 1970 and 1975, a decrease of 1,250. Retirement replacements will almost equal this number at 1,240 for a net loss of only 10 persons. Factors contributing to the decline include the heavy association of these occupations with aerospace, their lesser one with shipbuilding and repair, and the susceptibility of their duties and equipment to further technological advances. The major areas of growth will be in metals and machinery, two industries that will show solid employment gains with the recovery of national and local economies. Machine tool operators, Class A and Class B assemblers, and inspectors will experience the greatest losses, since these occupations are all closely related to aerospace and all highly susceptible to mechanical innovations. Employment of heaters, electroplaters, and electroplater helpers will be held in check as mechanically-enhanced productivity takes care of increases in output requirements. However, furnacemen, smeltermen, and pourers will be in demand because of their strong utility in the metals industry and relative security from technological replacement. The same will be true for welders and flamecutters, whose added utility to the construction and machinery industries will be more than enough to offset layoffs in shipyards.

Furnacemen, Smelters, and Pourers

Furnacemen, smelters, and pourers separate and recover the metals in the process of smeltering, and refine them to the state required for commercial use. Heaters are in charge of furnace operations in shaping metal through rolling. Approximately 60 percent of this group will be employed in the primary nonferrous sector, 25 percent in other parts of the metals industry, 5 percent in machinery, and 5 percent in transportation equipment. Steady expansions of activity in the metals industry will occur in response to the development of new alloys and uses for nonferrous metals and requirements for more structural steel in construction projects. This will create substantially more jobs for furnacemen, smelters, pourers, and heaters than will be lost in aerospace and shipbuilding. No appreciable effects from automation in the smeltering or shaping processes are expected over the forecast period. Anticipated are 70 new jobs plus 80 retirement replacements for a total of 150 openings.

Welders and Flamecutters

Welders join pieces of metal by applying heat, pressure, or both, with or without filler metal, to produce a permanent bond. Approximately 20 percent will be employed in shipbuilding and repair yards; 10 percent each in the metals, machinery, and construction industries; and 5 percent each in repair service shops, retail and wholesale trade, and in general government maintenance. Another 5 percent will be self-employed. Losses in shipyards associated with reduced defense contracts will be offset by hiring of welders and flamecutters in the other industries. In all these industries, including shipbuilding, the significance of welders will rise as demand increases for sheet-metal products and such structural metal items as metal doors, boilers, and storage tanks. The use of welded steel structures will expand rapidly in most kinds of construction. In all, a gain of 170 new jobs is anticipated accompanied by 580 retirements for a total of 750 openings.

Assemblers, Metalworking, Class A

Skilled assemblers are responsible for the final assembly of complex components and subassemblies, receiving little or no supervision. Approximately 40 percent will be employed in aerospace and 10 percent by other transportation equipment manufacturers, 30 percent by machinery firms, and 5 percent in metals. Major layoffs of class A assemblers will be occurring in aerospace in conjunction with general employment reductions and as a result of the extension of automation to more intricate and complex operations. Some hiring in the machinery industry will occur due to a more vigorous local market for machinery and a generally expanding national market, but these will not approach the magnitude of aerospace reductions. A loss of 130 positions is anticipated for Class A assemblers, and with only 50 retirements expected, a net loss of 80 jobs will result.

Assemblers, Metalworking, Class B

Class B assemblers perform simple, routine assembly jobs under the guidance of a supervisor and often in pace with a conveyor. Approximately 35 percent will be employed in aerospace and 20 percent in other transportation equipment, 30 percent in machinery, and 10 percent in fabricated metal products and nonferrous metals. Layoffs of class B assemblers in aerospace have been acute since 1970, and little relief will be provided through hiring in other industries. In all employing industries, demand for these workers is declining because the duties lend themselves readily to mechanized production processes. A loss of 330 jobs is anticipated over the forecast period, although the need to fill 130 retirement positions will reduce the net loss to 200.

Inspectors, Metalworking, Class B

Semiskilled metalworking inspectors inspect and test metal parts under supervision to ensure that they conform to specifications. Approximately 35 percent will be employed in machinery, 35 percent in aerospace, and 20 percent in other transportation equipment. Substantial layoffs of class B inspectors are occurring in aerospace as a part of general contractions and increased mechanization of production processes. Hiring in machinery will be inhibited by the increasing pervasion of modern plants able to compete in a national market and containing among other things some automatic inspection equipment. In all, a loss of 190 jobs is anticipated, partially offset by 60 retirement replacements for a net decline of 130.

Machine Tool Operators, Class B

Class B machine tool operators use machine tools in simple, repetitive operations to shape metal to dimensions. Approximately 30 percent will be employed in machinery, 30 percent in aerospace, 20 percent in other transportation equipment, and 20 percent in nonferrous metals and fabricated metal products. Massive reductions of machine tool operators in aerospace and lesser ones in shipyards will not be countered to any great extent by hirings in machinery and metals. Demand for their services will steadily decline as the development of modern machine tools, especially numerically controlled power tools, enables quick performance of simple boring or shaping tasks without as much use of skill. An estimated loss of 830 jobs will occur over the forecast period, only partially compensated for by 310 retirement replacements for a net decline of 520 persons.

Electroplaters and Helpers

Electroplaters set up and control plating equipment to coat metal objects electrolytically with chromium, copper, or some other metal to provide a protective or decorative surface or to build up worn surfaces. Electroplater helpers assist electroplaters or perform a single portion of the total process. Approximately 55 percent will be employed in fabricated metal plants, 15 percent in aerospace, 10 percent in other transportation equipment, 10 percent in machinery manufacturing plants, and 5 percent in nonferrous refineries. Hiring in metals and machinery will not quite equal layoffs in aerospace and shipyards. Demand for electroplaters at fabricated metal product plants will be inhibited by the mechanization of a few of their functions and in some instances the assignment of duties to chemists and foremen. Increasingly more of electroplater helpers' duties will become subject to mechanization. In all, a loss of 10 jobs is anticipated, although with 30 retirement replacements a net total of 20 openings will still occur.

Table 13d

Average Employment in Semiskilled Textile Occupations, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacements	Total
TOTAL	1,770	2,430	2,680	250	810	1,060
Textile Weavers and Related	170	150	140	- 10	10	0
Sewers and Stitchers, Mfg.	1,600	2,280	2,540	260	800	1,060

Employment of semiskilled textile occupations will rise from 2,430 in 1970 to 2,680 in 1975, an increase of 250 jobs. Retirement replacements will add another 810 positions for a total of 1,060 openings. The apparel and textile industries will remain principle employers of semiskilled female workers. In the textile industry, characteristically low wages and a low rate of growth will result in little impetus for change. Textile weavers will lose a few jobs, but employment of related workers in the industries will remain pretty much static. In apparel, urbanization and a growing fashion-consciousness in the state will stimulate some growth and a corresponding gain for sewers and stitchers. The rate of labor force separations in these categories will be quite high due to the preponderance of female workers, especially in the older age brackets.

Textile Weavers, and Related

Textile weavers operate a battery of looms to weave yarn into cloth, removing defects and watching for loom stoppages. Related occupations include spinners, knitters, toppers, and loopers. Approximately 80 percent of this group will be employed in the textile industry and 15 percent (weavers only) by furniture stores. With little expansion in textile mill activities accompanied by a slow modernization, 10 weaver jobs will be lost and no change is expected among the others. However, this will be compensated for by 10 retirements, all among weavers.

Sewers and Stitchers, Mfg.

Manufacturing sewers and stitchers use sewing machines to join, decorate, or reinforce manufactured fabric products. Approximately 90 percent will be employed by apparel manufacturers, and most of the remainder at furniture stores or textile mills. Gradual expansion of the apparel industry resulting from increased demand for sportswear and urbanization within the state will create new jobs for sewers and stitchers. Mechanization of positioning and removing functions performed at each stage of operations will be offset by an increase in duties relating to the number of different styles, materials, and color combinations. Anticipated are 260 new positions plus a high 800 retirement replacements for a total of 1,060 openings. Retirements will run high in this occupation because of the exceptionally large proportion of older female workers.

Table 13e

Average Employment of Other Operatives, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacements	Total
TOTAL	95,040	115,340	114,850	- 490	12,520	12,030
Asbestos, Insulation Workers	420	600	630	30	40	70
Attendants, Auto Service, Parking	5,920	7,930	8,440	510	310	820
Blasters and Powdermen	220	300	390	90	20	110
Laundry and Dry Cleaning Ops.	5,450	6,170	5,870	- 300	1,200	900
Meat Cutters, exc. meat packing	2,580	3,520	3,320	- 200	290	90
Mine Operatives and Laborers, Nec.	660	520	550	30	50	80
Other Operatives, Nec.	79,790	96,300	95,650	- 650	10,610	9,960

Employment of other operatives will decline from 115,340 in 1970 to 114,850 in 1975, a decrease of 490 positions. However, with so many workers, retirement replacements will reach 12,520 for a net total of 12,030 openings. The greatest deterrent to employment in these categories will be the amenability of their functions to mechanization. Aerospace layoffs will also have an effect, especially on the miscellaneous operative category. Laundry and dry cleaner operators, meat cutters, and mine operatives and laborers will all experience adverse effects directly from technological innovations, as will many of the operatives in the miscellaneous category. Asbestos and insulation workers will be relatively unaffected by technological developments and will show a fair employment gain, but this will be tempered by shipyard losses. Blasters and powdermen will benefit from expansions in logging and certain kinds of construction activity, and automobile service attendants by increased population and population affluence.

Asbestos, Insulation Workers

Asbestos and insulation workers cover pipes, boilers, furnaces, ducts, and other related equipment with insulating material. Approximately 55 percent will be employed in construction firms and 30 percent in shipbuilding and repair yards. With expansions of construction activity, jobs will open for asbestos and insulation workers in that industry. Little improvement is likely in tools, techniques, or materials. A few losses will occur in shipyards because of reductions in defense expenditures, but these losses will be minimal as the alteration of insulated equipment for increased power and temperature control receives major emphasis in modernization projects. Anticipated is an increase of 30 new jobs plus 40 retirement replacements for a total of 70 openings.

Attendants, Auto Service, Parking

Automobile service attendants are responsible for providing immediate service to customers' automobiles. Most are service station attendants, who dispense gasoline, clean windshields, check the water and oil, and sell and install various items. Parking attendants park automobiles for customers, tag them for time, protect them from theft, and collect fees. Approximately 70 percent of automobile service attendants will be employed at gas stations, 5 percent at parking lots, and 15 percent will be self-employed. A growing and more affluent population will own more automobiles, do more driving, and consume more gasoline and other service station products. The rise of self-service stations will be offset by expansions of services offered by manned stations, since the gradual replacement of small independents by chain stations favors installation of more sophisticated equipment and pooling of tools and materials. Anticipated is a gain of 510 new positions for automobile attendants along with 310 retirement replacements for a total of 820 openings.

Blasters and Powdermen

Blasters and powdermen assemble, plant, and detonate charges of industrial explosives to loosen natural obstructions or demolish structures. Approximately 45 percent will be employed in logging, 35 percent in construction firms, 10 percent in mining operations, and 5 percent by cement and concrete establishments. Very solid expansions in both logging and construction will assure high demand for blasters and powdermen. In logging, the increased inaccessibility of operational areas will stimulate a need for workers who can remove natural obstructions quickly and efficiently in road construction. The rising volume of highway construction over the forecast period will also add to the significance of blasters and powdermen. Anticipated are 90 new jobs along with 20 replacements for a total of 110 openings.

Laundry and Dry Cleaning Operators

Laundry and dry cleaning operators handle the machines to clean articles, perform cleaning maintenance, and may assume various desk duties. Approximately 80 percent will be employed at laundries and dry cleaners, and 15 percent will be self-employed. Self-service laundromats, sta-press clothing,

and the replacement of cloth items with plastic or paper will considerably reduce employment prospects for laundry and dry cleaning operators. This decline will be tempered by added emphasis on bookkeeping, display, and distribution duties, but a loss of 300 positions will still result. Replacement requirements will be quite high, however, due to the predominance of women in the occupation, equaling 1,200 persons for a net total of 900 openings.

Meat Cutters (exc. meat packing)

Meat cutters divide and prepare meat, fish, and poultry for sale. The great majority will be employed at retail stores and wholesale outlets, and the remainder will work primarily in large restaurants and transportation kitchens or will be self-employed. A gradual relocation of meat cutters from retail outlets to wholesale warehouses will be occurring through the forecast period, allowing a greater mechanization and specialization in the meat cutting process. In addition, the trend toward standard slicing of sandwich meats and others lends itself readily to automation. Growing demand for high protein meat products will merely have a moderating effect on the employment loss for meat cutters. Anticipated is a decline of 200 jobs, although with an expected 290 retirements, a net total of 90 openings will emerge.

Mine Operatives and Laborers, Nec.

Mine operatives and laborers operate drilling and cutting machines, crushers, conveyors, and pumps, and are engaged in various manual operations above and below ground. Approximately 65 percent will be employed in nonmetallic mining, 20 percent in metal mining, 5 percent in coal mining, and 5 percent will be self-employed. Expansions in stone and gravel quarrying will create more jobs for mine operatives and laborers than will be lost through metal mining contractions. However, this gain will be tempered by extended use of heavy machinery and automatic equipment in extraction, transporting, and other aspects of quarrying. Anticipated is an increase of 30 new jobs along with 50 retirement replacements for a total of 80 openings.

Other Operatives, Nec.

This category includes all operative occupations not elsewhere classified. Sawyers, graders and sorters, oilers and greasers, and milliners are a few of the many involved. Approximately 15 percent will be employed in sawmills, 10 percent in metals, 10 percent in paper products, 5 percent in aerospace, and 20 percent in various other manufacturing industries; 10 percent will be employed in retail and wholesale trades, 10 percent by the government, 5 percent in construction, and 5 percent in services. Massive layoffs of various types of semiskilled workers in aerospace will temporarily destroy any possibility of growth in the miscellaneous operative category. Steady mechanization in sawmills, metal plants, and pulp and paper mills will inhibit any extensive hiring in those industries. The most promising prospects will

be in construction, where mechanization of the functions of semiskilled workers must proceed slower because of the unique characteristics of each project and the problems of transporting cumbersome equipment onto the site. Also in retail trade, semiskilled labor in the stockrooms will be of too small a scale in most locations to warrant extensive mechanical innovations. Nevertheless, a decrease of 650 jobs is expected over the forecast period, although with a high number of workers in the category, retirement replacements will reach 10,610 for a net total of 9,960 openings.

SERVICE WORKERS

Table 14

Average Employment in Subgroups, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacements	Total
TOTAL	120,150	166,320	182,410	16,090	38,160	54,250
Private Household Workers	25,620	32,600	29,200	- 3,400	11,110	7,710
Protective Service Workers	10,340	11,470	13,610	2,140	1,610	3,750
Waiters, Cooks, Bartenders	32,580	47,550	53,970	6,420	9,230	15,650
Other Service Workers	51,610	74,700	85,630	10,930	16,210	27,140

Employment of service workers will rise from 166,320 jobs in 1970 to 182,410 in 1975, an increase of 16,090. Replacement requirements will add another 38,160 positions for a total of 54,250 openings. Principle factors behind the employment expansion include population growth and rising affluence, a more urbanized milieu with its associated cultural and social emphases and relative communal indifference, and an improved economic climate with the resulting rise of new building construction, business travel, and tourism. The services of protective workers will be in greatest demand as the cost of potential destruction rises and public enforcement continues to replace informal controls. Waiters, cooks, and bartenders, and the miscellaneous service workers group will also experience strong gains as a result of the growing popularity of active entertainment and the rising interest in health and personal attractiveness. Employment of private household workers will decline as child care and handyman duties become more professionalized and the cultural stigma against live-in domestic work grows more emphatic. However, labor force separations will be extremely high among private household workers because of the preponderance of females who are either still in school or are nearing retirement age. As a whole, service worker occupations associated with attractive environs and highly personalized services will rise in importance despite the potential application of mechanized equipment to their duties.

Table 14a

Average Employment of Private Household Workers, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacements	Total
TOTAL	25,620	32,600	29,200	-3,400	11,110	7,710

Private household workers are employed directly by the consumer. Included among others are maids, mother's helpers, babysitters, housekeepers, household cooks and laundresses, companions, handymen, caretakers, houseboys, valets, butlers, and chauffeurs. Employment of private household workers will decline from 32,600 in 1970 to 29,200 in 1975, a drop of 3,400 jobs. However, replacement requirements will be high because the category is composed largely of female workers, many of whom are either quite young or approaching retirement. With 11,110 replacements needed, a net total of 7,710 openings will result. Declines in demand for private household workers will stem from a number of reasons. One factor will be the continued introduction of household innovations, which render paid help increasingly impractical. Another will be the rising number of day-care centers and nursery schools, where professional care for a good number of children can be provided with a minimum of staff and expense. Yet another will be the social trend toward the consideration of live-in household employment as demeaning by workers and unnecessarily conspicuous by the well-to-do. In addition, the growing personal affluence of the population will reduce the necessity of performing work for others that seems unduly distasteful.

Table 14b

Average Employment of Protective Service Workers, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacements	Total
TOTAL	10,340	11,470	13,610	2,140	1,610	3,750
Firemen	2,620	2,920	3,610	690	170	860
Guards, Watchmen, Doorkeepers	3,770	4,020	4,140	120	920	1,040
Policemen, Other Law Enforcement Officials	3,950	4,530	5,860	1,330	520	1,850

Employment of protective service workers will rise from 11,470 jobs in 1970 to 13,610 in 1975, an increase of 2,140. Retirement replacements will add another 1,610 positions for a total of 3,750. Population growth, rising affluence, urbanization, high crime rates, and a higher rate of financial transaction will combine to require a substantial increase in all kinds of protective service workers. With greater population density, protection passes increasingly into the hands of public officials; and as the economy revitalizes, the amount and value of property needing protection will grow.

Firemen

Firemen control and extinguish fires, provide preventative inspections, and maintain firefighting equipment. Approximately 95 percent will be employed in local government, and most of the remainder in state and federal government, aerospace, or shipyards. As urbanized areas become more crowded and continue to expand, a larger staff of firemen will be needed to prevent fires and to control them before any spreading can occur. In smaller, growing communities, new jobs will become available through the replacement of volunteers with paid city workers. In most areas an added emphasis will be placed on fire prevention as the potential for destruction rises. Anticipated are 690 new jobs plus 170 retirement replacements to total 860 openings.

Guards, Watchmen, Doorkeepers

Guards, watchmen, and doorkeepers are responsible for guarding industrial or commercial property against fire, theft, vandalism, or illegal entry. Approximately 40 percent will be employed by government agencies, 20 percent by private protective services, and 20 percent by manufacturing industries. Some govern-

ment hiring of guards for defense sites will occur, as will hiring by private protective services in response to a rising volume of financial transactions. At manufacturing firms, the development of improved alarm devices will inhibit employment of watchmen, although rising insurance rates may deter this trend somewhat. In all, a gain of 120 new jobs is anticipated along with 920 retirement replacements for a total of 1,040 openings.

Policemen, Other Law Enforcement Officials

Policemen, highway patrolmen, Federal Bureau of Investigation agents, and other law enforcement officers are responsible for preventing criminal activities, investigating crimes, and apprehending and assisting in the prosecution of offenders. Approximately 80 percent will be employed in local government and 15 percent in federal and state government. With an expanding population and economy, all branches of law enforcement must be strengthened to be effective. In areas where urbanization is most intense, informal community controls will gradually deteriorate, resulting in an even greater demand for public protection. An emerging trend will be an emphasis on specialization, scientific enforcement, and other means by which to enhance professionalism. Anticipated is an increase of 1,330 new jobs along with 520 retirement replacements for a total of 1,850 openings.

Table 14c

Average Employment of Waiters, Cooks, and Bartenders, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacements	Total
TOTAL	32,580	47,550	53,970	6,420	9,230	15,650
Bartenders	3,620	4,890	5,540	650	630	1,280
Cooks, exc. Priv. Household	11,720	17,290	19,540	2,250	3,450	5,700
Counter and Fountain Workers	1,570	2,760	3,350	590	530	1,120
Waiters and Waitresses	15,670	22,610	25,540	2,930	4,620	7,550

Employment of waiters, cooks, bartenders, and related will rise from 47,550 jobs in 1970 to 53,970 in 1975, an increase of 6,420. Replacement requirements will be fairly high due to the predominantly female composition in all but the bartender occupation, equaling 9,230 for a total of 15,650 openings. Population growth, rising affluence, a greater number of working wives, an emphasis on active entertainment, and the popularity of hot lunches for schoolchildren will combine to ensure high demand in all categories. Technological innovations in kitchens or serving areas will have relatively little effect since many establishments simply will not be able to afford them and because personalized service is one of the commodities in demand.

Bartenders

Bartenders mix and serve alcoholic and nonalcoholic drinks to patrons of the bar. Almost all will be employed at eating and drinking places. A growing population, rising affluence, and increasing leisure time and expectations for entertainment assure a solid expansion in restaurant and night club business and a corresponding demand for bartenders. As cultural stigmas against occasional drinking continue to weaken, especially with respect to women, a greater proportion of restaurants will be equipped with full drinking facilities. Anticipated is an increase of 650 new jobs for bartenders along with 630 retirement replacements for a total of 1,280 openings.

Cooks, exc. Private Household

Cooks prepare and cook various kinds of foods according to recipe and methods prescribed by the environs. Approximately 45 percent will be employed in eating and drinking places, 20 percent in educational institutions, and 5 percent each in hotels, medical institutions, and nonprofit organizations. Another 10 percent will be self-employed or unpaid family workers. Solid expansions in restaurant activity will result from a growing population, the search for active entertainment, and a higher percentage of working wives. Freshly cooked food will be at a premium, and since few restaurants will have the resources to sustain large-scale modernization of kitchen equipment, a high demand for cooks is assured. Modernization will occur more rapidly in school kitchens, but rising enrollments and the popularity of hot lunches will assure continued demand in this sector. In all, a gain of 2,250 new jobs is anticipated for cooks along with a high replacement need of 3,450 workers to total 5,700 openings.

Counter and Fountain Workers

Counter workers serve food to diners seated at the counter, itemize checks and accept payments. Fountain workers prepare and serve soft drinks and ice cream dishes, and clean various fountain items and equipment. Approximately 35 percent of counter and fountain workers will be employed at eating and drinking places, 30 percent at educational institutions, 5 percent in drug stores, and 5 percent in medical institutions. Another 10 percent will be unpaid family workers. Corresponding to the growing popularity of eating out and hot lunches at schools, demand for counter and fountain workers will rise. As people become increasingly mobile and have more small change to spend, diners and snack bars with quick service at economical prices will grow in importance. Anticipated are 590 new jobs plus a high 530 labor force separations for a total of 1,120 openings.

Waiters and Waitresses

Waiters and waitresses serve food to patrons at tables in either a formal or informal setting. Approximately 65 percent will be employed in eating and drinking places, and 5 percent each in other retail establishments, educational institutions, and medical institutions. Another 10 percent will be unpaid family workers. Solid expansions of activity in all kinds of sit-in restaurants will create a number of jobs for waiters and waitresses. Self-service innovations will have little effect on employment, as a major part of the attraction of dining out is the personalized services received. Anticipated are 2,930 new jobs plus a high 4,620 labor force separations for a total of 7,550 openings.

Table 14d

Average Employment of Other Service Workers, 1960, 1970, and 1975, and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacements	Total
TOTAL	51,610	74,700	85,630	10,930	16,210	27,140
Airplane Stewards and Stewardesses	240	510	740	230	110	340
Attendants, Hosp. Other Institutions	6,600	9,850	12,510	2,660	1,970	4,630
Charwomen and Cleaners	2,180	3,330	4,050	720	820	1,540
Janitors and Sextons	12,440	17,320	19,510	2,190	3,730	5,920
Nurses, Practical	4,890	7,530	9,710	2,180	2,030	4,210
Service Workers, Nec.	25,260	36,160	39,110	2,950	7,550	10,500

Employment of other service workers will rise from 74,700 in 1970 to 85,630 in 1975, an increase of 10,930 jobs. Replacement requirements will run high in all these categories, equaling 16,210 positions. For janitors and sextons, the advanced average age of workers will be the root; for the others, the general predominance of female workers will be the cause. Expansions in almost all sectors of service-producing activities will create openings for workers even where mechanization is most advanced. More luxury-oriented airlines will require more stewardesses, expanded medical services will demand more practical nurses and hospital attendants, and the steady rise of new commercial, educational, and medical buildings will result in openings for janitors and cleaners. A growing population, increased concern with personal well-being, and a rising ability to pay for special services will assure high demand for these service occupations.

Airplane Stewards and Stewardesses

Stewards and stewardesses help make passengers' flights as comfortable, safe, and enjoyable as possible. Improvements in airline business later in the forecast period will create new jobs for these workers. The development of larger, smoother riding planes will also involve an improved aura of comfort, in which the services of stewards and stewardesses will be an important ingredient. Anticipated are 230 new positions plus a high 110 labor force separations for a total of 340 openings.

Attendants, Hospital, Other Institutions

Hospital attendants assist in the care of patients, performing nontechnical duties under the direction of nurses or doctors. Most are either nursing aides, psychiatric aides, or orderlies. Approximately 65 percent will be employed in hospitals, 25 percent in other health institutions, and 5 percent by nonprofit organizations. The strong expansion in services offered by medical institutions will have a favorable effect on employment of attendants. Since most medical institutions are understaffed, many of the more routine duties of registered and practical nurses will become the responsibility of attendants in order to leave the former free for more complex functions. Especially in psychiatric institutions, demand for aides and orderlies will continue to accelerate. Anticipated are 2,660 new jobs plus a high replacement requirement of 1,970 for a total of 4,630 openings.

Charwomen and Cleaners

Charwomen and cleaners keep the premises of commercial establishments in clean and orderly condition. Approximately 15 percent will be employed by cleaning service firms; 15 percent by medical institutions; 10 percent each by hotels and other lodging places, eating and drinking places, and educational institutions; and 5 percent each by other retail establishments, finance companies, and nonprofit organizations. Another 5 percent will be self-employed or unpaid family workers. With higher levels of economic activity, expanded medical services, and a rising population, a number of new hotels, hospitals, schools, recreation centers, and other new buildings will be constructed. However, the implied gain in jobs for cleaning personnel will be somewhat tempered by improvements in cleaning materials and equipment, and buildings designed for easier maintenance. This will especially affect openings in cleaning service firms, since the required expertise in caring for many of these establishments will be low enough to stimulate direct hiring of cleaning personnel by the establishments themselves. Nevertheless, an estimated 720 new jobs will emerge along with a high 820 labor force separations for a total of 1,540 openings.

Janitors and Sextons

Janitors maintain clean and orderly conditions in commercial buildings, tend furnaces and boilers, and perform all other manual cleaning tasks. Sextons specialize in church buildings and furnishings. Approximately 35 percent of janitors and sextons will be employed by educational institutions, 15 percent by religious and other nonprofit organizations, 10 percent by cleaning service agencies, and 5 percent each by retail trade establishments, real estate firms, medical institutions, and government agencies. Another 5 percent will be self-employed. Population growth, rising affluence, a trend toward larger and more modern church buildings, increased economic activity, and a rising expertise associated with many janitorial functions will all contribute to a substantial demand for more janitors and sextons. Anticipated are 2,190 new jobs along with a high 3,730 retirement replacements for a total of 5,920 openings.

Practical Nurses

Practical nurses assist in caring for medical and surgical patients, convalescents, handicapped people, and others who are physically or mentally ill. Approximately 35 percent will be employed in hospitals and 55 percent in other kinds of medical institutions. Another 5 percent will be self-employed. Expanding medical services will create the necessity for practical nurses to relieve more technically trained personnel of less complex functions. At mental institutions the need will be especially acute, as significant gains in psychiatric and behavioral research continue to bring attention to the vast range of therapeutic possibilities existing at these institutions given adequate staffing. Anticipated are 2,180 new jobs plus 2,030 labor force separations for a total of 4,210 openings.

Service Workers, Nec.

Included in this category are all service worker occupations not classified elsewhere. Among others are barbers and cosmetologists, bootblacks, kitchen workers and busboys, boarding and lodging housekeepers, elevator operators, porters, and ushers. Approximately 15 percent will be employed in personal service establishments; 15 percent in eating and drinking places; 10 percent each in medical institutions, educational institutions, and hotels and other lodging places; and 5 percent at government agencies. Another 15 percent will be self-employed or unpaid family workers. With a growing population and rising affluence, the emphasis on service-producing activities will expand. An increasing number of people will have the incentive and means to invest in styled appearances, health programs, [illegible] other ways of improving personal attractiveness. Emphasis on hygienic care and the growing popularity of eating out will create many openings for kitchen staff despite some modernization of facilities. The construction of expensive, modern hotels and apartment buildings to serve executives and tourists with the resurgence of economic activity will bring about a returned demand for luxury-associated occupations, such as porters, bellboys, recreational directors, and others. In short, an era of popular interest in service-related activities is emerging, in which a wealth of positions will develop for workers who can offer some kind of personalized service. These workers are not really mechanically replaceable although in some cases automated machinery could be constructed to perform the same technical functions more cheaply and efficiently. Anticipated are 2,950 new jobs for miscellaneous service workers along with a high replacement requirement of 7,550 for a total of 10,500 openings.

LABORERS (EXC. FARM AND MINE)

Table 15

Average Employment 1960, 1970, and 1975,
and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacements	Total
TOTAL	63,070	67,790	62,170	-5,620	6,190	570

Laborers perform manual operations requiring no special training. Frequently the duties involve handling and moving materials, and often heavy physical exertion is required. Approximately 25 percent will be employed in manufacturing industries, 15 percent in construction, 10 percent in transportation, 10 percent in retail trade, 5 percent in wholesale trade, and 5 percent in private household work. Another 10 percent will be government employed, and 10 percent self-employed. Employment of laborers will decrease from 67,790 in 1970 to 62,170 in 1975, a decline of 5,620 jobs. However, 6,190 retirements are expected, for a net total of 570 openings. Losses of laborer positions will be most acute in manufacturing, both because of contractions in aerospace and because of the rapid rate of mechanization and automation in these industries. Also, the rate of mechanization in wholesale trade and transportation warehouses will accelerate as operations in these sectors become larger, more complex, and more centralized. Only in construction and retail trade can the laborer hope to hold his own over the forecast period. In construction, the individualized characteristics of each project, the difficulty of transporting cumbersome equipment onto the site, and the sheer volume of new starts expected will temporarily allay a decline in laborer jobs. In retail trade, the generally small scale of stockroom and display activities permit little scope for technological advance. An overall loss of laborer jobs is inevitable eventually in all industries; in the future job market the acquisition of special skills will be a basic requirement that few employable workers will be able to avoid.

FARMERS AND FARM WORKERS

Table 16

Average Employment in 1960, 1970, and 1975,
and Worker Needs, 1970-1975

	Average Employment			Worker Needs		
	1960	1970	1975	Expansion	Replacements	Total
TOTAL	58,310	46,370	41,110	-5,260	6,960	1,700

Farm managers raise various kinds of crops or livestock and may be either owners or tenants. Farm workers perform tasks on the farm under the direction of the manager. Employment of farmers and farm workers will decrease from 46,370 in 1970 to 41,110 in 1975, a decline of 5,260 jobs. However, since a high 6,960 labor force separations are expected, net openings will total 1,700. The number of owners will continue to fall as the trend towards large corporate farming advances and farming on a smaller scale becomes economically impractical. Approximately 38,500 farms were in existence in Washington State in 1970, but only 31,000 are anticipated for 1975. Although acreage in apples, asparagus, sugar beets, and other crops will increase from about 19,600,000 to 20,000,000, this will occur mainly on large farms. Farm laborers will also face poor employment prospects. The development of larger farms will generally be accompanied by the resources to make more extensive usage of existing technologies, while the possibility of efficient mechanical harvesters in apples, asparagus, and various berry crops will become increasingly real. However, the numerical decline of laborers will be temporarily moderated by the need to replace the services of small farmers and their families who have sold their farms.

APPENDIX

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A. Note on Methodology:

Statements of occupational employment in Washington State were generated through a procedure recommended by the U. S. Bureau of Labor Statistics. First, projections of 1975 industry employment were derived as extensions of 1958-1969 trends by use of multiple-regression techniques. The crude estimates were then adjusted in accordance with recent developments and other information not directly a part of initial predictions. The adjusted industry data were converted to occupational estimates through the use of an industry-occupational matrix. Since this matrix reflected national patterns, the theoretical 1960-1975 ratios of change were applied directly to 1960 census data for Washington State to obtain 1975 occupational estimates reflective of local rather than national staffing patterns. These 1975 projections were converted to jobs rather than persons as a unit of measure, and refined with use of various information available to this department. Occupational estimates for 1970 were interpolated from those of 1960 and 1975, taking into consideration the anticipated growth or contraction of the industries a category is employed in, their changing occupational composition, and the extent to which a category is employed by each. Estimates of the number of workers leaving the state labor force because of retirement, death, or other reasons, were obtained through application of 1960 census data to national separation rates specific for age and sex.

B. Average Employment in All Occupations, 1960, 1970, and 1975, and Worker Needs, 1970-1975.

Table 17

Occupation	AVERAGE EMPLOYMENT			WORKER NEEDS		
	Calendar 1960 Estimates	Calendar 1970 Estimates	Calendar 1975 Estimates	Calendar 1970-1975 Expansion	Calendar 1970-1975 Replacement Needs	Total Demand 1970-1975
TOTAL ALL OCCUPATIONS	1,020,280	1,288,150	1,347,690	59,540	178,740	238,280
Professional, Technical, Kindred	137,750	201,900	216,250	14,350	25,050	39,400
Engineers, Technical	21,950	33,630	31,640	- 1,990	1,860	- 130
Engineers, Aeronautical	4,700	4,900	3,410	- 1,490	160	- 1,330
Chemical	720	970	940	- 30	60	30
Civil	4,330	7,160	7,780	620	560	1,180
Electrical	4,090	6,740	6,290	- 450	310	- 140
Industrial	2,150	4,160	3,700	- 460	240	- 220
Mechanical	3,820	5,520	5,150	- 370	290	- 80
Metallurgical	340	560	530	- 30	40	10
Mining	60	60	70	10	0	10
Other Engineers, Technical	1,740	3,560	3,770	210	200	410
Natural Scientists	2,590	4,030	4,300	270	210	480
Chemists	1,050	1,560	1,630	70	90	160
Agricultural Scientists	440	650	750	100	20	120
Biological Scientists	390	600	710	110	50	160
Geologists, Geophysicists	200	330	350	20	20	40
Mathematicians	140	230	220	- 10	10	0
Physicists	310	570	560	- 10	20	10
Other Natural Scientists	60	90	80	- 10	0	- 10
Technicians, exc. Medical & Dental	12,220	19,090	19,780	690	970	1,660
Draftsmen	3,250	4,020	4,050	30	230	260
Surveyors	1,060	1,850	2,130	280	80	360
Air Traffic Controllers	340	310	300	- 10	20	10
Radio Operators	520	740	840	100	40	140
Technicians, Other	7,050	12,170	12,460	290	600	890

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Occupation	AVERAGE EMPLOYMENT Calendar 1960 Estimates	Calendar 1970 Estimates	Calendar 1975 Estimates	WORKER NEEDS Calendar 1970-1975 Expansion	Calendar 1970-1975 Replacement Needs	Total Demand 1970-1975
Medical, Other Health Workers	24,060	29,450	34,800	5,350	5,240	10,590
Dentists	1,750	2,090	2,420	330	310	640
Dieticians, Nutritionists	450	490	520	30	110	140
Nurses, Professional	11,290	13,160	15,300	2,140	2,720	4,860
Optometrists	350	370	400	30	10	40
Pharmacists	1,790	2,070	2,300	230	310	540
Physicians and Surgeons	3,630	4,640	5,560	920	500	1,420
Psychologists	240	440	550	110	40	150
Technicians, Medical, Dental	2,480	3,920	5,300	1,380	740	2,120
Veterinarians	430	540	640	100	30	130
Other Medical, Health Workers	1,650	1,730	1,810	80	470	550
Teachers	32,590	46,850	49,740	2,890	7,770	10,660
Teachers, Elementary	17,740	21,900	22,180	280	4,250	4,530
Secondary	9,350	15,500	16,830	1,330	2,190	3,520
College	3,110	5,890	6,800	910	690	1,600
Other	2,390	3,560	3,930	370	640	1,010
Social Scientists	450	620	690	70	60	130
Economists	160	240	280	40	20	60
Statisticians and Actuaries	260	340	350	10	40	50
Other Social Scientists	30	40	60	20	0	20
Other Professional, Technical, Kindred	43,890	68,230	75,300	7,070	8,940	16,010
Accountants and Auditors	9,090	13,360	14,260	900	1,650	2,550
Airplane Pilots and Navigators	950	1,750	1,970	220	120	340
Architects	970	1,760	2,110	350	170	520
Workers in Arts, Entertainment	8,440	12,630	13,900	1,270	2,150	3,420
Clergymen	3,370	3,710	3,790	80	480	560
Designers, exc. Design Drafts	700	1,170	1,370	200	70	270
Editors and Reporters	1,440	1,690	1,800	110	220	330
Lawyers and Judges	3,260	4,070	4,440	370	620	990
Librarians	1,930	2,710	2,970	260	640	900
Personnel and Labor Relations Workers	1,790	2,800	2,980	180	350	530

Occupation	AVERAGE EMPLOYMENT Calendar 1960 Estimates	Calendar 1970 Estimates	Calendar 1975 Estimates	WORKER NEEDS Calendar 1970-1975 Expansion	Calendar 1970-1975 Replacement Needs	Total Demand 1970-1975
Other Professional, Technical, Kindred (continued)						
Photographers	900	930	900	- 30	90	60
Social and Welfare Workers	1,730	2,660	3,170	510	450	960
Professional, Tech., Kindred, Nec.	9,320	18,990	21,640	2,650	1,930	4,580
Managers, Officials and Proprietors	102,180	125,250	131,140	5,890	17,540	23,430
Conductors, Railroad	670	650	650	0	70	70
Creditmen	860	1,270	1,470	200	210	410
Officers, Pilots, Engineers, Ship	1,820	2,270	2,650	380	270	650
Purchasing Agents	2,470	2,890	2,880	- 10	380	370
Postmasters and Assistants	610	600	600	0	100	100
Managers, Officials, Proprietors, Nec.	95,750	117,570	122,890	5,320	16,510	21,830
Clerical and Kindred	154,700	208,670	226,980	18,310	35,390	53,700
Stenos, Typists, and Secretaries	35,820	50,890	55,000	4,110	11,750	15,860
Office Machine Operators	5,110	7,580	9,190	1,610	1,680	3,290
Other Clerical and Kindred	113,770	150,200	162,790	12,590	21,960	34,550
Accounting Clerks	6,440	7,550	7,830	280	1,440	1,720
Bookkeepers, Hand	11,910	14,440	16,000	1,560	2,750	4,310
Banktellers	2,380	4,070	5,220	1,150	620	1,770
Cashiers	7,430	13,020	15,950	2,930	2,290	5,220
Mail Carriers	3,030	4,200	4,860	660	300	960
Postal Clerks	3,280	4,550	5,230	680	490	1,170
Shipping, Receiving Clerks	2,960	3,140	3,090	- 50	300	250
Telephone Operators	5,400	6,380	6,990	610	1,520	2,130
Clerical & Kindred Workers, Nec.	70,940	92,850	97,620	4,770	12,250	17,020
Sales Workers	79,140	99,320	106,020	6,700	12,610	19,310
Craftsmen	155,690	192,650	199,820	7,170	18,830	26,000
Construction Craftsmen	46,960	53,550	54,900	1,350	5,590	6,940
Carpenters	18,080	18,560	18,850	290	2,120	2,410

Occupation	AVERAGE EMPLOYMENT Calendar 1960 Estimates	Calendar 1970 Estimates	Calendar 1975 Estimates	WORKER NEEDS Calendar 1970-1975 Expansion	Calendar 1970-1975 Replacement Needs	Total Demand 1970-1975
Construction Craftsmen (continued)						
Brickmason and Tile Setters	1,880	2,130	2,220	90	160	250
Cement, Concrete Finishers	750	1,020	1,190	170	100	270
Electricians	7,110	8,440	8,150	- 290	770	480
Excavating, Grading Machine Operators	5,220	6,510	7,140	630	640	1,270
Painters and Paper Hangers	5,520	5,660	5,730	70	710	780
Plasterers	410	460	480	20	50	70
Plumbers and Pipe Fitters	5,290	6,890	7,270	380	720	1,100
Roofers and Slaters	880	1,070	1,160	90	100	190
Structural Metal Workers	1,820	2,810	2,710	- 100	220	120
Foremen, Nec.	18,000	24,300	24,400	100	2,390	2,490
Metal Working Craftsmen	17,520	17,290	15,720	- 1,570	1,710	140
Machinists and Related Occupations	8,790	8,100	6,770	- 1,330	840	- 490
Blacksmiths, Forgemen, Hammermen	420	320	300	- 20	70	50
Boilermakers	710	890	860	- 30	110	80
Millwrights	1,860	2,150	2,340	190	200	390
Molders, Metal, exc. Coremakers	350	430	450	20	40	60
Patternmakers, Metal, Wood	730	630	510	- 120	90	- 30
Rollers and Roll Hands	200	230	240	10	30	40
Sheet Metal Workers	3,000	3,110	2,960	- 150	230	80
Toolmakers and Diemakers	1,460	1,430	1,290	- 140	100	- 40
Printing Trades Crafts	3,650	3,970	4,070	100	450	550
Compositors, Typesetters	2,370	2,280	2,150	- 130	280	150
Electrotypers, Stereotypers, Engravers	220	200	210	10	20	30
Photoengravers, Lithographers	270	480	610	130	50	180
Pressmen and Plate Printers	790	1,010	1,100	90	100	190
Transportation and Public Utilities Crafts	7,240	8,230	9,600	1,370	560	1,930
Linemen and Servicemen	5,420	6,860	8,300	1,440	320	1,760
Locomotive Engineers and Firemen	1,820	1,370	1,300	- 70	240	170

Occupation	AVERAGE EMPLOYMENT Calendar 1960 Estimates	Calendar 1970 Estimates	Calendar 1975 Estimates	WORKER NEEDS Calendar 1970-1975 Expansion	Calendar 1970-1975 Replacement Needs	Total Demand 1970-1975
Mechanics and Repairmen	41,120	59,510	63,260	3,750	5,360	9,110
Airplane Mechanics and Repairmen	6,690	6,230	5,210	- 1,020	300	- 720
Motor Vehicle Mechanics	11,240	16,240	17,450	1,210	1,200	2,410
Office Machine Mechanics	570	930	1,110	180	100	280
Radio and TV Mechanics	1,800	2,270	2,390	120	120	240
Railroad and Car Shop Mechanics	730	720	720	0	80	80
Other Mechanics and Repairmen	20,090	33,120	36,380	3,260	3,560	6,820
Other Craftsmen and Kindred	21,200	25,800	27,870	2,070	2,770	4,840
Bakers	1,730	1,780	1,740	- 40	220	180
Cabinetmakers	1,530	1,620	1,640	20	180	200
Crane, Derrick, Hoistmen	2,630	3,560	4,070	510	300	810
Glaziers	380	530	630	100	170	270
Jewelers and Watch Makers	710	700	680	- 20	80	60
Opticians, Lens Grinders	320	390	420	30	40	70
Inspectors, Log and Lumber	2,070	2,320	2,700	380	220	600
Inspectors, Other	1,320	1,530	1,630	100	160	260
Upholsters	990	1,230	1,310	80	130	210
Craftsmen and Kindred Workers, Nec.	9,520	12,140	13,050	910	1,270	2,180
Operatives	149,290	179,880	181,790	1,910	18,010	19,920
Drivers and Deliverymen	35,680	43,370	46,640	3,270	3,050	6,320
Drivers, Bus, Truck, Tractors	27,920	32,860	34,900	2,040	2,380	4,420
Deliverymen and Routemen	7,760	10,510	11,740	1,230	670	1,900
Transportation and Public Utility	4,440	4,770	4,900	130	390	520
Brakemen and Switchmen, Railroad	2,130	2,180	2,150	- 30	160	130
Power Station Operators	980	1,140	1,230	90	100	190
Sailors and Deck Hands	1,330	1,450	1,520	70	130	200
Semiskilled Metalworking Occupations	12,360	13,970	12,720	- 1,250	1,240	- 10
Furnacemen, Smeltermen, Pourers, and Heaters	630	780	850	70	80	150
Welders and Flamecutters	4,910	7,110	7,280	170	580	750

Occupation	AVERAGE EMPLOYMENT Calendar 1960 Estimates	Calendar 1970 Estimates	Calendar 1975 Estimates	WORKER NEEDS Calendar 1970-1975 Expansion	Calendar 1970-1975 Replacement Needs	Total Demand 1970-1975
Operatives (continued)						
Assemblers, Metalworking, Class A	620	550	420	- 130	50	- 80
Assemblers, Metalworking, Class B	1,650	1,440	1,110	- 330	130	- 200
Inspectors, Metalworking, Class B	810	750	560	- 190	60	- 130
Machine Tool Operators, Class B	3,400	3,030	2,200	- 830	310	- 520
Electroplaters and Helpers	340	310	300	- 10	30	20
Semiskilled Textile Occupations	1,770	2,430	2,680	250	810	1,060
Textile Weavers and Related	170	150	140	- 10	10	0
Sewers and Stitchers, Mfg.	1,600	2,280	2,540	260	800	1,060
Other Operatives	95,040	115,340	114,850	- 490	12,520	12,030
Asbestos, Insulation Workers	420	600	630	30	40	70
Attendants, Auto Service, Parking	5,920	7,930	8,440	510	310	820
Blasters and Powdermen	220	300	390	90	20	110
Laundry and Dry Cleaning Operatives	5,450	6,170	5,870	- 300	1,200	900
Meat Cutters, exc. Meat Packing	2,580	3,520	3,320	- 200	290	90
Mine Operatives and Laborers, Nec.	660	520	550	30	50	80
Other Operatives, Nec.	79,790	96,300	95,650	- 650	10,610	9,960
Service Workers	120,150	166,320	182,410	16,090	38,160	54,250
Private Household Workers	25,620	32,600	29,200	- 3,400	11,110	7,710
Protective Service Workers	10,340	11,470	13,610	2,140	1,610	3,750
Firemen	2,620	2,920	3,610	690	170	860
Guards, Watchmen, Doorkeepers	3,770	4,020	4,140	120	920	1,040
Policemen, Other Law Enforcement Officers	3,950	4,530	5,860	1,330	520	1,850
Waiters, Cooks, Bartenders	32,580	47,550	53,970	6,420	9,230	15,650
Bartenders	3,620	4,890	5,540	650	630	1,280
Cooks, exc. Private Household	11,720	17,290	19,540	2,250	3,450	5,700
Counter and Fountain Workers	1,570	2,760	3,350	590	530	1,120
Waiters and Waitresses	15,670	22,610	25,540	2,930	4,620	7,550

Occupation	AVERAGE EMPLOYMENT Calendar 1960 Estimates	Calendar 1970 Estimates	Calendar 1975 Estimates	WORKER NEEDS Calendar 1970-1975 Expansion	Calendar 1970-1975 Replacement Needs	Total Demand 1970-1975
Service Workers (continued)						
Other Service Workers	51,610	74,700	85,630	10,930	16,210	27,140
Airline Stewards and Stewardesses	240	510	740	230	110	340
Attendants, Hospital, Other Inst.	6,600	9,850	12,510	2,660	1,970	4,630
Charwomen and Cleaners	2,180	3,330	4,050	720	820	1,540
Janitors and Sextons	12,440	17,320	19,510	2,190	3,730	5,920
Nurses, Practical	4,890	7,530	9,710	2,180	2,030	4,210
Service Workers, Nec.	25,260	36,160	39,110	2,950	7,550	10,500
Laborers, Except Farm and Mine	63,070	67,790	62,170	- 5,620	6,190	570
Farmers and Farm Workers	58,310	46,370	41,110	- 5,260	6,960	1,700

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*Denotes inclusion in an "other" category.

VT 017 737
MILLER, DONALD G.
THE END OF YEAR EVALUATION OF A CAREER CONTINUUM FOR GRADES K THROUGH 10.

SOUTH-WESTERN CITY SCHOOL DISTRICT, GROVE CITY, OHIO.
OHIO STATE DEPT. OF EDUCATION, COLUMBUS. DIV. OF VOCATIONAL EDUCATION.
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IDENTIFIERS - CAREER AWARENESS; *SOUTH WESTERN CITY SCHOOLS

ABSTRACT - THIS DOCUMENT IS THE ANNUAL EVALUATION REPORT OF A PROJECT WHICH DEVELOPS A CAREER CONTINUUM FOR GRADES K-10 AND IS ADAPTABLE TO AN OHIO DISTRICT SCHOOL SYSTEM. CONTENTS ARE INCLUDED UNDER THE FOLLOWING TITLES: (1) HISTORY, PHILOSOPHY, AND RATIONALE OF THE CAREER CONTINUUM PROGRAM, (2) CAREER MOTIVATION EVALUATION, (3) CAREER ORIENTATION EVALUATION, (4) CAREER EXPLORATION EVALUATION, (5) CONTINUUM STAFF QUESTIONNAIRE, AND (6) A COMPARISON STUDY OF OCCUPATIONAL INTEREST CHOICES. (DL)

VT 017 737

1904

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

SOUTH-WESTERN CITY SCHOOL DISTRICT
3708 South Broadway
Grove City, Ohio

The End of Year Evaluation of

A CAREER CONTINUUM FOR GRADES K THROUGH 10

June 30, 1972

By

Donald G. Miller
Career Continuum Developer

Martin L. Stahl, Ph.D.
Superintendent of Schools

James B. Knox, Ph.D.
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Assistant Superintendent

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Charles Besse, Director
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VT017737

SOUTH-WESTERN CITY SCHOOLS 3708 SOUTH BROADWAY • GROVE CITY, OHIO 43123
PHONE 875-2318

July 7, 1972

Dr. Robert Balthaser
State Department of Education
Division of Vocational Education
Room 611, State Office Building
65 South Front Street
Columbus, Ohio 43215

Dear Dr. Balthaser:

The End of Year Evaluation of our Career Continuum Project will not be in strict accordance with guidelines established by the Division of Vocational Education in December, 1971. I did not receive the guidelines until June 30, 1972, the day the final evaluation report was returned from our publication division. You will obviously notice that our document contains more material than has been requested. Also, some information requested by your division was deleted. Thus, I have prepared an amendment to the report which will be listed under separate cover.

I apologize for the inconsistency of our report. However, I think it is representative of the hard work and dedication to this year's project by all personnel.

Future evaluations will be consistent with your guidelines.

Very truly yours,

Donald G. Miller

Donald G. Miller
Career Continuum Developer

DGM/bl

1906

Title of Program or Project:	A Career Continuum for Grades K through 10
Project Organization:	South-Western City School District
Initiator:	Charles Besse Mr. Charles Besse - Director Vocational Education 614-875-2318
Project Director:	Donald G. Miller Mr. Donald G. Miller Career Continuum Developer 614-875-2318
Transmitted By:	Martin Stahl Dr. Martin L. Stahl Superintendent 614-875-2318
Duration Of Activity:	July 1, 1971 through June 30, 1972
Purpose of Grant Or Contract:	Research and Training
Use Of Funds:	Research in Vocational Education
Total State Funds Expended:	$36,632.30 (Estimated)

THE ABSTRACT

Title of Project - A Career Continuum for Grade K - 10

Principle Investigator - Mr. Charles Besse

Contracting Agency - South-Western City School District

State Funds Expended - $36,632.30 (Estimated - Affidavit will follow)

Beginning and Ending Dates - July 1, 1971 through June 30, 1972

Summary of Project -

1. Purpose - This project will develop a career continuum for grades K - 10 which will be adaptable to the total school system and which will be culminated by the 11th and 12th grade program now in existance.

2. Objectives - To incorporate within the regular K - 6 curricula the - need for, contribution of and overall place of socially useful labor in our society. To orient each 7th and 8th grade student to a wide range of career possibilities. To provide within the educational program of 9th and 10th graders opportunities for each to make in depth exploration of career opportunities.

3. Activities - Staff inservice and time to revise curriculums in K - 10 will be provided. Newly prepared material will be used with students in one elementary, one middle and one high school. Field experiences will be provided at the orientation and exploration level.

4. Evaluation - Locally prepared pre and post tests, survey forms, check lists and data comparison charts will be utilized.

5. Contribution to Education - A career continuum will be developed which will incorporate within the regular school curriculum the world of work in such a way that positive attitudes will be generated toward all socially useful labor.

STATEMENT OF PROBLEM

The United States was founded and has been developed on the premise that everyone is important - that everybody has a contribution to make and is entitled to a fighting chance to develop the best that is in him. Now great groups of people find themselves in curcumstances where forces beyond their control overpower them. Of particular concern is that, unless something is done soon, during the next decade there will be 30 million new workers looking for jobs and upward of 1/3 of these have little hope of really obtaining one unless there is a change in what we are now doing.[1]

In addition it is important that right choices are made. Sometime during the last six years of schoolwork young people must start preparing specifically for his initial working experience. Thirty-five percent of their waking hours will be spent making a living so it follows that no other part of man's activities so completely influence his way of life.[2]

There is therefore a need to develop a continuum of career development that will start at the earliest possible age and continue throughout the school life of each student.

In order to do this, means must be found to make career development an integrated part of the total curriculum. Realistically this is the premise upon which education in the United States has been based since free public education for all became a part of our national heritage. The time has long past when we can afford to operate in isolation from the outside world in the field of education.

The South-Western City School district has an excellent vocational program at the 11th and 12th grade level but has not developed programming to give students a real understanding of the need for, contribution of and overall place of socially useful labor in our society. Neither has there been adequate programming provided to give students opportunities to investigate career possibilities related to his abilities and interests. In order to provide for this need a vocational continuum will be developed for grade K - 10.

---

1. Imperatives in Education, (Washington D. C., American Association of School Administration, 1966) p. 21

2. IBID, p. 23

STATEMENT OF PROBLEM (Continued)

It will be the purpose of this project therefore to develop a career continuum for grades K - 10 which will be adaptable to the total school system. In the beginning this program will attempt to bring the world of work to the schools. As we proceed through the early experiences and students are motivated to actually observe what takes place in the world of work, orientation to specific job clusters will be provided. This will be followed by actual exploration experiences in real job situations, culminated by training for specific job opportunities in the 11th and 12th grades.

CONTRIBUTION TO EDUCATION

The results of the project evaluation indicate that (1) the career continuum curriculum has provided experiences which have contributed to the knowledge and awareness of the world of work for all students in all three levels; (2) student interest in the curriculum has increased as a result of careers integration; (3) career integration of the curriculum has produced a cohesiveness in the curriculum which never before had been possible; (4) one building is now able to move to a total integrated day curriculum as a result of career integration.

As the child moves through the continuum curriculum, experiences will be provided which will enable him to become aware of his attitudes, values, strengths, and weaknesses. These experiences will be curriculum based. Counselors will conduct group guidance and counseling sessions which will enable each child to assess himself. This is a necessary and integral part of the career continuum curriculum because career decisions cannot be based solely on knowledge of occupations and the world of work. An individual must be aware of his own personal qualities in order to make appropriate career decisions.

Results of the pilot project evaluation can be used as a basis for comparison of future evaluations to determine the effectiveness of the career continuum curriculum.

All information gained in the project this year, including units of study and curriculum activities, will be used as a guide for career curriculum integration into other attendance areas in the district. Copies of the final evaluation report will be distributed to all schools in the South-Western City School District.

THE PERSONNEL AND FACILITIES

Mr. Charles W. Besse, Director of Vocational Education, is the project initiator.

Dr. Martin L. Stahl, Superintendent, is the transmitter of the project.

Mr. Donald G. Miller, Career Continuum Developer, is the full time director of the project and is responsible for the development of the Career Continuum Curriculum.

During the development of the project this year, Mr. Miller worked closely with the principals of the three buildings involved in the project. They are as follows: Mrs. Mary Pinkley, Kingston Elementary School; Mr. Wayne Umholtz, Park Street Middle School; and Mr. Norman Gaines, Grove City High School.

All activities for the project were limited to Kingston Elementary School, Park Street Middle School, and Grove City High School.

THE PROJECT EXPENDITURES

The estimated project expenditures for the July 1971 to July 1972 fiscal year are $36,632.30.

The fiscal affidavits will be forwarded as soon as they are completed by the district fiscal officer.

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CHAPTER I

THE HISTORY, PHILOSOPHY, AND RATIONALE

I. HISTORY

During the summer of 1970, the Vocational Division of the State Department of Education allocated to the South-Western City Schools $ 14,000 to be used in grades 1 and 3 to develop a program to emphasize Career Education. Since that time all middle schools have continued to emphasize career orientation as an integral part of the total curriculum, not as a separate program.

Fourteen thousand dollars ($ 14,000) more was [illegible] Career Orientation by the State Department of Education for the 1971-72 school year. Park Street Middle School was selected as a pilot school, so that this program could be developed in more depth.

In January of 1972, $ 38,000 was allocated for development of a pilot K - 10 Career Continuum Curriculum which will be adaptable to the total school system and which will be culminated by the 11th and 12th grade program now in existence. The placement of the pilot program is:

Motivation - Kingston Elementary School

Orientation - Park Street Middle School

Exploration - Grove City High School

The approach taken by the South-Western City School District in developing such a program is that Career Motivation, Career Orientation, and Career Exploration, become an integral part of the total daily educational experience of each child and not be something that is taught in isolation on a once a week basis or as a separate subject area. It must be interwoven into the total curriculum in such a way that children recognize there is a "World of Work" and it is a wonderful, exciting place where they will eventually someday have a chance to be participants if they are properly prepared.

II. PHILOSOPHY

Career education must be an integrated part of all the curriculum within the school and not be considered a separate isolated program and it must be concerned not only with trade and industry but the professions as well.

III. RATIONALE

Education at all levels is a crucial element in the preparation for a successful life and desirable cognitive and affective behaviors develop only when appropriate learning experiences are provided.

Education must be career oriented because practically everyone's life and opportunities for self-expression and self-fullfillment includes work.

Due to the increasing complexity of numerous opportunities in the world of work, the school must accept more responsibility for providing needed information and experiences.

Schools must provide opportunities for students to learn how to work efficiently with new materials, tools and techniques, because these are prerequisites for a successful life of work.

CHAPTER I

MOTIVATION

I. STATEMENT OF PURPOSE

1. To develop and incorporate within the regular curriculum procedures and materials which will lead to motivation for the student to gain knowledge of the
   a. need for
   b. consideration of and
   c. overall place of academically useful labor in our society.
2. To provide greater opportunity for each student's display of interests including, but not limited to the academic area.

II. ACTIVITIES

Staff. All motivation activities for grades 4 - 8 were limited to Kingston Elementary School. The total school was involved and consisted of 270 students and 13 staff members. All motivation activities for the 8th grade level were limited to Fair Street Middle School and included students from the following feeder schools: J.C. Dower, Kingsley, Westbrook, and Kingston Elementary Schools.

200 hour observation program was provided to help staff understand the concept of career education and how to develop objectives and approaches to make it an integral part of the curriculum.

An additional 600 hours of time were distributed among the staffs and were used to develop actual objectives and procedures to assure that the widest possible number of socially accepted varieties of work, their need, contribution and place in society were integrated into the curriculum.

Curriculum. A letter was sent to parents requesting them to volunteer to talk to students about their jobs.

Resource speakers from the community were utilized for the units of study.

Field trips were taken so that students could see the world of work in action. During the field trips, students were given the opportunity to talk with and ask questions of individual workers.

A Career Center, which includes a multi-media of materials such as books, filmstrips, prints, etc. for student and teacher use, was established within the Instructional Materials Centers. Educational aids acquainted the students with the nature of the career center and encouraged student involvement with the available materials.

III. EVALUATION PROCEDURES

1. All students were given a pre-assessment or pre-test at the beginning of each unit, and a post assessment or post-test at the conclusion of each unit.

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The results of the pre-assessment and post-assessment evaluations indicated that students had a broader and [illegible] in-depth knowledge of the world of work as a result of the world of work [illegible]. Results of the pre-assessment and post-assessment [illegible] and most [illegible] with the units of study located in [illegible] of the Universal Evaluation.

[illegible] students [illegible] determine to what [illegible] their interests had been identified and nurtured [illegible] approaches. The results of the survey are [illegible]

[illegible] percent of all students indicated an interest in one or the workers listed. Ninety (90) percent of all students indicated an interest in one or more workers listed. Seventy-six (76) percent of all students indicated an interest in two or more workers listed. Sixty-one (61) percent of all students indicated an interest in three or more workers listed. Forty-eight (48) percent of all students indicated an interest in four or more workers listed. Thirty-five (35) percent of all students indicated an interest in five or more workers listed. Twenty-five (25) percent of all students indicated an interest in six or more workers listed. Seventeen (17) percent of all

students indicated an interest in seven or more workers listed. Twenty-six (26) percent of all students indicated no interest in eight or more workers listed. Forty-seven (47) adult and workers not included in the survey/demo were listed by students.

LISTED FIELD STUDENT INTEREST SURVEY	
Number of Worker Roles	Percent of Students Interested
0	10%
1 or more	90%
2 or more	78%
3 or more	61%
4 or more	48%
5 or more	35%
6 or more	25%
7 or more	17%
8 or more	13%

ADDITIONAL WORKER'S FIELD LISTED
ON WELL-ARTS & SCIENCE

Doctor	Commercial Artist
House Painter	Stevedore
Veterinarian	Truck Or Driver
Baseball Player	Draftsman
Soldier	Drummer
Actor/Actress	Fashion Designer
Lawyer	Values Collector
Dental Hygienist	Interior Decorator
Table Tennis Player	Photographer
Basketball Player	Chef
Football Player	Telephone Operator
Teacher	Mechanic
Policeman	Cosmetologist
Plumber	Paratrooper
Boxer	Concert Pianist
Stunt Pilot	News Reporter
Architect	Astronomer
Nurse	Florist
Model	Naturalist
Mortician	Gymnast
Yachtsman	Utility Company Sales Representative

Dear Parent,

The children of Kingston School will soon be learning about the many jobs that are involved in a community. We want to stress not only how important it is for every community to have policemen, firemen, and milkmen; but to exist, a community also needs secretaries, custodians, salesmen, factory workers, mechanics, etc. In order to present a true picture of what each job is actually like, we would like to have your help. It would be greatly appreciated if you would volunteer to talk to a small group of children about your job. Our goal is to have as many parents involved as possible. The more that are willing to discuss their work, the more successful this program will be and the more each child will gain from it.

This summer we will be organizing a School Resource File of all people willing to help in this program. Therefore, you will not be contacted by the school until next school year. However, it is necessary for us to obtain the names of all those interested before the close of this school year.

We would also be interested in having you talk to a group of children about any hobbies you might have. Again, you would only be talking to one small group at a time: no more than fifteen children.

If you are willing to talk about your job and/or hobby to a group of children, please complete the form below and return it to the school. Remember, in a community every job is important and no matter how insignificant you might think your job is, there are undoubtedly children within the school who will be more than interested in hearing about your work.

Very truly yours,

Mary C. Pinkley
Principal

Cathy Folsen
Intermediate Teacher

Name_____ Telephone_____

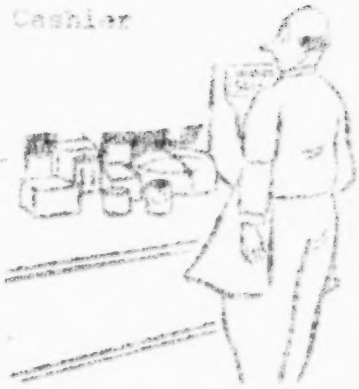
Occupation_____

Place of Employment_____

List anything used in your work which the children might enjoy seeing. (Pictures, work clothes, materials, etc.) _____

_____

JOBS		Interested	Not Interested
Grocery Boy			
Truck Driver			
Manager			
Milkman			
Druggist			

JOBS	Interested	Not Interested
Farmer		
Butcher		
Baker		
Cashier 		

Motivation (4 - 5) Interest Inventory

The following is a list of worker roles or jobs which you studied this year. Please put a check mark in the blank beside those which interest you.

Architect_____

Surveyor_____

Contractor_____

Landscaper_____

Cement Layer_____

Machine Operator_____

Electrician_____

Plumber_____

Pipe Fitter_____

Painter_____

Wallpaper Hanger_____

Plasterer_____

Interior Decorator_____

Roofer_____

Carpenter_____

Brick Layer_____

Carpet Layer_____

Tile Layer_____

Glazier_____

Black Topper_____

Building Inspector_____

Insurance Salesman_____

Real Estate Salesman_____

1027

Motivation (6) Interest Inventory

The following is a list of workers which you studied this year. Please put a check mark in the blank beside those which interest you.

Pilot_____

Salesclerk_____

Inventor_____

Assembly Man_____

Freight Handler_____

Foreman_____

Aeronautical Engineer_____

Freight Clerk_____

Ground Crew_____

Bank Teller_____

Bank Manager_____

Produce Salesman_____

Stock Broker_____

Secretary_____

Control Observer_____

Assembly Line Worker_____

Quality Inspector_____

Buyer - Retail_____

Cashier_____

Stock Boy_____

Butcher_____

Produce Manager_____

Product Tester_____

Watch Repairman_____

TV & Radio Announcer_____

Metal Fabricator_____

Metallurgist_____

Molder_____

Mechanical Engineer_____

Electrical Engineer_____

Lumberjack_____

Fireman - Boiler_____

Statistician_____

Parts Manager_____

Maintenance Man_____

Teletype Operator_____

IV. COMPARISON OF THE STUDY

BY GRADE ELEMENTARY SCHOOLS

C A R E E R S U N I T 1

"GROCERY STORE"

Primary Unit:

Susan Greene
Lois Knox
Miriam Todd

Kingston Elementary School
Mary Pinkley, Principal

1553

CAREERS UNIT 1

Grocery Store

Pre-Assessment

Concept - Development - Given 12 pictures of toys, farm animals, or families, the class was to develop an awareness of the characteristics of their particular set of pictures.

Instructional Goals	Behavioral Objectives	Sub-Objectives
I. Students will learn to observe, catagorize, and label data by forming, clarifying, and and extending concepts by seeking out a variety of relationships among different items of information.	1. Given 3 distinct groups of objects the student will describe orally each object by stating all the characteristics of the given item.	a. Given an object the child will be able to identify the attributes of the object by smelling, touching and seeing. 1) Given an object, the child made a riddle (we worked in small groups rather than individual), then exchanged riddles with other classes doing the same project. The class then was to identify the object. 2) Given an object, the child identified the object using the senses. 3) Given colored paper and drawing paper, the child made booklets entitled "I See", entered one of the items describing it.

Goal	Behavioral Objectives	Sub-Objectives
		4) Given a set of unidentified objects, the child selects one characteristic of the item, and the other children identify it.
		b. Given a food item, the child will be able to identify the attributes of the food items by tasting, smelling, feeling, and seeing.
		c. Given a picture of a grocery store scene, the children will describe the grocery store by naming the contents.
		1) Given pictures of various retail stores, the child named items seen in each store, by listing them.
		2) Given the instructions for playing " I See ", the children named the store in which the item belonged in 15 seconds.
		3) After playing " I See ", a tally was made to show the most frequently named store. A graph was then made.
		4) Filmstrip - Retail Stores

Goal	Behavioral Objectives	Sub-Objectives
		5) Given a sheet of paper, and a picture of a store, a group was given 60 seconds to name every item he saw, by words, or by making pictures.
		6) Given a grocery scene the children had 60 seconds to name and list on the board, items they saw. Then went back to the picture and compared accuracy.
	2. Given magazines, the child will find food pictures according to the grocery store department.	a. Given magazines the child will find and cut out pictures of food that can be found in a grocery store.
		1) Given magazines, the children cut pictures of food found in the grocery store, and put them in folders, called "shopping carts".
		b. Given large poster paper, the child will categorize the foods found into the departments of a grocery store.
		1) Given 5 large sheets of butcher paper, the children paste food items pictures on the proper "shelves".

Goal	Behavioral Objectives	Sub-Objectives
		2) Given play money, the children will experiment with making change.
		3) Given a cash register, the children will pretend to be purchasing food items.
		4) Given price tags, the children will price food items on the charts made in (b).
		5) Given the categorized charts (1) the children will pretend to purchase the items.
		6) Using the 5 posters, a mural can be made.
		7) Given Wednesday's newspaper, and a large piece of construction paper, the child will paste on ads to form a "shopping list", or an "advertising page".
		8) Given the "shopping list' the child will add up the prices to get a total grocery bill.
		9) Given the adding machine, the child will check his adding, for (8).

Goal	Behavioral Objectives	Sub-Objectives
		10) Using the large "shopping list", the child will make flash cards of the items he will shop for.
		11) Using the flash cards, the child will hold up the card being called out by the teacher. A tally was made as to how many children had that food item.
		12) Using the tally, the children made a graph showing the usage frequency.
		13) Using the ad from (7), a bar graph was made to show frequency of use of each item.
	3. Having discovered the categories of grocery store departments, the child will identify, by listing, each person responsible for that department.	a. Given the categorized pictures of food in a grocery store, the child will name the worker responsible for the care of each grocery department.
		1) Given construction paper, the children will make a lif size figure of one of the workers.
	4. Given magazines, crayons, paint, etc., the child will select pictures of grocery store workers and classify them according to departments.	a. Given magazines or paper for color ing the child will find and cut out, or make (crayon or paint) pictures of the workers of the grocery, as named in objective 3.

Goals	Behavioral Objectives	Sub-Objectives
		b. Using these pictures the child will paste them on the mural, or in his book, in the appropriate simulated food department.
II. Children will be able to demonstrate an understanding of the workers in a grocery store.	1. Having taken two field trips, the child will be able to identify and label each worker observed.	a. By taking a walk through and around the school building, the child will list all workers observed. 1) By using the Concept-Development approach, the children will identify the workers seen. 2) With the permission of a worker, the children will interview, or ask questions concerning his job. This can be done by recording. 3) Using the interview, the child will report the information orally or written. b. By taking a field trip to the IGA Food Market, the child will identi and label the workers observed. 1) List workers 2) Make a map 3) Place pictures of workers approximately 4) Book reports of varied worke 5) Dramatize a worker

Goal	Behavioral Objectives	Sub-Objectives
	2. Given the list of workers in the grocery store, the child will be able to name the tools used by each worker	a. Given the list of workers, the children will bring in or make or find pictures of tools used by each worker observed. 1) Bring in objects 2) Paint or color 3) Cut pictures 4) Concept development chart 5) Make chart out of clay, and fire in kiln Match wi workers make bul tin boar
	3. Using knowledge acquired from previous objectives, the children will assemble and organize a role play grocery store situation similar to the grocery store visited.	a. Given a corner in the room, the children will organize a simulated grocery store. 1) Bring in cartons, cans, bags any grocery items 2) Organize shelving b. Given a toy cash register and toy money, the children will buy and sell groceries. 1) Learn coinage 2) How to count change 3) How to make change c. Given scales, the children measure out or weigh out proper commoditie for sale.

Goal	Behavioral Objectives	Sub-Objectives
		d. Given recipes and necessary tools, the children will make the commodities from the bakery department
		e. Using the newspapers, children will compare items for sale in the different stores. 1) Scrapbook 2) Bulletin Board 3) Graphs

1633

GHOST TOWN TREASURE

Gold Rock had become a ghost town. The only family left was the Jacksons. Mr. Jackson ran a grocery store, and business was so bad that he, too, must seek employment elsewhere. Ty Jackson, his young son, would do anything to stay in Gold Rock, but the situation seemed hopeless. Then, Paul and Nora Connor visited Gold Rock. They brought their great grandfather's diary with them. Their great grandfather had been a prospector in Gold Rock more than one hundred years before.

After studying the diary, they are all sure that gold can be found nearby. The story of the search for gold and how Gold Rock came to life again is very interestingly told in " GHOST TOWN TREASURE ".

CAST

Reporter...	come to get the story about Gold Rock
Ty Jackson...	a boy who does not want to leave Gold Rock
Paul Connor Nora Connor...	lucky visitors to Gold Rock
Mr. Jackson...	a shopkeeper who is planning to close his store
Mrs. Jackson...	his very practical wife
Steve...	a rock specialist and a friend of Mr. Jackson
Mr. Weber...	a ranch owner
Visitor...	a shopper

SCENE 1

Reporter: "My newspaper has sent me out here to Gold Rock, California, to cover a story about a ghost town come to life. (When reporter isn't talking he should be writing notes for his story in his notebook.) It seems that just a few months ago, Gold Rock was a ghost town, almost deserted. If you were to walk down Main Street, in the early evening, you would be the only one there. The only light you would see comes from Jackson's Grocery Store. The Jacksons, the only family left in town, live in the back of the store..."

(Mrs. Jackson is making supper. Mr. Jackson is reading a newspaper. Ty enters, carrying a leather bag in his hand.)

Mrs. Jackson: "Hello, Ty, where have you been? Supper's almost ready."

Ty: "Up on the mountain, Mom."

Mrs. Jackson: "I wish you wouldn't stay out so late. What have you got there?"

Ty: "Rocks. More rocks for my collection, Mom." (Adds them to a rock collection on the shelf.) "I found some real good ones down near the stream."

Mrs. Jackson: "Ty Jackson, you're like a pack rat--always packing things away."

Mr. Jackson: "The mailman brought you a letter, Ty. It's over there on the table."

Ty: (Picks up letter and looks at it.) "It's from Paul and Nora Connors! (Tears open envelop) It's a funny thing how we have become such good friends and yet we have never met. (Starts to read letter.) Yippee! They're coming out! They're going to come out in about two weeks. Isn't that great! Dad, I told you they've always wanted to visit Gold Rock. Their great grandfather hunted gold here more than one hundred years ago."

Mr. Jackson: "They must be clever. It was smart of them to write that letter, last year, "To Anyone in Gold Rock, California", so they could find someone to write to in the town where their great grandfather once lived. (Pause) It is too bad you will have to write and tell them not to come."

Ty: "What do you mean? I want them to come. I've asked them to visit us."

Mr. Jackson: "I am sorry about that, Ty. But in two weeks we won't be living here."

Ty: "Not living here in Gold Rock? Why?"

Mr. Jackson: "I had a letter today, too. I haven't told you about it. It was from your Uncle Rod. He has invited us to come and live with him. Maybe I can get work in his grocery store."

Ty: "In the city?"

Mr. Jackson: "Yes, I'm afraid we'll have to go to the city."

Ty: "But, Dad, why do we have to move to the city?"

Mrs. Jackson: "Ty, your father has to make a living. Having a grocery store in a ghost town doesn't bring in enough money."

Ty: "Gold Rock won't always be a ghost town. People will come back. You'll see."

Mr. Jackson: "I used to think so, son, but I don't anymore. When the new highway was built and it by-passed Gold Rock, that was the end of our town. People just don't want to live here when they can live in the new town up on the highway."

Ty: "This is where I want to live. This is the best place in the world!"

Mrs.Jackson: "Don't you see? We can't make a living here when there is nobody left to come to the store."

Ty: "The people on the ranches come here. What about Mr. Weber? He has the biggest ranch here and needs lots of groceries.

Mrs. Jackson: "Stop and think, Ty. How long has it been since Mr. Weber came here? No, he must be getting his groceries somewhere else. We can't count on him any more."

Ty: "But I wouldn't like living in the city. Neither would King. How can a horse be happy living in the city?"

Mr. Jackson: "Ty, I'm sorry. We can't take King with us. There wouldn't be any place for him."

Ty: "Then I won't go."

Mrs. Jackson: (Sternly) "Now listen to me. We can't always have every thing we want. You are old enough to know that. Your father and I don't want to leave Gold Rock any more than you do. This is our home, and we hoped we would never leave it. But we've talked it over, and we don't see anything else to do."

Ty: "Go if you want to. I'll stay in Gold Rock by myself." (Runs out of the room.)

Mrs. Jackson: "Ty...Ty...(Goes to the door and looks outside.)"

Mr. Jackson: "Let him be. He'll just have to get used to the idea. He'll come back in a little while. The boy needs some thinking time."

SCENE 2

Reporter: "But Ty Jackson doesn't come back. He has an idea. Quickly and quietly he saddles his horse and rides halfway around the mountain until he reaches the Weber Ranch. In response to his knock, Mr. Weber opens the door."

Mr. Weber: "Hello, Ty. What brings you out so late? Is something wrong? Come on inside."(Ty enters.)

Ty: "Yes, sir."

Mr. Weber: "What is it?"

Ty: "It's our grocery store, Mr. Weber. People don't come there anymore. They all go to the new store on the highway."

Mr. Weber: "Why doesn't your father open a store in the new town?"

Ty: "It's too late. The new town already has three grocery stores. Besides we like Gold Rock. It's our home and we want to stay. But we'll have to go to the city unless..."

Mr. Weber: "Unless what?"

Ty: "Unless people start coming to our grocery store again. As long as the people from the ranches came to the store, everything was alright.... But now they go to the new town."

Mr. Weber: "And you want me to buy groceries at your store?"

Ty: "It would help us if you would."

Mr. Weber: (Mr. Weber is quiet for a while) "Ty, no one takes much care of the Gold Rock Road anymore. It was slick and muddy the last time I started to your store. I couldn't get my car through. It was much easier to go to the new town."

Ty: "The road isn't muddy now."

Mr. Weber: "No, but it's rough and rocky. And there is something else. Your store is a small one. You don't always have the things I need. In the new town I can get everything. I'm really sorry."

Ty: "Well, I'd better go now....(got up to leave). Maybe I could work for you Mr. Weber. If I could work here, I could still live at Gold Rock."

Mr. Weber: "How old are you?"

Ty: "Twelve"

Mr. Weber: "Twelve is kind of young for a ranch-hand. I'm sorry. I know how you feel, but it may be a good thing for you to go to the city. A ghost town is no place for anybody, especially a growing boy like you."

Ty: (Sadly) "Good night, Mr. Weber."

Mr. Weber: "Good night, son, I'm really sorry. (Ty exits.)

SCENE 3

Reporter: "Mrs. Jackson doesn't scold Ty when he returns. She doesn't even ask where he has been. She gives him something to eat and tells him the good news. She and Ty's father have decided not to leave Gold Rock until after his friend's visit. Of course this makes Ty very happy. The next few days he is very busy, working hard, scrubbing and clearing one of the many empty houses in town, making it ready for the Connors. The days fly by and soon his friends are in Gold Rock."

Ty: "Paul, that building over there used to be the jail. (Points) Nora, believe it or not, Dad said it was full most every Saturday night."

Nora: "Why did Gold Rock turn into a ghost town?"

Paul: "Why did all the people leave?"

Ty: "This used to be a gold town, but the men didn't find much gold, and some of them left. Then it was a lumber town. But after a while there weren't enough trees to keep the lumber mill running, so more people went away. Then the new highway came through and missed us and that was the end of Gold Rock."

Nora: "It's so pretty here. It looks just the way Great Grandfather Connor wrote about it in his diary."

Paul: " We brought his diary with us. We thought you'd like to see it."

Nora: "Our great grandfather left his wife and children in Ohio and came here to find gold."

Paul: "He was going to send for them when he struck it rich, but he never did."

Nora: "He did find something, but it wasn't gold."

Ty: "What did he find?"

Paul: "A cave. He found a cave in the canyon."

Nora: "Do you know where the cave is, Ty?"

Ty: (Shakes his head.) "Cave? What cave? I have never heard of any cave in the canyon. I've been living here all my life and never have heard anyone speak of a cave."

Paul: "Maybe no one else ever found it! Here's what we know about it. Great grandfather made what turned out to be his last trip into the canyon. He was gone so long that his friends went to look for him. They found him in the canyon trying to get back to town, too weak to walk. Just before he died he said something about a cave and being lost a long time with nothing to eat. His friends wrote to his wife back in Ohio about it and sent his diary to her."

Ty: "I sure would like to see that diary. Maybe it would give us some clues as to where the cave is located."

Nora: "We'll show it to you. (Looking up to the sky.) It looks like it is going to rain. This would be a good time for you to show us your rock collection. I've never seen a gold nugget. We'll bring the diary to your home. See you in a few minutes."

Ty: "Okay, see you soon."

SCENE 4

Reporter: "The children are all peering down at a small brown book."

Paul: "See on the front cover, it says, "Diary of John Connor." He must have taken it with him where ever he went. He wrote in it almost every day."

Ty: "Gosh, the book is so old it's falling apart! But you can still see the writing. Let's see what it says:

> "March 19, 1858, Today, the others are at the creek panning for gold. I think there is just a little gold in the creek, but I feel sure there is much to be found near here."

There's more here, but the writing is so faded that we can't read anymore."

Ty: "Did anyone try to read it through a magnifying glass?"

Nora: "That's a great idea! We never thought of it."

Ty: (Picks up magnifying glass and studies page carefully.) "It's something about a cave. Look!"

Nora: "What does it say?"

Ty: "I can't believe my eyes! Here, Paul, you read it and tell us what you think it says."

Paul: "I see it! It says, "Gold...in the cave!"

Nora: "Oh how exciting! Look, the rain has stopped. We can go to the cave in the canyon and look for the gold."

Paul: "That's a pretty big canyon. Where would we find it?"

Nora: "The diary tells us where to find it! It's just beneath the 'Great Cross'. Ty, where is the Great Cross?"

Ty: (Puzzled) "I don't know. I never heard of it before."

Paul: "Maybe your father would know. Let's ask him. We can start hunting for the lost cave early in the morning. Come on." (They exit.)

SCENE 5

Reporter: "When the children ask Mr. Jackson about the Great Cross, he, too, tells them he has never heard of it. He reminds them that everything that is written in the diary happened more than a hundred years ago. If there had been a cave with gold in it, he feels someone would have found it by now. But the children are determined to look for the lost cave.... Early the next morning, Ty, Paul, and Nora pack a lunch and start hiking toward the canyon."

Ty: "Last night, before I went to sleep, I had an idea about the Great Cross. There are animal trails in in a wild place like a canyon. My father says animals follow the same trails for years and years. Perhaps the Great Cross is where one of these trails crosses another."

Paul: "That sounds possible. At least we have something to look for."

Ty: "And I thought of something else. If we find the cave with gold in it, it will start a gold rush. Then so many people will come to Gold Rock, it won't be a ghost town anymore."

Nora: "And then you won't have to move away! I hope we find the gold."

Ty: "Here's an animal trail. Let's follow it to where it crosses another trail. If its near a steep embankment, we'll look for a cave."

Paul: "Okay. Let's go." (They exit)

Reporter: "They follow trail after trail, with no luck. Paul tears his shirt. A red ant stings Ty on his hand. Nora is having a hard time keeping up with the boys as they go up and down steep slopes. Now they know how gold hunters feel when they look for gold and don't find any. They realize finally, that it would take years to look everywhere in the canyon, and decide to give up in the search."

SCENE 6

Reporter: "For the next few days they go fishing, riding, and mountain climbing. They have all but forgotton about the lost cave and its treasure of gold.... One day the boys are examining rock samples they have found near a large boulder."

Paul: (Hammering a rock) "What a neat rock collection I've started here. This gray rock has small purple stones in it!"

Ty: "I think that is amethyst crystal in the rock."

Nora: "Come here quickly!" (Ty and Paul run to her side)

Paul: "What's the matter?"

Nora: "Look, over there. (Points back into the canyon) Down the side of the canyon wall is a ridge. See it? Now look. The shadows of the late afternoon are making a large cross."

Ty: (Amazed) "I've lived here all my life and I've looked at that cliff a hundred times, but I never saw that cross before!"

Paul: "You would have to be in the right place at the right time, when the shadows are on the rocks!"

Nora: "See, it's changing now. The shadows are moving. It doesn't look so much like a cross anymore."

Ty: "I had better hike over and put a mark on that tree or we won't be able to find it in the morning. We don't have time to climb in the canyon now. It will be dark real soon." (Exits)

Paul: "Ty is right. It's getting dark fast. I wish he'd hurry. We don't want to get stuck here all night."

Nora: "I wish he hadn't gone. It's so dark, it's getting kind of scary. (Footsteps) There he is!"

Paul: "Where were you? Did you go down into the canyon?"

Ty: "No. I went up the trail till I was right under the cross. Then I had to mark a tree. I wanted to be sure we could find the place in the morning."

SCENE 7

Reporter: "The sun is just over the mountain when they start out the next morning. They climb past the big rock, where they had found the amethyst, until they reach the tree where Ty had made the mark. Then they climb down the steep bank. They look among bushes and rocks, but they can not find the cave. Then Nora feels some cool air blowing between two rocks. They push and prod until one of the big rocks comes free and rolls down the bank. They have found it!

There is a cave, so dark inside they can see in only a little way. Ty runs home to get some candles. Nora and Paul wait in front of the cave until Ty returns with his father. Mr. Jackson carries candles and rope."

Ty: "When I told Dad about the cave he wanted to come along to help us explore it."

Mr. Jackson: "Did you go inside the cave?"

Nora: "I was afraid."

Paul: "It was too dark for us to see anything anyway."

Mr. Jackson: "I'm glad you waited. The cave might not be safe. There might be falling rocks or pools of water. I'm going to tie one end of my rope here. And if I get into trouble, I'll tug on the rope and you can pull me out."

Ty: "I wonder what we'll find inside the cave."

Reporter: "When Mr. Jackson reappears, they all ask him what he has found and if they can go in."

Mr. Jackson: "It's safe enough. Come on, all of you. I want you to see this, but please be careful."

Prporter: "They enter the cave in single file each one holding a candle. There are two large openings inside the cave. Long pointed formations hang from the roof. A waterfall splashes over huge rocks. It is a strange feeling being inside a cave. But how does one look for gold? It is so damp and cold they all begin to shiver. They can't stay in the cave any longer. Mr. Jackson gathers some rock samples and they all file out of the cave."

SCENE 8

Reporter: "When they return to Gold Rock, Mr. Jackson shows the rocks to his friend, Steve, a rock expert. Steve examines the rocks and decides to visit the cave. He spends four days exploring the cave. Finally he comes to Mr. Jackson's store to report on his findings. The cksons and Nora and Paul listen very carefully to Steve."

Steve: "I've been all through the cave."

Ty: "What did you find?"

Steve: "I found many rocks and lots of strange and different looking rooms."

Ty: "Any gold?"

Steve: "No, I didn't find a sign of any gold."

Paul: "But there is gold. There has got to be gold there!"

Steve: "What makes you so sure of that?"

Paul: "Our great grandfather kept a diary. He found the cave and wrote about the gold."

Steve: "I'd like to see what he wrote. Do you have the diary here?"

Ty: "It's in my room. I'll get it." (Exits)

Paul: "The first part of the diary is about finding the cave We couldn't read the faded writing at the end of the diary until we used Ty's magnifying glass."

Ty: (Ty returns with the diary) "See, hold the magnifying glass over the page here and read this line. It says "gold in the cave".

Steve: (Removes a powerful magnifying glass that fits over his eye from a small leather case.) "Let me look at the page with this powerful magnifying glass I use when studying rock samples. It's much stronger than yours."

Reporter: "Ty hands the book to him. Steve looks at it carefully then hands it back to Ty."

Steve: "I see what you read. But, Ty, if you look very carefully you will see a little scratch on the paper. It makes the 'c' look like a 'g'. Look carefully. Then give it to Paul to read."

Paul: (Looks through glass) "It's not 'gold in the cave', it says 'cold in the cave'."

(They all look disappointed.)

Mr. Jackson: "We're sorry, too. But thanks a lot for helping us, Steve. We all were hoping there would be gold there; but there isn't. I guess Gold Rock will remain a ghost town after all.

SCENE 9

Reporter: "This is when I came to Gold Rock. My paper wanted me to interview the boy who had found the lost cave. I thought we were first to hear about it, but when I arrived in town there were crowds of curious people ahead of me, waiting to visit the cave everyone was talking about. Then I began to realize that I was watching a ghost town come to life."

Ty: (Ty is waiting on customers.) "What do you want to buy, Ma'm?"

Visitor: "We're going to visit the cave we've heard so much about. We need some things for a picnic lunch. I want a loaf of bread, some peanut butter and some jelly, please. Do you have any American cheese?"

Ty: "Not right now, but we'll have some in about an hour when my father gets back with the grocery truck. That will be ninety-eight cents, please. (Give her change.) Thank you. Bye." (Visitor exits)

Mr. Weber: (Enters) "Hello, Ty."

Ty: (Surprised) "Why, hello, Mr. Weber. I'm sure glad to see you here."

Mr. Weber: "I just heard some news. I drove over to find out if it's true. Did you really find a cave in the canyon?"

Ty: "Yes, I did, with some friends of mine."

Mr. Weber: "Could you show it to me?"

Ty: "Just as soon as my dad comes back. It's a wonderful sight to see."

Mr. Weber: "Well, while I'm here, I'd like to buy some food and supplies. I'll write my order down. (Takes an order form and starts to fill it out) Your father can be filling this order while we explore the cave."

Visitor: (Returns) "Young man, I forgot to get a dozen apples when I was here before. May I have some please?"

Ty: (Smiles) "Yes, Ma'm."(Places apples in paper bag)

Visitor: "Young man, is there something funny about me?"

Ty: "Oh, no."

Visitor: "Then why are you smiling?"

Ty: "I didn't know I was smiling. I guess it's just because I feel so good, Gold Rock isn't a ghost town anymore. People keep coming from everywhere to see the cave. I'm so happy I want to say to everyone, 'Welcome to Gold Rock!' "

C A R E E R S U N I T 1

"HOME BUILDING"

Intermediate Unit:

Ethel Shaffer
Cathy Kohen
Larry Battles

Kingston Elementary School
Mary Pinkley, Principal

GOAL	BEHAVIORAL OBJECTIVES	SUB-OBJECTIVES
I. To develop an awareness that there are different careers within a major field.	1. Given a list of workers in the home building industry, students will list three workers in each of the following areas: a. Planning for a home b. Producing materials for a home c. Building a home d. Selling a home	a. Given a list of home building workers, each student will select a worker, gather information about that occupation, qualifications, training, salary, and tools used. Student will record this information with appropriate illustrations. These stories will then be compiled into a class booklet. b. Using the phone directory, students will list the jobs and workers involved in the home building industry. c. Using the format for "What's My Line", students will develop a set of questions to be used in playing the game, using home building occupations and then play "What's My Line?" d. Students will make collages about workers. Collages should include various tasks the worker does, clothing worn, tools used by the worker. Based on observations of the collage, students will guess what worker is depicted e. Children will conduct a scavenger hunt in their own homes and make a list of the work that might have been done in their home by the various workers in the building industry.

BEHAVIORAL OBJECTIVES	SUB-OBJECTIVES
	f. Given an envelope containing specific letters which spell out the name of a worker, the child will unscramble the word and write about the worker telling what he does, where he works, and how he helps in building a house. The child will draw a picture to go with the story.
	g. Given newspaper and magazines, the children will select photographs of workers and construct a mural on home building using the photographs.
2. Given a list of occupations in the home building industry, students will identify personal characteristics of individuals suited to a specific job.	a. Students will write a tall tale about a modern day worker.
	b. Given appropriate information about requirements for a specific job, the students will plan and conduct a job interview for the job.
	c. Given appropriate information about requirements for a job, the students will write a want ad for the job.
	d. Given the name of a specific worker, the student will describe that worker's work behaviors while the other students attempt to determine the job held by the person.

BEHAVIORAL OBJECTIVES	[illegible]
	[illegible] students will draw cartoon[illegible] [illegible] workers who don't seem to [illegible] their work, i.e., because [illegible] he is using, stage of [illegible], or worker's lack of [illegible] abilities.
	[illegible] will plan a comedy show [illegible] workers who don't fit [illegible] particular job.
	[illegible]
3. Given a list of occupations in the home building industry, students will differentiate [illegible] them on the basis of [illegible] technical training and education required for the jobs.	[illegible] will make a mobile [illegible] needs for various [illegible] in the building industry.
	[illegible] will make a mobile [illegible] specific worker, various [illegible] is responsible for, and [illegible] he uses.
	[illegible] will observe a worker [illegible] specific period of time to [illegible] skills, type of environment, and limitations apparent [illegible] work.
	[illegible] will construct a chart [illegible] specific workers, technical training and education [illegible] for jobs.

BEHAVIORAL OBJECTIVES	[illegible]
	Students will make booklets portraying or advertising the characteristics of different jobs including training needed.
	Students will graph the amount of training needed for various occupations.
	[illegible]
4. Given a specified task in the home building industry students will be able to role play, act out, or put on a puppet show depicting the various workers doing their jobs.	Given a specific occupation, students in pairs, will role play those occupations with particular to training, skills, qualifications, and advantages of occupations
	Students will make puppets about certain workers. They will develop and perform skits showing how the workers in the building industry discussing and demonstrating their jobs. Students will then list the workers and the tasks each performs.
1, 2, 3, 4.	Students will organize information gained from study on a retrieval chart of all workers, listing specific jobs, training, and or education required, approximate salary, tools, or equipment required for job, and advantages and disadvantages.

[illegible]

[illegible] of the inter-[illegible] and [illegible] of [illegible] in the [illegible] society.

BEHAVIORAL OBJECTIVES

1. Given a list of jobs in the housing industry, students will be able to explain how they are related.

[illegible] OBJECTIVES

[illegible] a list of workers and the [illegible] they do, students will make [illegible] line showing steps in [illegible] a home.

[illegible] of students will design [illegible] circular chart depicting inter-[illegible] of workers. Each [illegible] will explain its chart to [illegible] class.

[illegible] a picture of a specific [illegible], the student will write [illegible] describing what the [illegible] is doing.

[illegible] will plan and draw a [illegible] showing the sequential [illegible] in building a home.

[illegible] will make a work chart [illegible] illustrate that responsibility [illegible] one "job" is often shared [illegible] number of people.

[illegible] will decide which "job" [illegible] may use the same kind [illegible] skills and determine if the [illegible] for one type of work may [illegible] that worker for other [illegible]. A diagram is to be made [illegible] a job family.

[illegible] will write a para-[illegible] about various jobs that [illegible] done out of doors, indoors [illegible] electric tools, with an [illegible], etc.

BEHAVIORAL OBJECTIVES

1. Given a specific task (building a doll house), students will develop the necessary skills and work together cooperatively to achieve the task.

OBJECTIVES

Objective 1-a-b

Given a blueprint, students will be able to respond correctly to questions about the house dimensions, number of windows and doors in the house, and size of a specific room.

Students will make a scale drawing of a house.

Given dimensions of the floor plan of a house, students will compute the square footage.

Given dimensions of a specific room and the price of carpeting, students will compute square yards of carpet needed and the cost of the carpeting.

Students will draw a plan for landscaping a lot. They will investigate and estimate the cost of the landscaping plan.

Given a worker's hourly rate, students will compute the worker's salary for a week and a month.

g. Given a blueprint for a doll house students will figure the materials needed and the cost of a doll house.

BEHAVIORAL OBJECTIVES	SUB-OBJECTIVES
	h. Given the dimensions of a lot and house, students will determine how much grass seed to buy for the lot.
	i. Given dimensions for several homes of different sizes, students will determine the cubic yards of top soil to be removed.
	j. Given dimensions for basements of varying sizes, students will figure cubic yards of soil to be removed for basement excavation.
	k. Given dimensions of several homes students will estimate the quality of bricks required for different sized buildings.
	l. Given dimensions for rooms of varying sizes, students will estimate number of gallons of paint needed for each room.
	m. Students will select a specific worker, determine supplies that workers would need, figure cost of supplies, and fill out an order form for purchase of supplies.
	n. Given dimensions for a home and a lot, students will plot the proportion of the house to the property on graph paper.

GOALS	BEHAVIORAL OBJECTIVES	SUB-OBJECTIVES
		o. Given dimensions for a house students will plot basic floor plan on graph paper.
III. To develop the ability to group and regroup items according to a number of different attributes.	1. Given the task of making observations during a field trip, the students will identify the tasks of different workers.	a. Students will enumerate specific work tasks observed.
		b. Students will group enumerated items together in groups based on relationships among the items and will state reason for each group.
		c. Students will suggest labels that are appropriate for the relationships used to group items and provide reasons for appropriateness of each label.
		d. Students will subsume items under more than one label and subsume labels under other labels, giving reasons for the subsuming.
		e. Students will form new groups, label groups, subsume items, identifying completely different relationships and giving reasons for each step.
	2. Given a similar follow-up field trip, students will compare and contrast observations with those of the previous field trip.	a. Activities for this item are the same as for the previous behavioral objective.

GOALS	BEHAVIORAL OBJECTIVES	SUB-OBJECTIVES
IV. To develop the ability to record data in a number of various ways.	1. Given specific sets of facts, students will be able to make a bar graph, pictograph, or line graph.	a. Using the yellow pages of the phone book, students will count the number of listings for advertisements related to home building, and show the results on a graph.
		b. Using the figures showing a break down of costs for the construction of a house, students will make a pictograph showing how dollars are spent on a home, i.e., land, labor, materials, etc.
		c. Given salaries of various workers students will record this information on a graph.
	2. Given 15 steps in building a house, children will record this information in outline form.	a. Given a series of filmstrips on home building, students will list steps in home building in sequential order.
		b. Given a list of sequential steps in home building, students will group them and arrange in outline form.

CHAPTER III

CAREER ORIENTATION EVALUATION

I. STATEMENT OF OBJECTIVES

1. Each student will be oriented to a wide range of career possibilities.
2. Program development objectives:
   a. To incorporate career materials within the standard catalog of instructional materials located within the middle school.
   b. To develop behaviorally stated objectives and procedures within the 7 - 8th grade instructional program so as to incorporate career orientation as one of the major facets in each of the respective disciplines.
   c. To utilize the revised curriculum material with all 7th and 8th grade students to determine if this procedure for providing career orientation is effective.

II. ACTIVITIES

Staff. All activities were limited to the 7th and 8th grades at Park Street Middle School. The total school was involved and consisted of 500 students and 30 staff members.

The program provided for 300 hours of inservice time to help staff understand the concept of Career Orientation and how to develop objectives and procedures to make it an integral part of

the curriculum.

An additional 300 hours of time was used by the staff to develop actual objectives and procedures to assure that career orientation was integrated into the curriculum.

Curriculum. Resource speakers from the community were utilized for the units of study. The following is a list of businesses, industries, and agencies which furnished speakers for Park Street Middle School with reference to careers:

Huntington National Bank
Shoaf Realty Company
Ohio Bell
Center of Science and Industry
Little Theatre
WTVN-TV
Grove City Government
South-Western City Schools
Battelle Memorial Institute
A Cake Decorator
City Loan Company
Insurance

Field trips were taken so that students could widen their orientation to different jobs.

All career materials were classified under the Dewey Decimal System and became an integral part of the Instructional Materials Center. Materials were made available to students for independent and group research. Teachers utilized career materials in development of the units of study.

The 15 Career Clusters, as identified by the United States Office of Education were assigned to specific instructional areas.

Specific occupations were assigned to the clusters so that teachers and students can readily aware themselves of the wide range of occupations within each cluster. Although career clusters were assigned to specific instructional areas, no attempt was made to isolate career orientation to any specific area. The purpose of the assignment was to determine how the curriculum relates to each career cluster. Career orientation has been and will continue to be the responsibility of the total staff and all instructional areas. The career clusters and assignments are located in another section within the Career Orientation Evaluation.

III. EVALUATION PROCEDURES

1. A survey of the orientation units of study revealed that all career clusters were integrated into the curriculum and 154 specific occupations were introduced this year.

2.a. A questionnaire was distributed to students and teachers at Park Street Middle School. Three hundred twenty-eight (328) students and 25 teachers responded to the questionnaire. The results of the questionnaire are as follows. To the question, "Are career materials in the I.M.C. available for your use?", the respondents indicated: 100% of the teachers answered yes and 96% of the students answered yes.

To the question, "Are the career materials in the I.M.C.

catalogued in accordance with the Dewey Decimal System?", 100 percent of the teachers answered yes and 84 percent of the students answered yes.

To the question, "How many times have you used career materials in the I.M.C.?", 2 percent of the students indicated they had not used career materials; 12 percent of the students indicated they had used career materials one time or more; 16 percent of the students indicated they had used career materials two times or more; 16 percent of the students indicated they had used career materials three times or more; 15 percent of the students indicated they had used career materials four times or more; 11 percent of the students indicated they had used career materials five times or more; 6 percent of the students indicated they had used career materials six times or more; 5 percent of the students indicated they had used career materials seven times or more; 5 percent of the students indicated they had used career materials eight times or more; 3 percent of the students indicated they had used career materials nine times or more; 9 percent of the students indicated they had used career materials ten times or more. The average amount of times for student usage of career materials in the I.M.C. was 4.4.

RESULTS OF ORIENTATION QUESTIONNAIRE

Question	Teachers % yes	Teachers % no	Students % yes	Students % no
1. Are career materials in the I.M.C. available for your use?	100	0	96	4
2. Are career materials in the I.M.C. catalogued in accordance with the Dewey Decimal System?	100	0	84	15
3. How many times have you used career materials in the I.M.C.?				
a. none	-	-	2	-
b. one or more	-	-	12	-
c. two or more	-	-	16	-
d. three or more	-	-	16	-
e. four or more	-	-	15	-
f. five or more	-	-	11	-
g. six or more	-	-	6	-
h. seven or more	-	-	5	-
i. eight or more	-	-	5	-
j. nine or more	-	-	3	-
k. ten or more	-	-	9	-

ORIENTATION STUDENT EVALUATION

1. Are career materials in the I.M.C. available for your use? Yes 96% No 4%

2. Are the career materials in the I.M.C. catalogued by the Dewey Decimal System? Yes 84% No 16%

3. How many times have you used career materials in the I.M.C.?

   1 2 3 (4) 5 6 7 8 9 10 or more. (Circle correct answer)

4. Did your teachers inform you about careers that relate to the subject studied? Yes 86% No 14%

5. Did you go on field trips to businesses and industries in Grove City? Yes 34% No 66%

6. Did you visit businesses and industries in some other city? Yes 47% No 53%

7. Did you see films and/or filmstrips on careers? Yes 58% No 42%

8. Did you talk individually to your teachers about careers? Yes 30% No 70%

9. Did you talk to your counselor about careers? Yes 10% No 90%

2.b. A review by the middle school curriculum committee of all curriculum material prepared revealed that behaviorally stated objectives and implementation procedures were prepared which incorporated career orientation material from all fifteen job clusters.

2.c. All career integrated units of study which were developed were implemented. The results of the pre-tests and post-tests administered to students at the beginning and conclusion of each unit determined that curriculum integration is a most effective procedure for providing career orientation.

IV. CAREER CLUSTER CURRICULUM

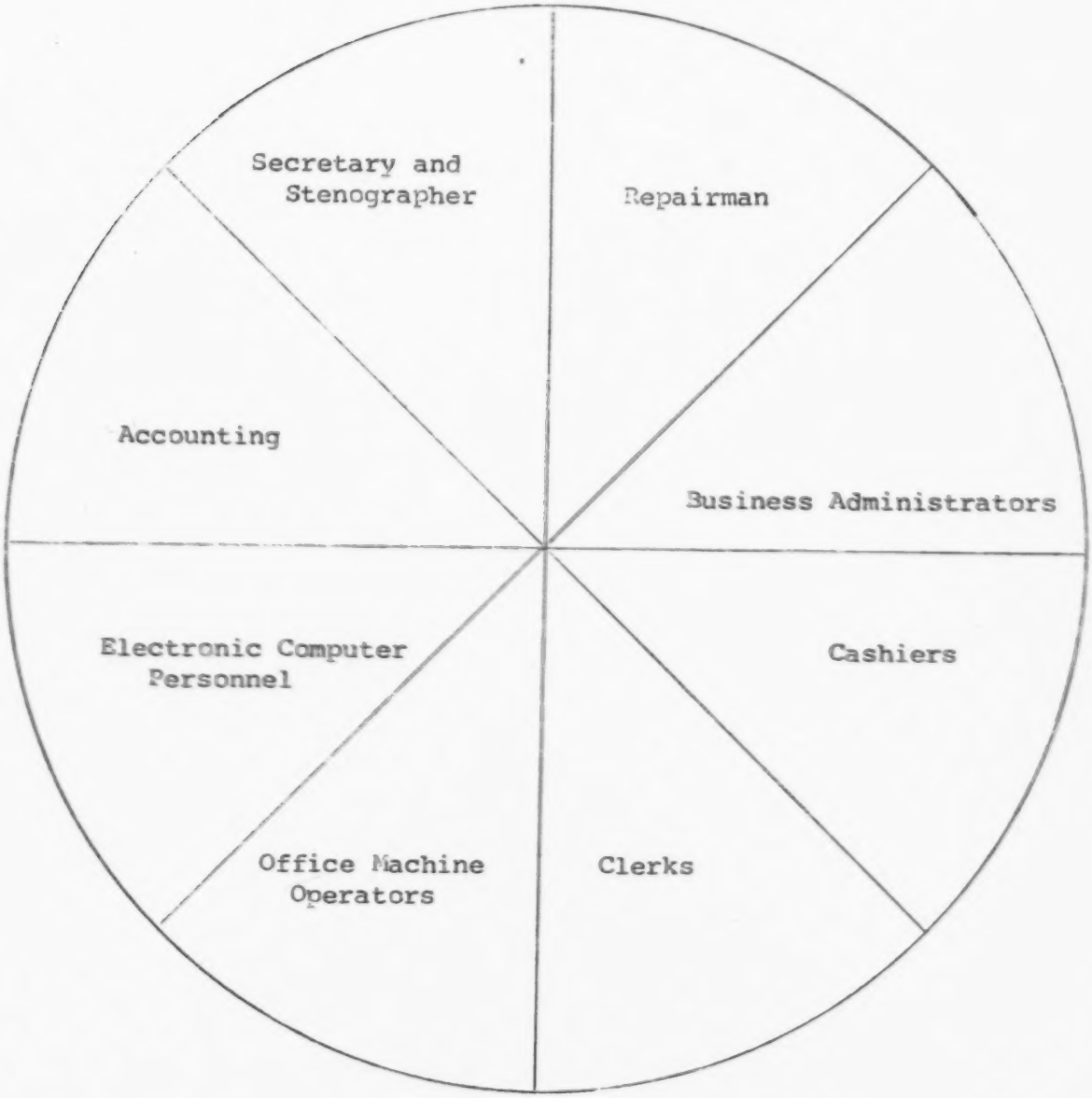
ASSIGNMENTS

Business and Office
Fine Arts & Humanities
Construction
Marketing & Distribution
Consumer and Homemaking
Hospitality and Recreation
Marine Science
Manufac-turing
Public Services
Trans-portation
Health Occupations
Personal Services
Communication and Media
Agri-Business, Natural Resources
Environment
Middle School Curriculum 7-8

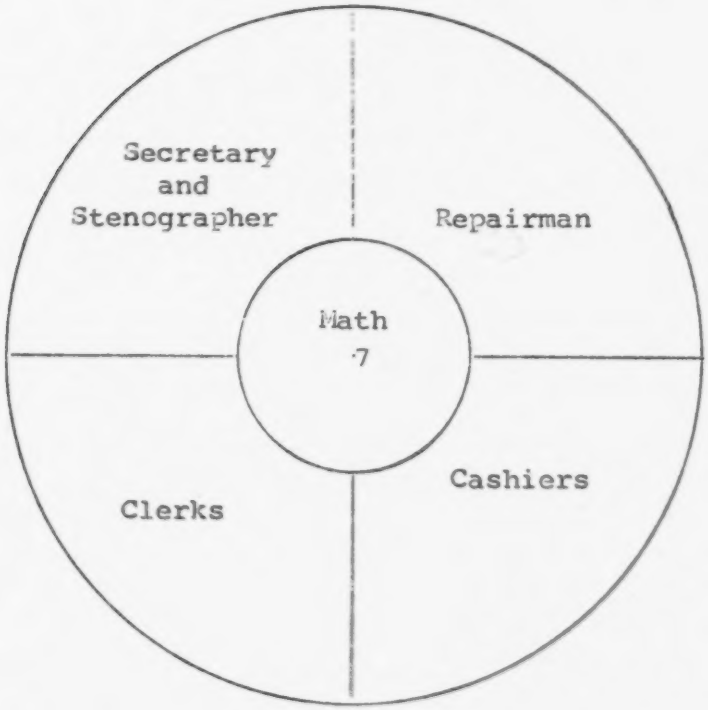
AGRI-BUSINESS AND NATURAL RESOURCES

AGRI-BUSINESS AND NATURAL RESOURCES

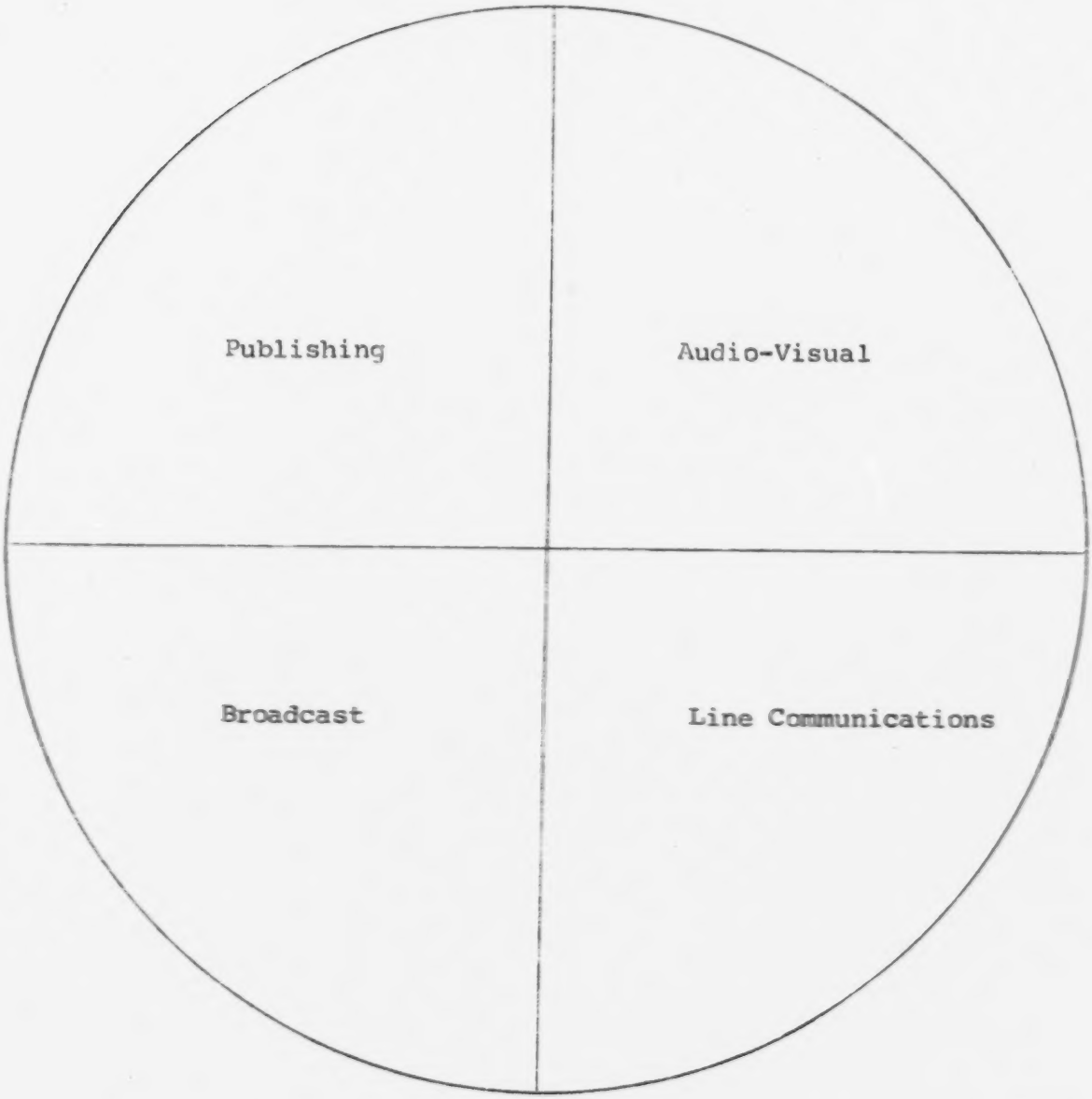
BUSINESS AND OFFICE OCCUPATIONS



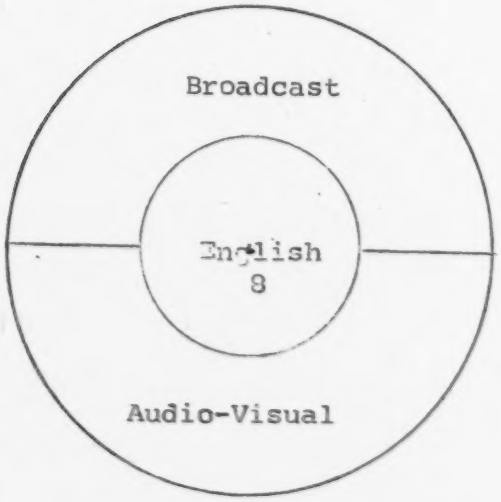
BUSINESS AND OFFICE OCCUPATIONS



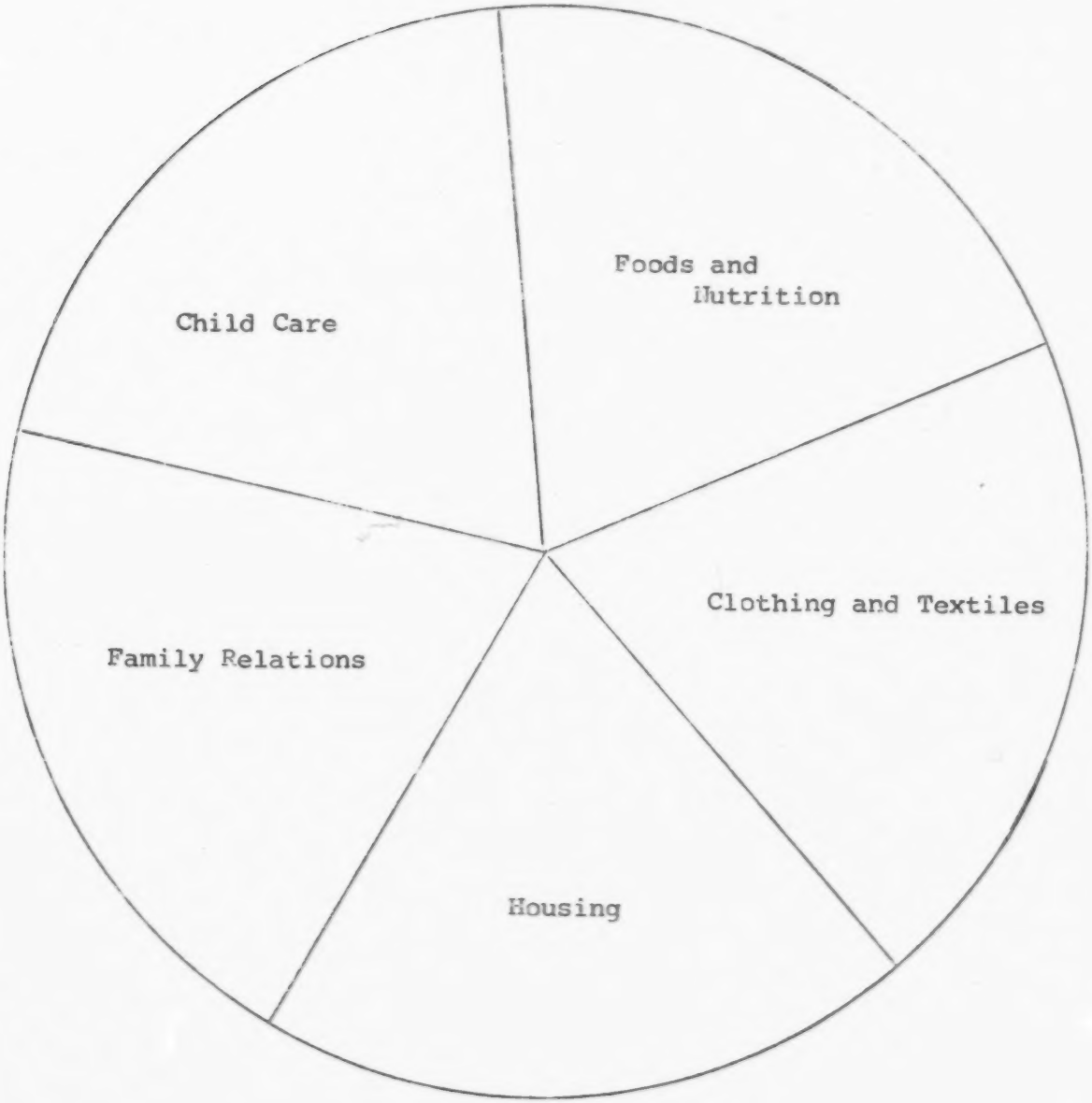
COMMUNICATIONS AND MEDIA



COMMUNICATION AND MEDIA



CONSUMER AND HOMEMAKING



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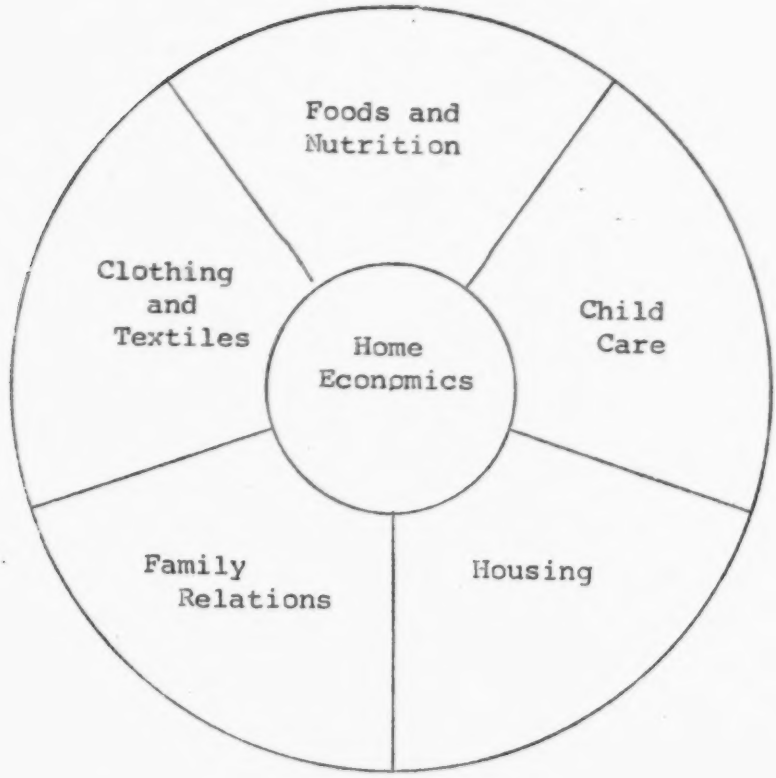
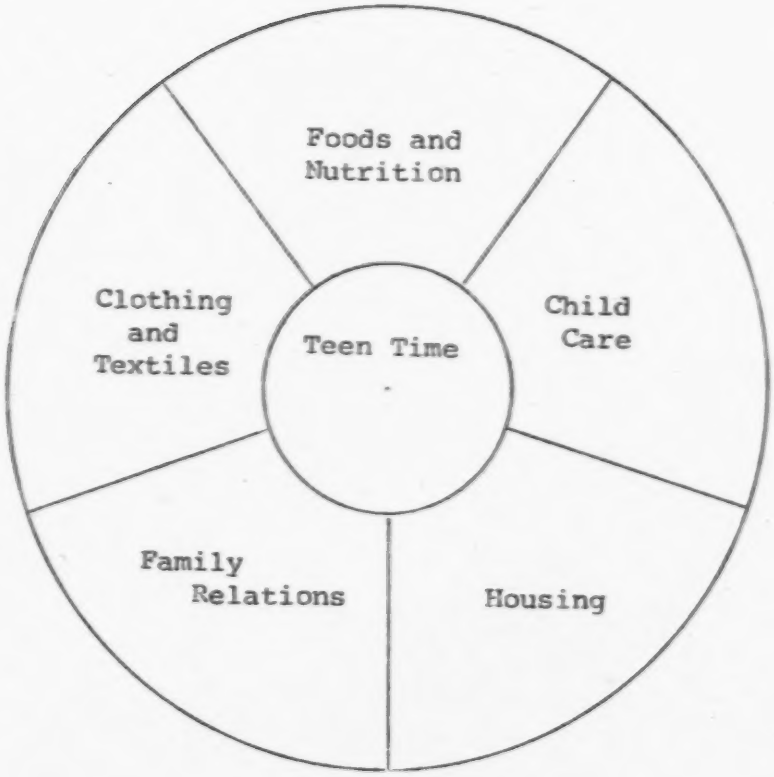
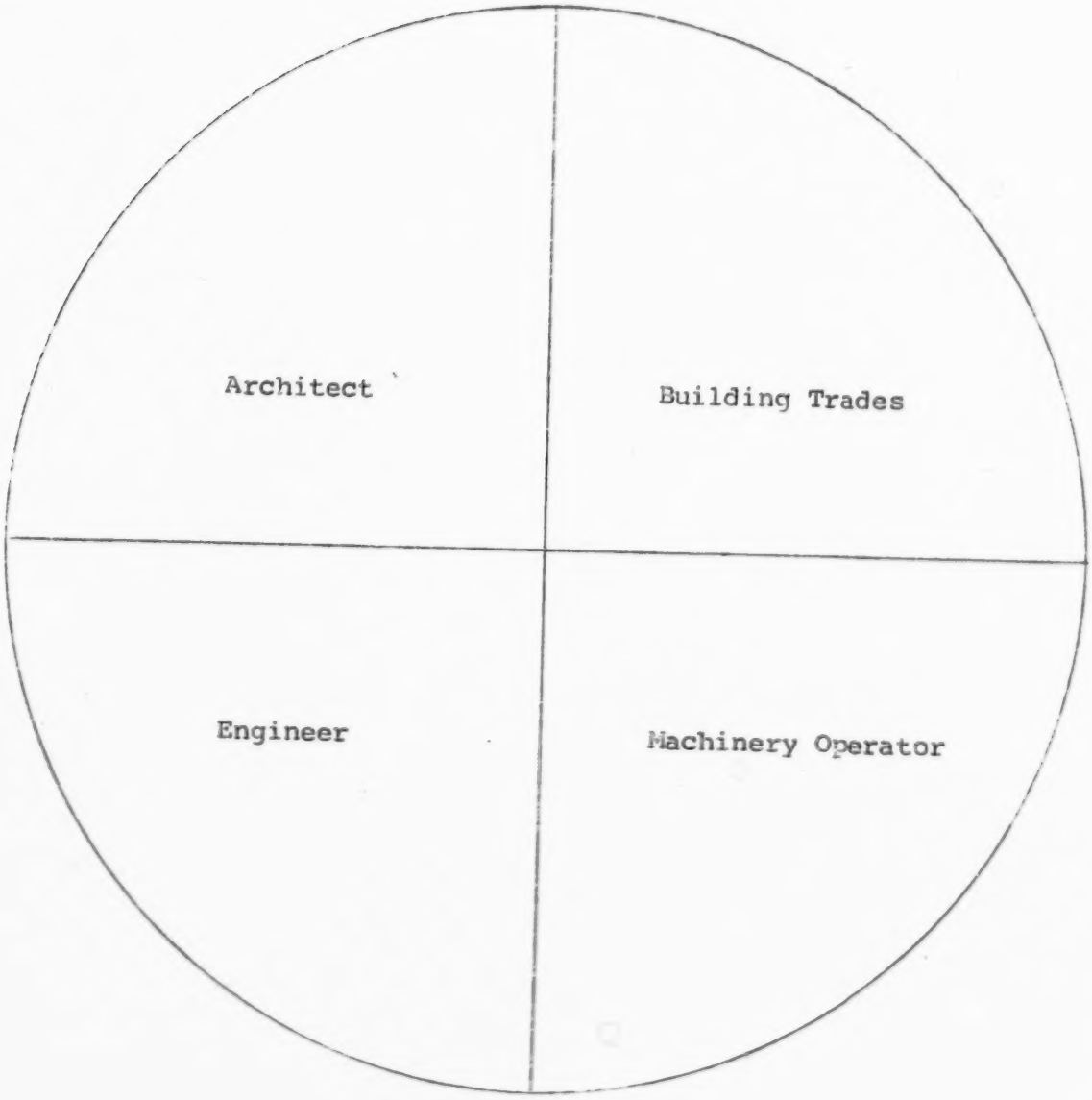
CONSUMER AND HOMEMAKING





1979

CONSTRUCTION



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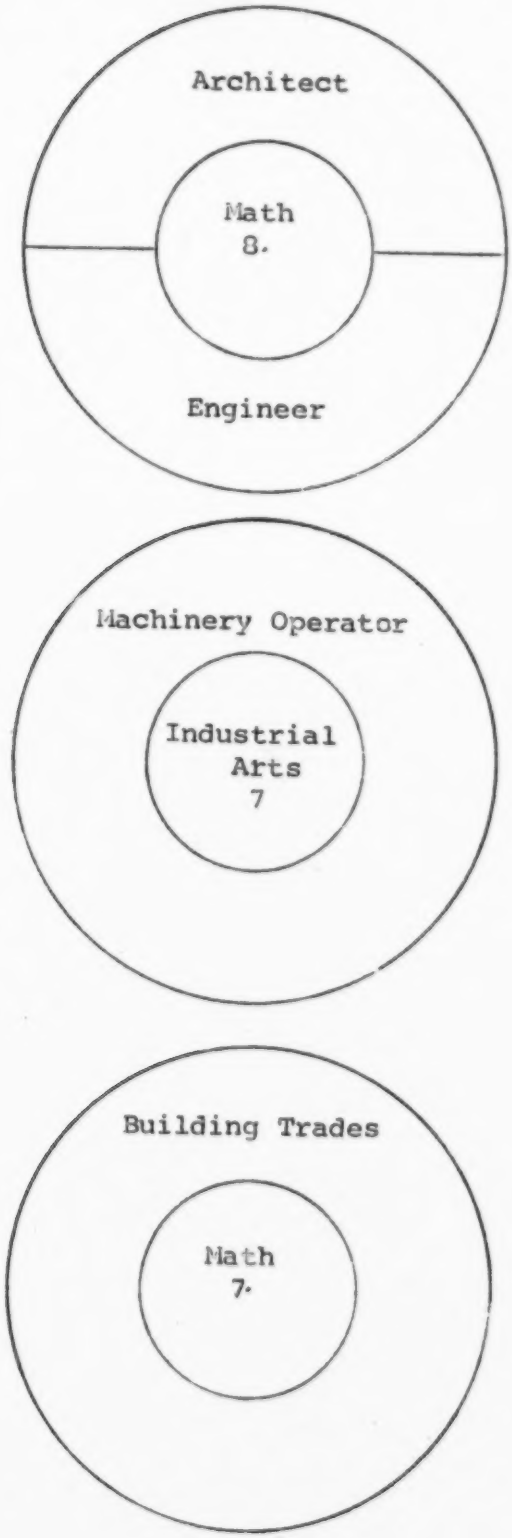
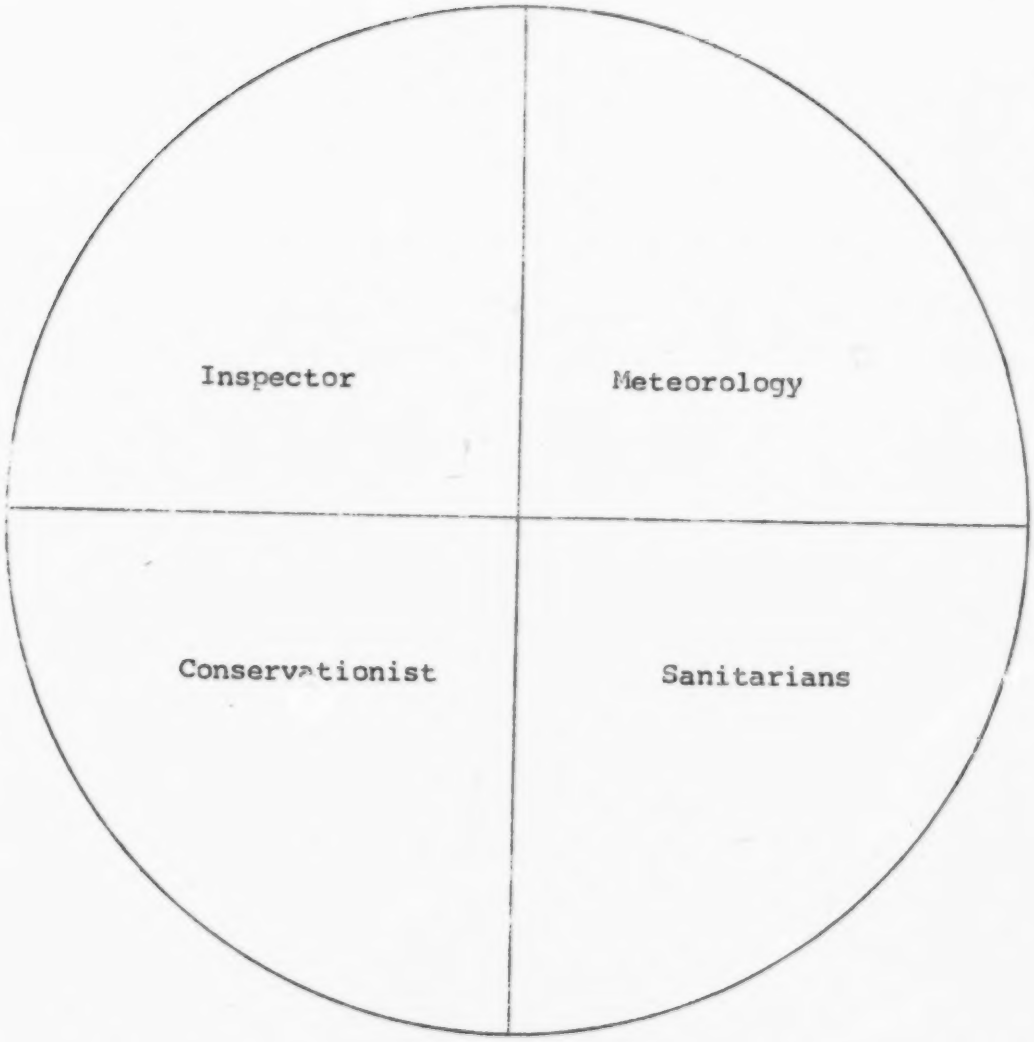


1981

ENVIRONMENT

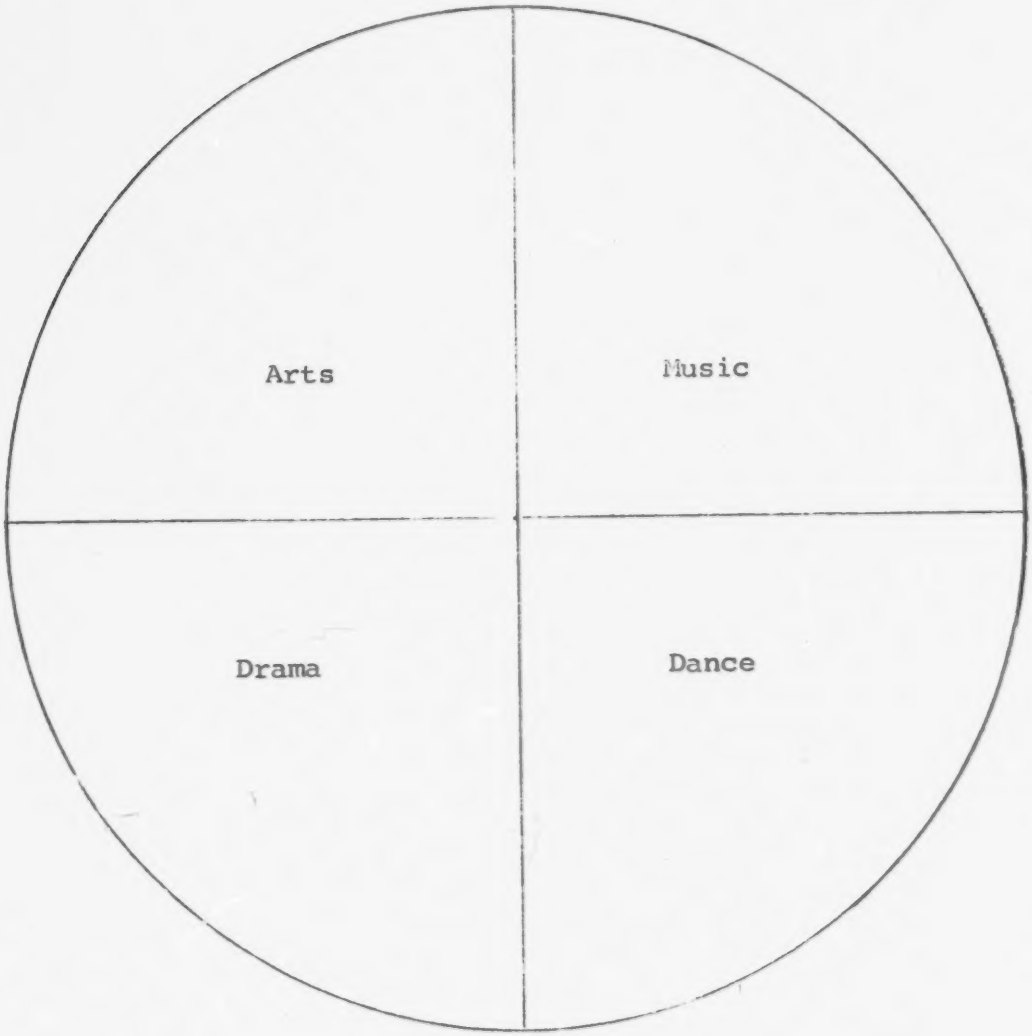


1982

ENVIRONMENT

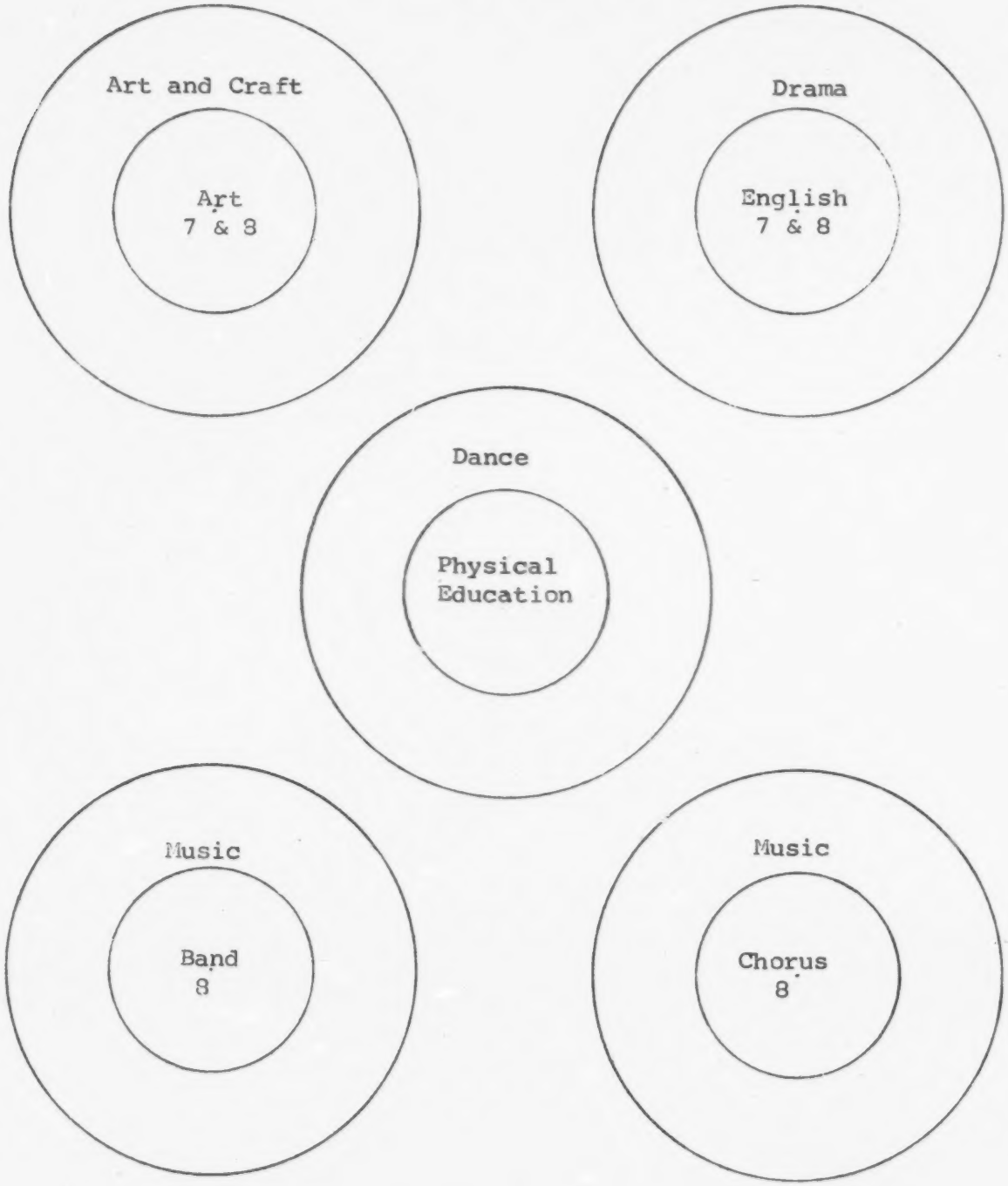
1083

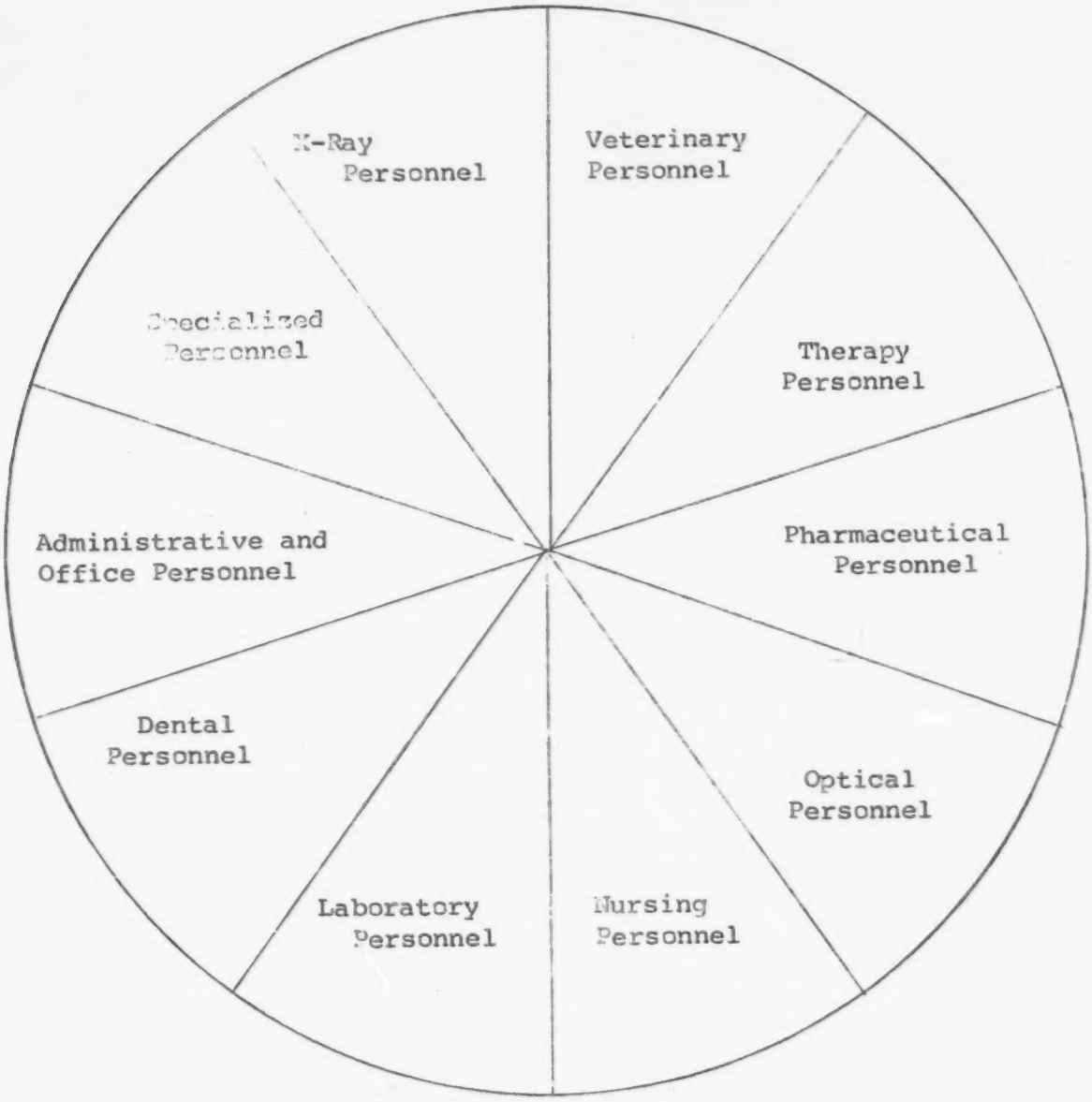
FINE ARTS AND HUMANITIES



1084

FINE ARTS AND HUMANITIES



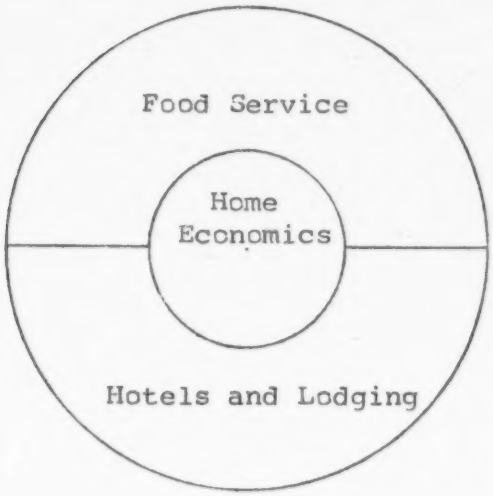

X-Ray Personnel
Veterinary Personnel
Specialized Personnel
Therapy Personnel
Administrative and Office Personnel
Pharmaceutical Personnel
Dental Personnel
Optical Personnel
Laboratory Personnel
Nursing Personnel

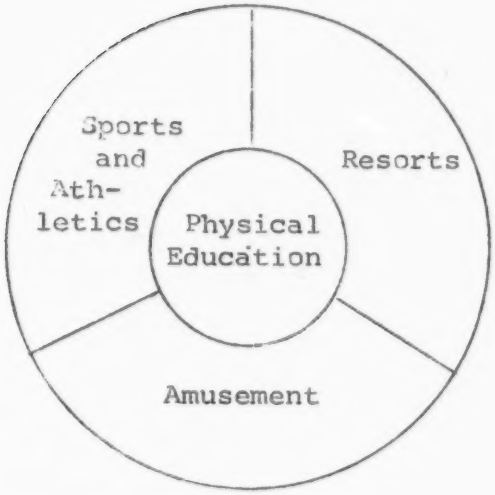
HEALTH OCCUPATIONS

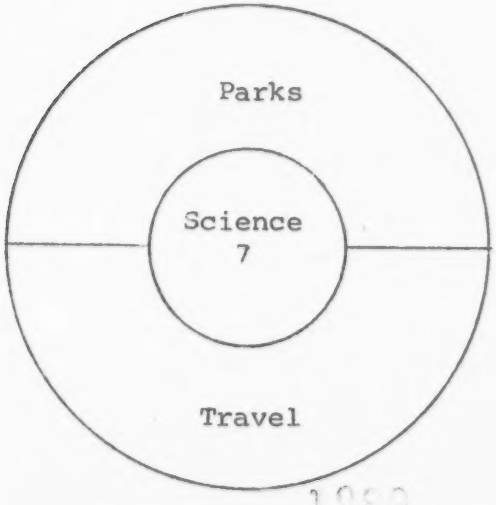
1987

HOSPITALITY AND RECREATION

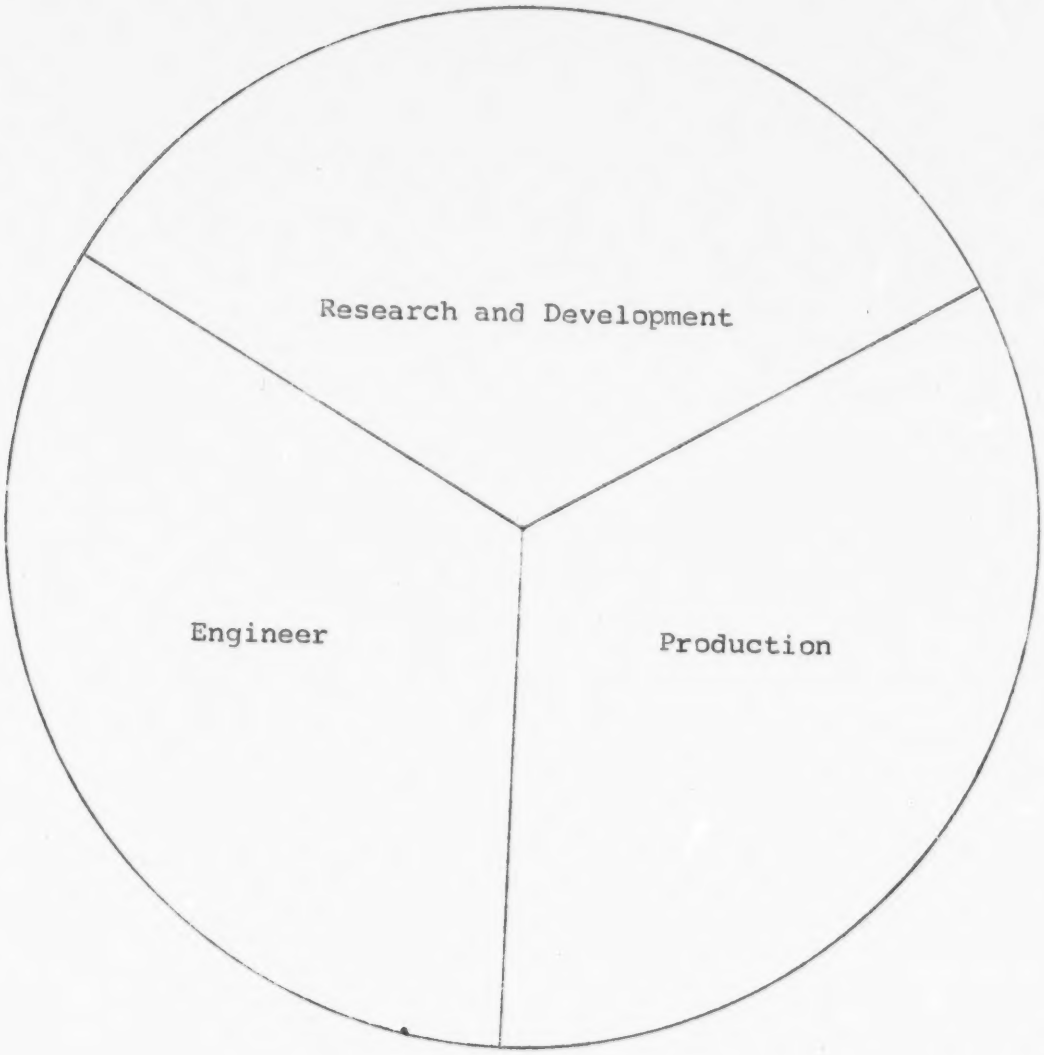
HOSPITALITY AND RECREATION



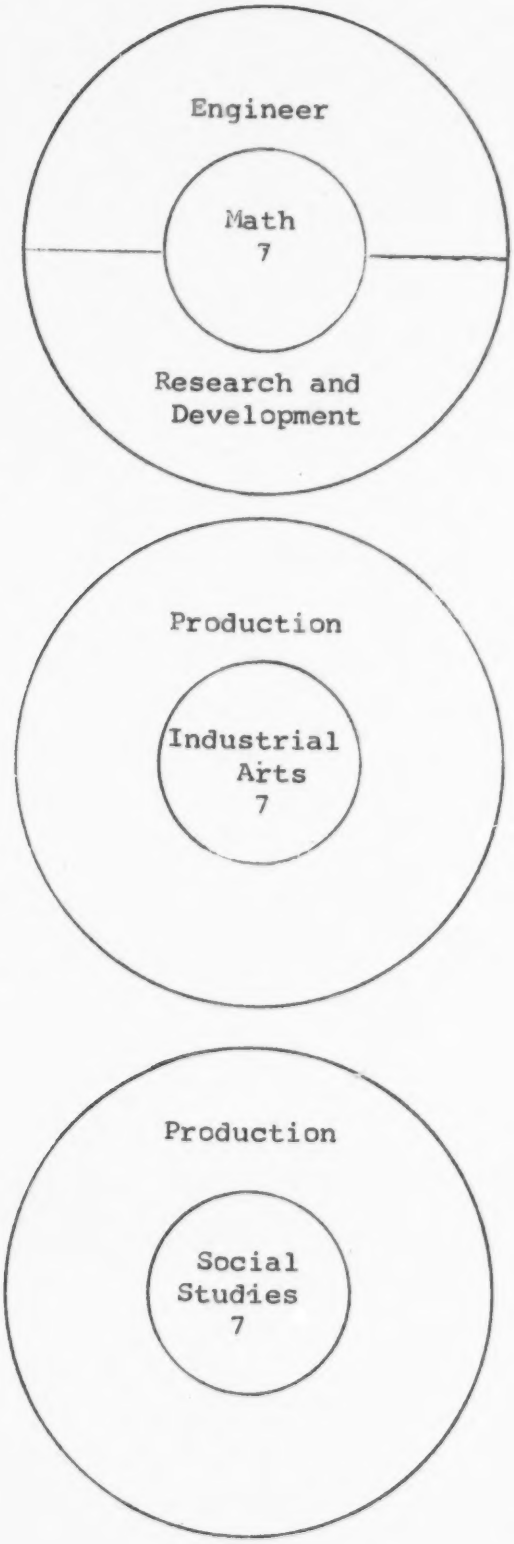




MANUFACTURING

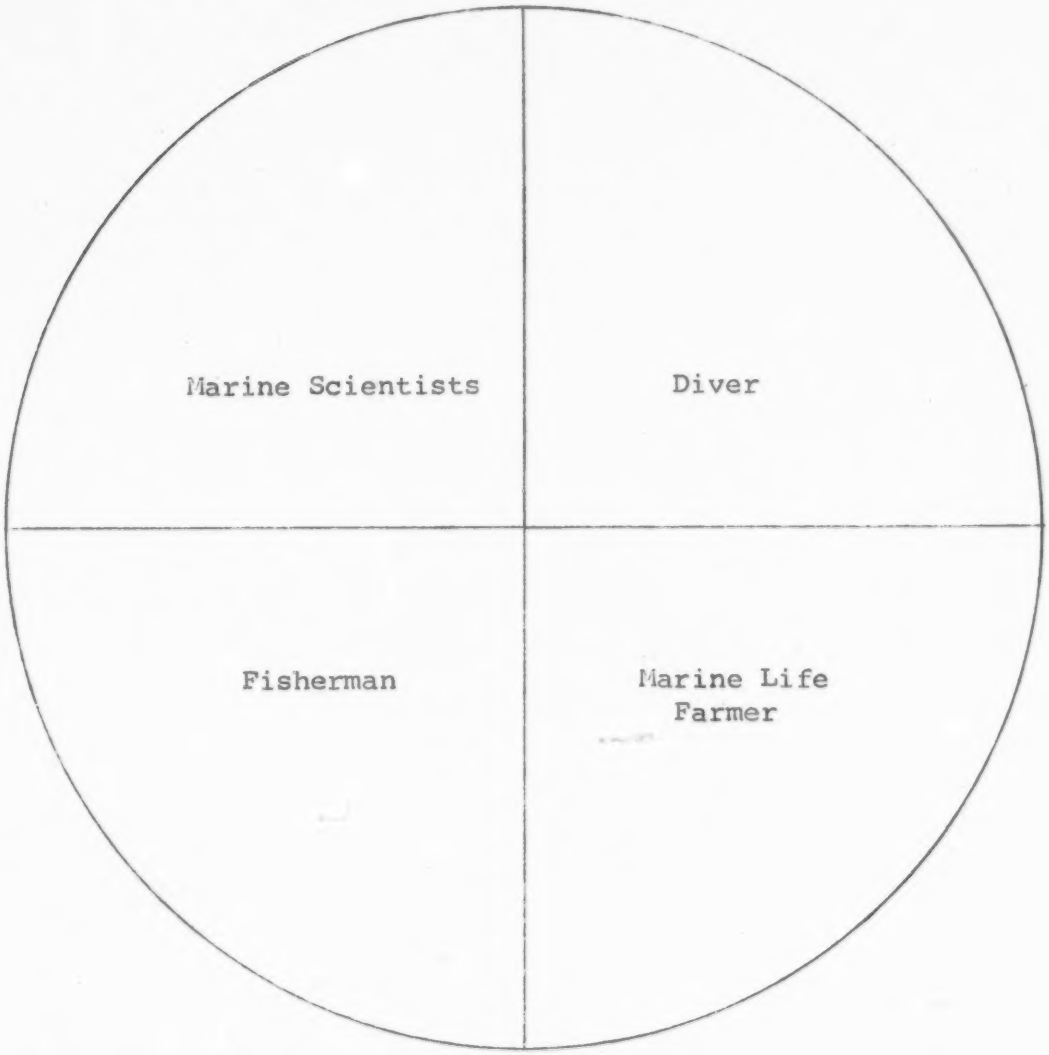


MANUFACTURING



1891

MARINE SCIENCE OCCUPATIONS



MARINE SCIENCE

1993

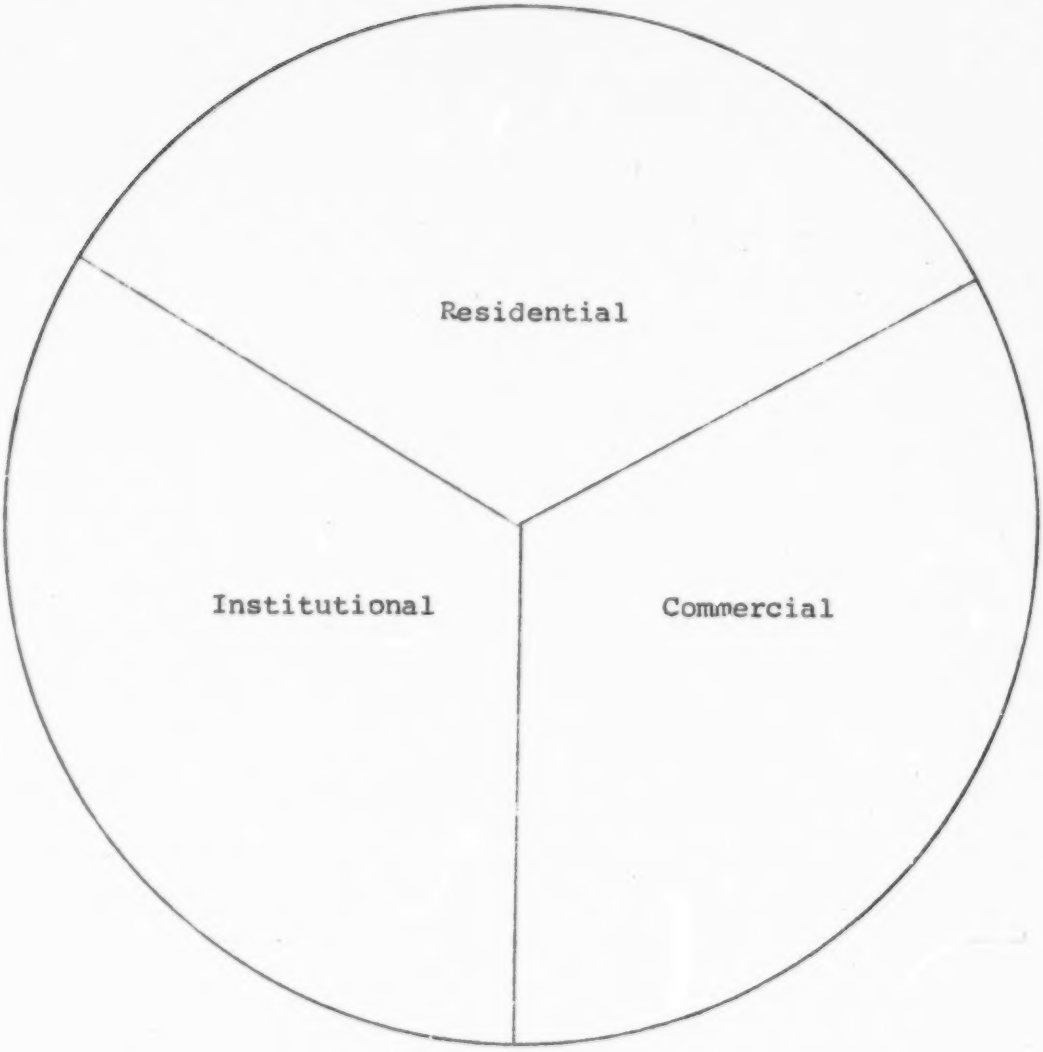
MARKETING AND DISTRIBUTION

1094

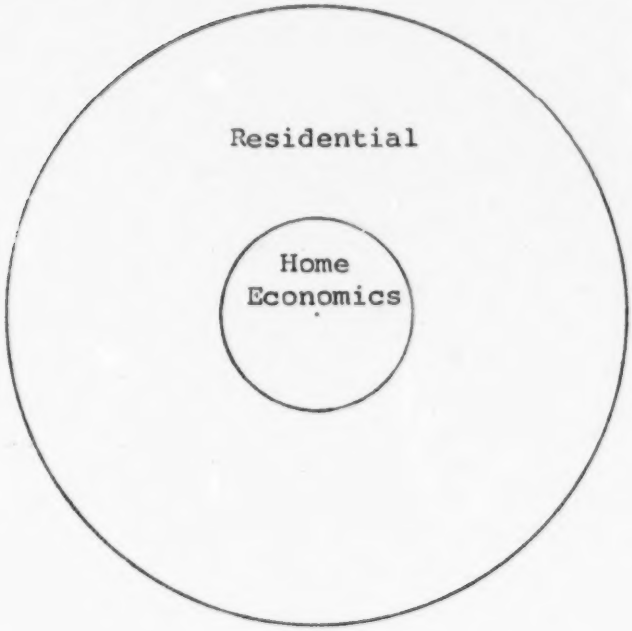
MARKETING AND DISTRIBUTION

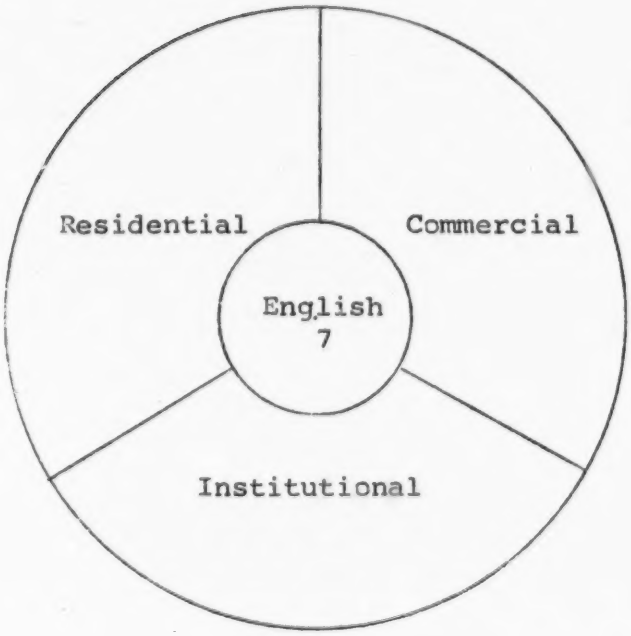
1995

PERSONAL SERVICES



PERSONAL SERVICES





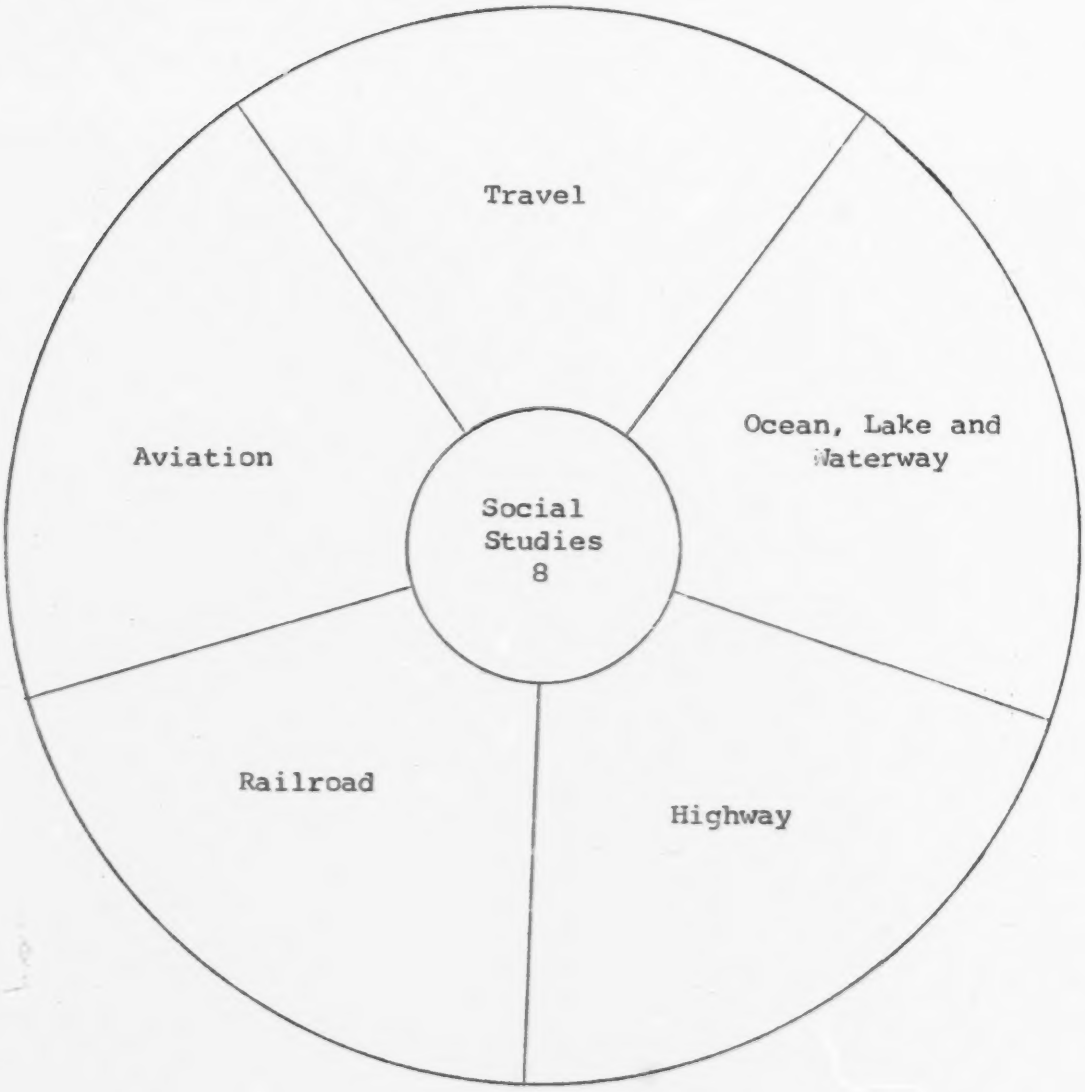
1997

PUBLIC SERVICE

PUBLIC SERVICE

TRANSPORTATION

TRANSPORTATION



V. ORIENTATION UNITS OF STUDY

PARK STREET MIDDLE SCHOOL

UNIT OF STUDY

ON

THE HUMAN BODY

Park Street Middle School
201 East Park Street
Grove City, Ohio
43123

Mr. H. Wayne Umholtz, Principal

Mrs. Norma Smith. Instructional Leader

Mr. Earl Moore. Counselor

Mr. Bernie Hall, Jr., Science

Mr. Ron Hutchinson, Physical Education

Mrs. Peggy Korn, Physical Education

Miss Peggy Schano, Social Studies

Mrs. Shirley Wannemacher, Mathematics

Mr. Bernie Hall, Jr. and Mrs. Shirley Wannemacher, Language Arts

INTRODUCTION

This unit will concern the human body broken down into three areas; (1) skeleton, (2) muscles and (3) vital internal organs. This is a unit that will involve a teaching period of four to five weeks.

Science will be the focal point with all other subjects co-relating and revolving around its area.

Each section in science will involve educational goals and behaviorally stated objectives. The sub-objectives will be broken down into three sections to enable all students to work at their capabilities.

UNIT EDUCATIONAL GOAL

To explore some of the aspects of the human body and its implications in the subject areas. The biological study of the skeletal, muscular systems and vital internal organs will be the basis of the exploration with social studies, mathematics, language arts, and physical education showing their implications and uses.

Pre-Test

Match column A to B

A		B
1. skull	_____	joining of the ribs or breastbone
2. humerus	_____	long bone in the upper arm
3. femur	_____	Latin word meaning "wise"
4. marrow	_____	soft tissue that manufacturers red and white blood cells
5. rickets	_____	houses the brain and shapes the head and face
6. sternum	_____	the thigh bone
7. sapien	_____	deficiency in Vitamin D
8. lifting weights	_____	connect bone to bone
9. fractures	_____	loss of salt
10. fatigue	_____	increased exercise causing decrease in blood supply
11. flexion	_____	isotonic
12. cardiovascular	_____	decrease in angle (elbow-knee)
13. joint	_____	break in bone
14. lack of salt to muscles	_____	strength, speed, endurance and balance
15. extension	_____	one who deals with rehabilitation of disease and injury
16. training	_____	obesity
17. sprain	_____	damage of ligament
18. respirators	_____	decreased ability of muscle to perform
19. ligament	_____	pumping of blood
20. physical therapist	_____	increase in angle

21.	cartiledge	_____	cramps
22.	tension	_____	damage of ligaments
23.	overweight	_____	protective padding (nose)
24.	motor fitness	_____	where two bones join
25.	stitch in side	_____	contraction of muscle
26.	tendon	_____	a person who deals with injuries and prevention of injuries to athletics
27.	muscle	_____	to prepare or make fit your body
28.	trainer	_____	added support to prevent injury or further injury
29.	caloric	_____	sharp pain associated with heavy exercise to the unconditioned individuals
30.	endurance	_____	ability to withstand heavy and prolonged exercise
31.	energy	_____	capacity to do work or exercise
32.	taping or straping (wrapping)	_____	foot doctor
33.	actuary	_____	mends and fits artificial limbs
34.	orthotests	_____	responsible for balanced meals
35.	prosthetests	_____	could figure life expectancy chart
36.	podiatrists	_____	makes and fits orthopedic braces
37.	dietitician	_____	study of the development structure and function of human groups
38.	archeology	_____	study of ancient writings and inscriptions
39.	anthropology	_____	study of material remains (fossils, relics, artifacts) of past human life

40.	sociology	_____	study of life of past geological periods as known from fossil remains
41.	geology	_____	study of the origin of man
42.	pateography	_____	study of the history of the earth and its life, especially as it is recorded in rock
43.	paleonthology	_____	operates the highly technical medical equipment such as the heart-lung machine
44.	cardiologist	_____	attention geared to the impairment in the muscles especially the skeletial system
45.	biomedical technician	_____	treats patients for manual manipulation of bones, especially the spinal column
46.	chiropractor	_____	treats diseases of the heart and its function
47.	podiatrists	_____	surveys the body from the inside by way of x-ray
48.	prosthetist	_____	designs, fabricates fittings for artificial limbs
49.	medical radiologist	_____	diagnoses and treats deformities in the feet
50.	technician	_____	
51.	osteophathic	_____	

True and False

1. _____ Bones originate in the embryo
2. _____ purpose of cartilage is to reduce friction between bones
3. _____ man can live without the liver in our highly technical society
4. _____ Cro-Magmam man was the first "modern man"
5. _____ the more a jumper jumps the more spring he has in his legs

Fill in the blanks

1. _____ forms together to make up all muscle tissue

2. _____ the skeleton system consists of _____ bones

3. _____ the bones are bound together by the _____

4. _____ there are _____ vertebrae in the human body

5. _____ another name for a verterbral column is _____

6. _____ the three division of the brain are _____ _____ _____

7. _____ the two largest arteries in the heart are _____

8. _____ the lungs consist of a left and right side, there are how many branches in the left side -- and how many branches on the right side? _____

9. _____ the small intestine are _____ feet long

10. _____ the large intestine are _____ feet long

11. _____ two purposes of the liver are _____

12. _____ the first three occupations of man were _____ _____ _____

Label

1. Name the sections of the brain (cerebrium, medulla and cerebellum) that control the following

   a. _____ walking
   b. _____ memory
   c. _____ heart beat
   d. _____ riding a bicycle
   e. _____ skating
   f. _____ digestion of food
   g. _____ balance
   h. _____ problem solving
   i. _____ judgment

2. Lable the types of muscles, (voluntary - involuntary or both) from the diagram on the next page

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Muscle and
Biological Science

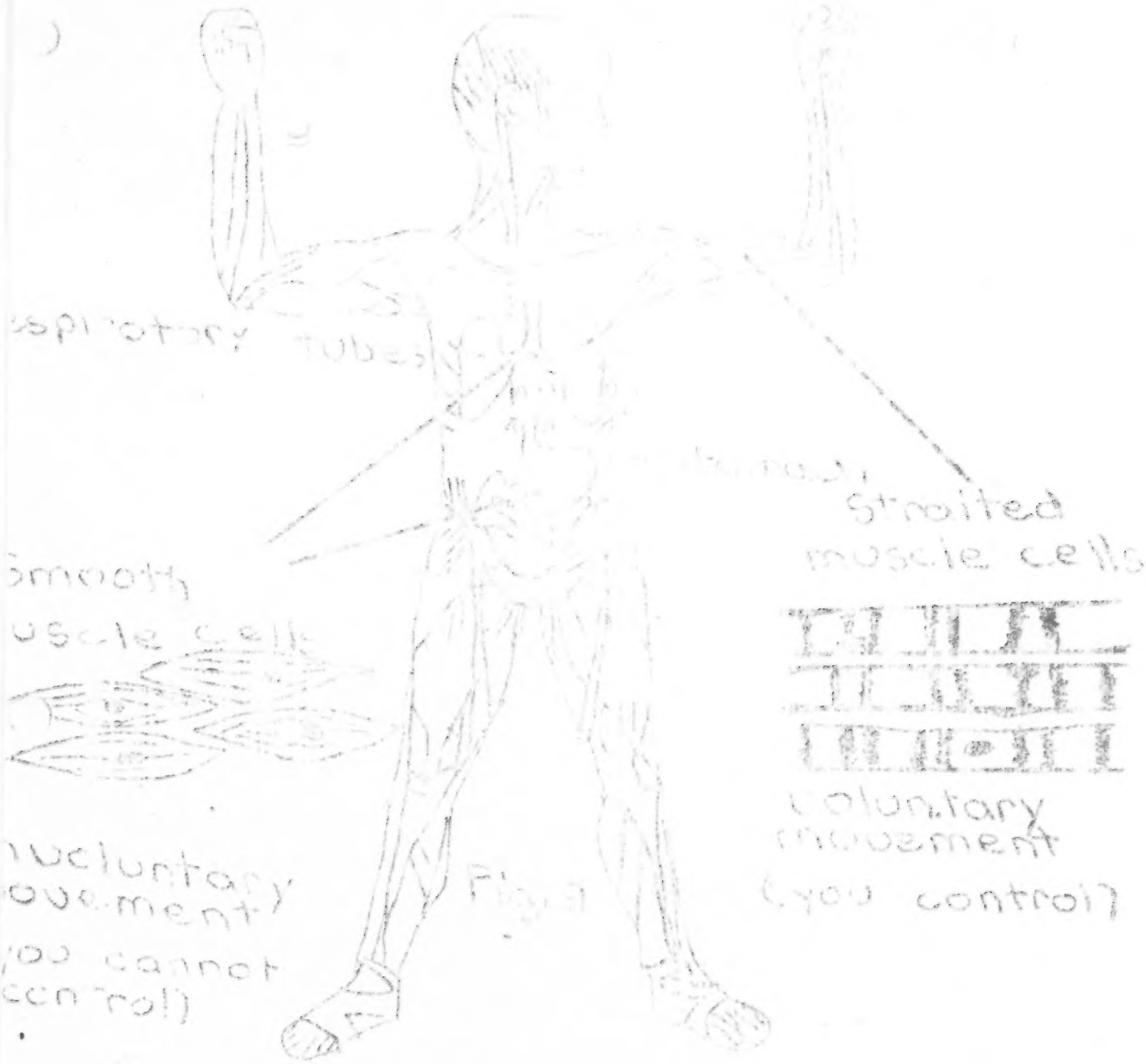

FIG. 1

1. LIFTING _____
2. DIGESTION _____
3. RUNNING _____
4. BLINKING EYES _____
5. BREATHING _____
6. DIAPHRAGM _____
7. SWALLOWING _____
8. SINGING _____

STUDENT ACTIVITY

1. In FIG. 2 and the cells in muscle in Fig. 1 and 2 [illegible] A. Be [illegible]

2. The dark spots seen in smooth muscle cells (FIG.) are the _____ of the muscle cells.

3. Man is similar to animals in his

   a. external structures
   b. internal structures
   c. form of hands and feet
   d. facial expressions
   e. none of the above
   f. all of the above

4. Man's chief assets are his
   a. ability to use tools
   b. ability to talk
   c. his brain and his thumbs

5. An artifact is

   a. a thing made by early man
   b. a thing used by early man
   c. things discovered and studied by anthropologists
   d. none of the above
   e. all of the above

6. Oxygen debt and fatigue concerns

   a. the bones
   b. the muscles
   c. both of these
   d. none of these

Answer

1. What is the difference between connective tissue and supporting tissue? Explain both in 3 to 4 lines.

2. List three types of muscle tissue and give one example of each muscle tissue.

3. Define the following in 2 to 3 lines each
   a. flexors
   b. extensors

4. How does the term tone relate to muscles and muscle build up? (3 to 4 lines)

5. Name four functions of the skeleton system.

6. What is the purpose of the vertebral column?

7. In 3 to 4 lines, explain inhaling and exhaling.

8. In one paragraph, explain the purpose of the kidney in relation to excretion.

9. Starting from inside the stomach name the 3 layers in the stomach wall.

10. Define pepsin and hydrochloric acid in relation to digestion in 2 to 3 lines.

11. Where does digestion take place in the human body?

12. Explain the function of the small intestine and large intestine.

13. Explain in one short paragraph the position of the large and small intestine in relation to the stomach and rectum.

14. In a paragraph tell how man's ability to think makes him different from animals.

15. Define anthropology.

16. In a sentence or two, tell why "home sapiens" is used to discuss modern man.

17. List 6 characters that are used to determine race.

18. Name 5 human races.

19. Name one discovery by early man that was a great step forward for civilization.

20. List 10 descriptive adjectives dealing with the form of the human body.

Entry level for science.

True or false - The human body is more complex than a machine. If true, explain in 3 to 4 lines.

2. How many bones does (on the average) the human body compile?

3. What is the true purpose of cartilege?

4. Name six purposes for the skeltal system.

5. Rickets is a disease in the bones primarily from the deficiency of (1) vitamin Q (2) vitamin C (3) vitamin D (4) no answer given.

6. In the body make up, there are three types of muscles, _____, _____, and _____.

7. Excess waste in the muscles is a condition resulting in _____ in the muscle itself.

8. True or false. Breathing takes place through the nose so straining of germs and dust particles are eliminated to a certain degree. _____

9. Match. The following internal organs of the human body, with the correct sentence to the right.

_____	heart	1.	control point for the human body.
_____	cardiologist	2.	oxygen enters to the lungs.
_____	lungs	3.	referred to as the pumping station.
_____	stomach	4.	holds 300 cubic inches of air when full.
_____	chiropractor	5.	produces the chemical substance that helps to digest food.
_____	nose	6.	surveys the bones, muscles and internal organs by x-ray.
_____	brain	7.	knows and operates the highly technical medical equipment such as the heart - lung machine.
_____	prosthetist	8.	treats patients for manuel manipulation of bones especially the spinal column.

SCIENCE

Educational goals -- skeleton

1. The student will appreciate the development of the human brain and the manipulation of the hands, places man in the highest category of the animal species.

2. The student will better understand the form and function of his own body.

3. The student will understand the importance of occupations dealing with the correction of mal-formed structures and the rehabilitation of people suffering from injuries.

Objectives

a. The student in one page or less will describe a computer and tell its function in relation to the brain.
b. The student will define the Latin word sapien in one paragraph.
c. The student will define and locate by a cross sectional drawing of the human body the following bones:
   1. skull
   2. ribs
   3. breast bone
   4. limb bone
   5. cartilage
   6. femur
   7. pelvis
   8. humerus
   9. ulna
   10. radius
   11. fibula
   12. metacarpals
   13. phallanges
   14. petella
   15. metatarsals
   16. phalanges
   17. vertebral column
   18. humerus
   19. femur
   20. tarsals
d. The student will define anatomy and physiology in one-half page or less.
e. The student will prepare a half page report concerning Aristotle and Galen (the early explorers in the functioning of human skeletal make up and behavior.)
f. The student will prepare a list of five different activities performed daily and explain the following:
   1. the bone or bones involved,
   2. the parts of the body used in each activity.

g. The student will locate and name the two main neck vertebrae by preparing a cross-sectional drawing of the vertebral column.
h. The student will name three connective tissue in the skeletal make-up and give one location for each tissue.
i. The student will name and give one example and explain the major points within the skeletal make-up.
j. The student will prepare a two page report explaining how they may better appreciate and care for their entire body by being more knowledgeable of the human skeletal make-up.
k. The student will research the following occupations:
   1. prosthetist
   2. medical radiologic technician
   3. osteopathic

   Each occupation will be one page following these points
   - personal qualifications
   - salaries
   - schooling
   - cost for the education
   - working hours

A Group (low level)
Concerning the skeleton system the student in A group must know and understand the following:

1. To be able to locate and discuss the location of the following bones: skull, clavicle, ribs, steanum, pelvis, vertebrae, humerus, ulna, radius, femur, fibula, tarsals, corpals, metacolpals, phalanges, petella, metatarsals, and phalanges.

2. To define the following: 1. sapien 2. anatomy 3. physiology and 4. cartilage and show two places and the purpose of cartilage being in the body.

3. To name four different types of joints and give the location where you can find the joints.

4. To know how many verterbraes are in the verterbral column (number).

5. To list six purposes of the skeletal system.

6. Be able to define ligaments in four to five good lines.

7. In one page each report on the following occupations:
   a. prosthetist
   b. medical radiologic technician
   c. osteopathic

   following these points
   - personal qualifications
   - salaries
   - schooling
   - cost for the education
   - working hours
   - personal opinion concerning this occupation

C Group (middle group)
Those working in C section must know the following concepts concerning the skeleton system.

1. To be able to locate and discuss the location of the following bones: skull, clavicle, ribs, sternum, pelvis, vertebrae, humerus, ulna, radius, femur, febula, tarsals, scapula, corpals, metacarpals, phalanges, patella, metatarsals, and phalanges. You will draw the human skeleton and label all parts by name and number giving a brief 2 to 4 lines desdribing each bone and location.

2. Be able to list three reasons for classifying animals according to structure and list three examples.

3. Be able to discuss the meaning of the Latin word "Sapien" in a paragraph or less.

4. To describe the skeleton system, know the location and the purpose of the following: skull, ribs, breast bone, limb bone, cartilage.

5. To define anatomy and physiology in a paragraph or less.

6. To describe the working of Aristotle and Galen as early explorers in the functioning of human skeletal make-up. Do both men in one page or less.

7. To be able to list and describe five bones that are essential or that are used while, 1. walking or running, 2. reading, 3. swimming, 4. name the type of joints these bones have -- 1. ball and socket, 2. hinge, 3. pivot and 4. gliding.

8. To be able to list two neck vertebrae that enable man to pivot and rotate the head and define the vertebrae in a one-half page or less.

9. Be able to list and explain in one-half page, three connective tissues and give a location for each.

10. In one page each report on the following occupations:
    a. prosthetist
    b. medical radiologic technician
    c. osteopathic

    following these points
    - personal qualifications
    - salaries
    - schooling
    - cost for education
    - working hours
    - personal opinion concerning this occupation.

D Group (top group)
All students working in D section must understand the following:

1. Can describe a computer and how it helps man in today's complex world.

2. Be able to list three reasons for classifying animals according to structure and relationship.

3. Be able to discuss the meaning of Sapien in a paragraph or less.

4. To describe the skeletal system, know the locations and purpose of the following by drawing; 1. skull, 2. ribs, 3. breast bone, 4. limb bone, and 5. cartilage.

5. To explain how anatomy and physiology relate through specialization in one-half page or less.

6. Describe the working of Aristotle and Galen as early explorers in the functioning of human skeletal make-up and its relationship to human behaviors. Do both men in one and one-half pages or less.

7. To make a chart of five columns listing activities you perform daily following these points:
   a. the parts of the body used in each activity.
   b. the bone or bones involved.

8. To be able to locate, describe and explain neck vertebrae of man by a drawing of human vertebral system.

9. Be able to explain and list three examples of a connective tissue.

10. To be able to list and explain four different types of moveable joints showing their locations by visual drawing.

11. To fully explain in a page how you can better appreciate and care for your entire body.

12. In two pages each, report on the following occupations:
    a. prostetist
    b. medical radiologic technician
    c. osteopathic

    following these points
    - personal qualifications
    - salaries
    - schooling
    - cost for the education
    - working hours
    - personal opinion concerning this occupation.

Educational goals - Muscles

1. The student will learn the importance of good muscle conditioning which will enable him to function at maximum capacity through life.

2. The student will acquire a knowledge for body actions controlled by voluntary, involuntary or both types of muscle.

3. The student will understand major muscles within the body and that muscles are grouped according to cardiac, smooth, straited.

4. The student will understand fatique and oxygen debt and how to better prepare for everyday life.

Objectives

a. The student will define muscle in a paragraph or less being sure to include the following:
   1. the percent of the body made up by muscles
   2. composition of muscle tissue.
b. The student will distinguish between connective and supporting tissue in three to four sentences.
c. The student will list the three types of muscle within the human body and give one location of each type.
d. The student will distinguish between the three types of muscles by dissecting a frog and observing different sections under the microscope.
e. The student will define voluntary and involuntary muscles in three to four lines.
f. The student will list four motions that are voluntary and four that are involuntary.
g. The student will label the following muscles by drawing front and back views of the human body and signifying each particular muscle.
   1. trapezius
   2. deltoid
   3. triceps
   4. latissmus dorsi
   5. gluteus mazimus
   6. gastrocnemius
   7. external oblique
   8. pectoralis major
   9. hamstrings
h. The student will define flexors and extensors and give four locations where this may take place within the human body.
i. The student in a paragraph or less will define tone when dealing with muscle build up.
j. The student will distinguish between "oxygen debt" and "fatigue" in relation to excess waste in the muscle. He will do this in one-half page or less.

A Group (low level)

Students working in A section must follow each topic below in the order they come "concerning the muscle system in the human body."

1. Be able to arrange the following letters into the correct spelling of each word and define each word in 3 to 4 lines.

moleus	_____
tiseus	_____
conivencte	_____
tingporpus	_____
diacrac	_____
miusnegastroc	_____
external oblique	_____
pectoralis major	_____
guletus minusax	_____
tendno achillse	_____
vastsu laertlise	_____
itedsrat	_____
thooms	_____
ontden	_____
pezisutra	_____
toidsled	_____
tirceps	_____
letismssu doris	_____
stringham	_____
rusect abdomusin	_____

2. Be able to explain voluntary and involuntary muscles and give an example for each.

3. Be able to explain flexors and extensors in a paragraph and make a small diagram of the arm and show the location of the flexors and extensors on the arm.

4. Be able to fill in the diagram below with 2 movements that are voluntary, involuntary or both from the list at the right.

Voluntary	Involuntary	Both

breathing
swallowing
closing the eye lid
heart beat
running
digestion
talking

5. Be able to dissect a frog and observe under a microscope, muscles in the heart, stomach and legs; be sure to lable each part whether its cardiac, smooth or straited. Follow your small group plan posted for your particular group.

C Group (middle group)

Students working in C section must follow the following points about the muscles in the human body.

1. Be able to define muscle in a paragraph or less, being sure to include the following points:
   a. the percent of the human body made up by muscles.
   b. what muscle tissue consists of.

2. Be able to explain connective and supporting tissue and list two examples for each.

3. To name the three different types of muscles in the human body and give a location for each type.

4. Dissect and examine a piece of muscle from the heart, stomach and legs and distinguish the type cardiac, straited, and smooth. Follow your group plan posted.

5. Be able to explain the difference between voluntary and involuntary in one to two paragraphs.

6. To list four voluntary movements, four involuntary movements and four movements involving both voluntary and involuntary actions.

7. Be able to spell and locate the following by making a cross sectional drawing and labeling the following muscles:
   a. trapezius
   b. deltoids
   c. triceps
   d. latissmus dorsi
   e. gastrocnemius
   f. external oblique
   g. pectoralis major
   h. hamstring
   i. gluteus maximus
   j. tendon achilles
   k. vastus lateralis
   l. rectus abdominus

8. Be able to define the purpose of flexors and extensors in one paragraph.

9. Be able to explain oxygen debt and fatigue in muscles.

10. Be able to explain in one full page each of the following:
    a. biomedical technical
    b. chiropractor
    c. ostepathic

    criteria for explaining careers
    a. schooling needed
    b. job position available
    c. working conditions
    1. hours per day
    2. cleaniness of the job

d. salary (per year)
e. how important or useful these professions are to society
f. personal feeling, would you prefer following one of these careers? Why or why not in 5 to 6 lines.

D Group (top group)

All students working in D section must follow the following points about the muscles in the human body.

1. Be able to define muscles in a paragraph or less being sure to include (1) the percent of the body made up by muscles, (2) what the muscle tissue consists of.

2. In 3 to 4 good sentences distinguish between connective and supporting tissue.

3. Be able to list 3 different types of muscles within the body and give a location for each.

4. Be able to dissect a frog and locate examples of cardiac, straited and smooth muscles by using the microscope.

5. Be able to define voluntary and involuntary muscles in one paragraph.

6. Be able to list 6 voluntary movements, 6 involuntary movements and 4 movements that could be considered voluntary or involuntary.

7. Be able to locate the following by making a cross sectional drawing
   a. trapezius
   b. deltoids
   c. triceps
   d. latissmus dorsi
   e. gastrocnemius
   f. external oblique
   g. pectoralis major
   h. hamstring
   i. gluteus maximus
   j. tendon achilles
   k. vastus lateralis
   l. rectus abdominus

8. Be able to define flexors and extensors in a short paragraph and give 2 locations for each.

9. In one-half page explain oxygen debt and fatique in relation to excess waste in the muscles.

10. Be able to explain in one full page each, the following careers concerning the muscles:
    a. biomedical technician
    b. chiropractor
    c. osteopathic.

criteria for explaining careers
a. schooling needed
b. job positions available
c. working conditions
d. pay per year
e. how important or useful the job is in society
f. personal feelings about following one of these professions. Why or why not (explain either way).

11. Write a two page report on, How Important Are the Muscles in relation to movement, personal appearance, sports (all types), digestion, breathing, seeing, working, sleeping, eating.

Educational goals - Internal Organs

1. The student will realize the level of achievement man has accomplished through the use of his highly developed brain.

2. The student will understand the purpose and function of each internal organ of the human body.

3. The student will point out how a division of labor is so necessary for proper functioning of his body.

4. The student will be made aware how modern day technology increased the life span thus creating new and interesting occupations.

Objectives:

1. Given a cross sectional picture of the brain the student will label the medulla, cerebrium, and cerebellum.

2. Given a list of activities and processes the student will identify the part of the brain that controls each.

3. Given a cross sectional picture of the heart, the student will trace the flow of blood through the heart and name the parts of the heart while tracing the blood.

4. The student will name the 2 largest arteries in the heart plus explain the function of the valve at the entrance of each artery. He will explain this in one-half page or less.

5. The student will construct a model of the lungs and show the number of branches.

6. The student will explain the act of inhaling and exhaling. He will do this in one-half page or less.

7. The student will name the 3 layers of the stomach starting with the inner layer.

8. The student will explain pepsin and hydrochloric acid in the role of digestion in one-half page.

9. The student will name the main organ of digestion in the human body.

10. By drawings of the large and small intestines, the student will compare the two organs as to size, position, function, length. He will do this fully in one page.

11. The student will write a one and one-half page report concerning the full operation of the kidneys.

12. The student will list 4 major functions of the liver and explain each function in 3 to 4 lines.

13. By looking at a psychological chart, the student will distinguish the size of the liver in comparison to the other surrounding organs.

A Group (low group)

All students working in A section can be concerned with the following topics concerning the internal organs of the human body.

1. By drawing a picture of the human brain, be able to label the following portions:
   a. medulla
   b. cerebrum
   c. cerebellum

2. Be able to name the portion of the brain, (medulla, cerebrum, cerebellum) that controls the following:
   a. portion where thinking takes place
   b. controls sight, hearing and speech
   c. controls sneezing and swallowing
   d. controls heart beat
   e. center for reflex, such as pulling your hand away from a hot object
   f. portion of the brain that controls breathing.

3. By drawing the heart on an 8½ by 11" unlined paper, be able to locate and label the following portions of the heart:
   a. pulmonary artery
   b. pulmonary vein
   c. left auricle
   d. left ventricle
   e. right ventricle
   f. right auricle
   g. aorta

4. Be able to explain the following concerning the lungs in one or two sentences:
   a. hemoglobin
   b. filtering station for the body
   c. carbon dioxide being taken out and oxygen being put back into the blood
   d. what happens when you inhale and exhale
   e. metabolism
   f. location of the lungs
   g. normal breathing rate.

5. Be able to define the following points concerning the stomach in one to 3 sentences:
   a. shape
   b. position in relation to the intestine
   c. purpose of the stomach for breaking down food
   d. gastric glands
   e. pepsin
   f. hydrochloric acid
   g. the three layers of stomach wall.

6. Be able to compare the large and small intestines by the following in 2 to 3 lines:
   a. what are the large and small intestines (4 to 6 lines)
   b. location in relationship to the stomach
   c. length (feet)
   d. purpose of the small intestines (3-4 lines)
   e. purpose of the large intestines (3-4 lines).

7. Be able to explain the kidneys in one page following these points:
   a. where are the kidneys
   b. what purpose does the kidneys serve
   c. could man survive without both kidneys? why?
   d. how does the skin aid the kidneys in getting rid of waste from the body?
   e. what does the term urine mean?

8. Be able to explain in one and one-half pages each, the following careers concerning the internal organs:
   a. cardiologist
   b. podiatrists

   criteria for explaining careers
   a. schooling needed
   b. job positions available
   c. working conditions
   d. pay for year
   e. how important or useful the job is in society
   f. personal feelings about following one of these professions. Why or why not (explain either way).

C Group (middle group)

All students working in C section wil' define the following concerning the internal organs of the human body

1. By making a full cross-sectional drawing of the brain label the three main brain portions.

2. Be able to identify the portion of the brain that controls each item listed below:
   a. region where thinking occurs
   b. controls sneezing and swallowing
   c. coordinates body movement and equilibrium
   d. center for sight, hearing and speech
   e. controls heart beat
   f. center for reflex of the body, such as pulling away from a hot object
   g. controls breathing
   h. center for voluntary behavior.

3. By making a drawing of the heart be able to label the following and in a short paragraph explain the blood flow to and through the heart.

4. Be able to compare and locate the 2 largest arteries in the heart and in 3 to 4 lines explain the purpose of the valve at each entrance.

5. In one-half paragraph explain hemoglobin.

6. Be able to explain in one full page where and how oxygen is filtered in the blood.

7. Be able to demonstrate inhaling and exhaling by using 2 baloons and be able to discuss orally the process of filtering out carbon dioxide and taking oxygen into the blood.

8. Orally discuss the stomach according to the following:
   a. shape
   b. location
   c. role the stomach plays in breaking down food for digestion
   d. naming of the three stomach layers
   e. gastric glands
   f. pepsin
   g. hydrochloric acid.

9. Be able to compare and discuss orally the following concerning the large and small intestines:
   a. size
   b. position in relation to the stomach
   c. function each organ serves
   d. length (feet).

10. Be able to explain the kidneys in 2 pages following these points:
    a. size
    b. location
    c. cortex
    d. medulla
    e. pyramid
    f. urine
    g. the skin.

11. Be able to explain in 2 pages each, the following careers concerning the internal organs:
    a. cardiologist
    b. podiatrist

    criteria for explaining careers
    a. schooling needed
    b. job positions available
    c. working conditions
    d. pay per year
    e. how important or useful the job is in society
    f. personal feelings about following one of these professions. Why or why not (explain either way).

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D Group (top group)

All students working in D section will define the following topics concerning the internal organs of the human body.

1. By securing a sheep's brain from a local butcher plus disecting a fetal pig, name and compare the medulla, cerebrium, cerebullum in each of the animal specimens. You must explain and compare the 2 specimens in one class period.

2. Be able to identify from the list below the portion of the brain that controls each:
   a. region where thinking occurs
   b. controls sneezing and swallowing
   c. coordinated body movement and equilibrium
   d. center for sight, hearing and speech
   e. controls breathing
   f. center for reflex of the body, such as pulling away from hot object
   g. controls breathing
   h. center for voluntary behavior.

3. By making a cross sectional drawing of the heart, be able to trace the flow of blood and name each part that the blood passes through.

4. Be able to name and locate the 2 largest arteries in the heart by giving their exact location and explaining in 3 to 4 lines the purpose of the valve at each artery.

5. To define hemoglobin and its importance in a paragraph.

6. To describe where oxygen is filtered in the blood, give the process that takes place when carbon dioxide and oxygen leave or enter the lungs. Be sure to include inhaling and exhaling in your description. In this topic in a report form in one and one-half pages, being sure to underline the points mentioned in the beginning.

7. By constructing a cross sectional drawing of the stomach name and label the three stomach layers starting with the inner layer.

8. To explain in one-half to three-fourths of a page the rate pepsin and hydrochloric acid affects digestion. Also where digestion takes place in the body.

9. To explain in one-half to three-fourths of a page the exact process of digestion.

10. To explain the kidneys in 2 pages following these points
size
location
cortex
medulla
pyramids
urine
the skin

11. Be able to list 4 main functions of the liver and explain each function in 3 to 4 lines.

12. In one-half page explain the importance of the liver compared to the kidneys.

13. Be able to explain in two and one-half pages each, the following careers concerning the internal organs
a. cardiologist
b. pediatrician.

criteria for explaining careers
a. schooling needed
b. job positions available
c. working conditions
d. pay per year
e. how important or useful the job is in society
f. personal feelings about following one of these professions. Why or why not (explain either way).

AVAILABLE FILMSTRIPS AND FILMS CONCERNING
THE SKELETAL, MUSCULAR AND INTERNAL ORGANS
OF THE HUMAN BODY

Filmstrips

The Human Body Series (16)
Kidneys - Having Filters
Heart and Circulation
Body Machine - Bone Structure
Body Machine - Muscular System

Above available at Grove City High School Library

Films

Circulatory System
Muscles and Bones of the Body
Work of the Kidneys

Above available at Columbus Public Library

Our Wonderful Body: How It Moves
Muscles and Bones of the Body
Digestion in our Bodies
Heart, Lungs and Circulation
Your Body Grows
Our Wonderful Body: The Heart and Its Work

Above available at South-Western School Film Library

Filmstrips

Digestive System
Bones and Muscles

Above available at Reynoldsburg Public Library

Films

The Human Body
Circulatory System
Muscular System
Skeleton System
Digestive System
Respiratory System

Above available at Grandview Heights Public Library

Filmstrips
Understanding Your Body (Box 12)
Skeletal System
Muscular System
Muscle and Skeleton System (2)

Circulatory System (2)
Digestive System (2)
Respiratory System (2)

Above available at Park Street Public School [illegible]

Culminating Activities

Field trip to Center of Science and Industry

1. The Invisible Woman
2. Center of Science for Man Area

Scale model of the vertebral column produced from wire, spools and clay.

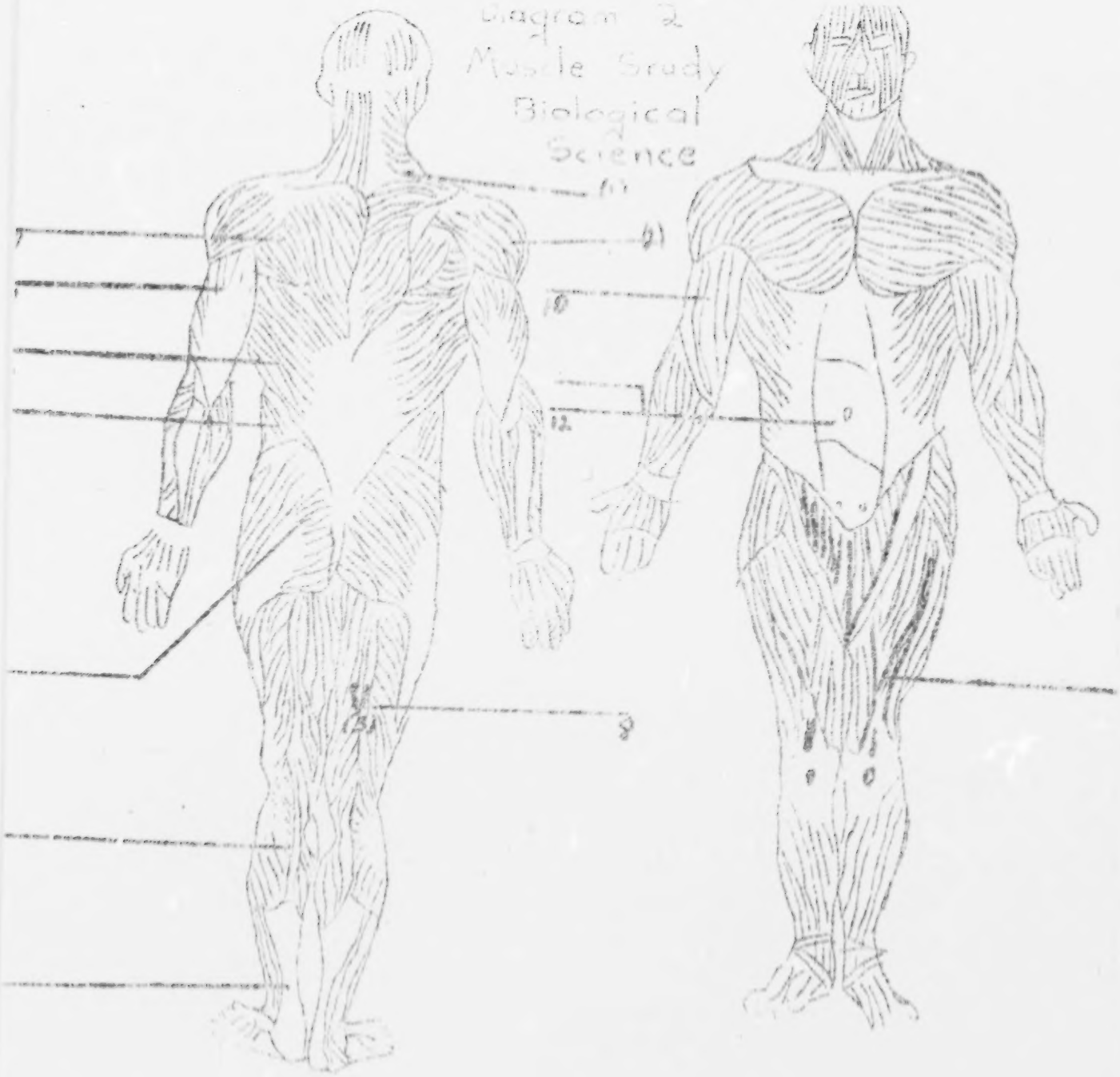
Dissecting of the frog.

Debate with questions concerning the human body.

Post test and discussion.

Supplementary Materials

Diagram 2
Muscle Study
Biological
Science



JOINTS

FIG. A WRIST

FIG B SHOULDER

FIG. C KNEE

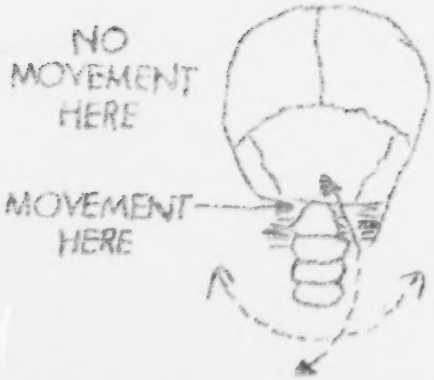


FIG. D SKULL ATOP VERTEBRA

BALL AND SOCKET -

Types of
Freely
Movable
Joints

Rounded end of bone fitting snugly within another bone.

HINGES- Movement at joint in one direction like a door.

PIVOT- Bone resting atop another bone, permitting free movement.

GLIDING- Bones slipping over other bones with a free flowing movement.

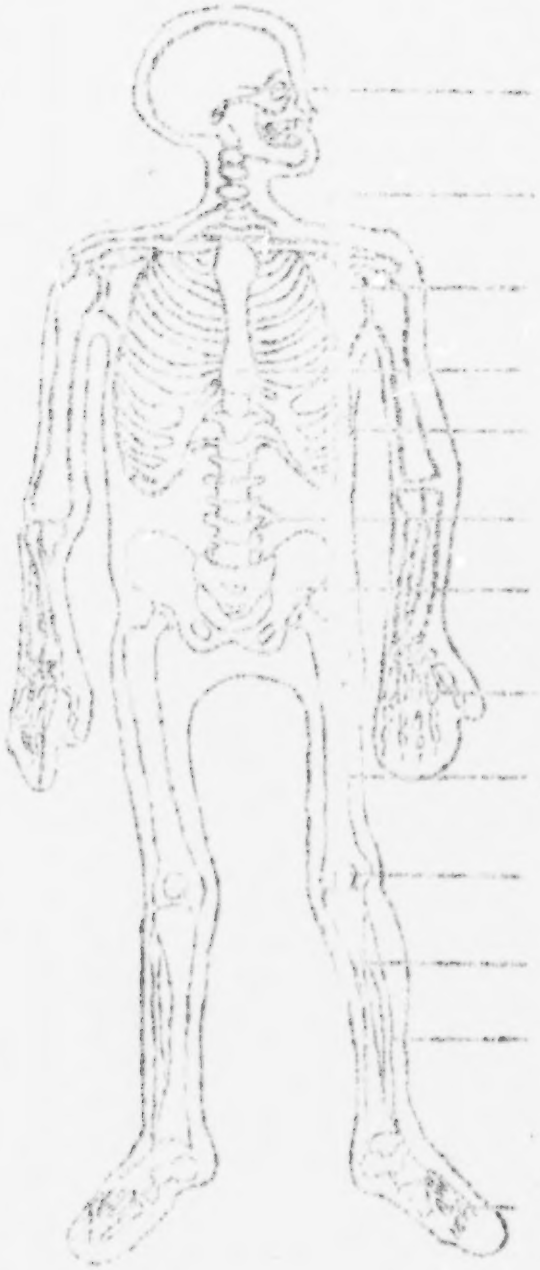
STUDENT ACTIVITY

1. Using the information above, label each figure to show the type of moveable joints.
2. Identify these types of movements joints.

a. Hip _____
b. Ankle _____
c. Elbow _____
d. Knuckles _____

HEART

THE SKELETAL SYSTEM



Social Studies Introduction

The social studies will be carried on by a tracing of the development of the evolution of man. Various races and cultures will be discussed and careers going along with this information will be studied.

Entry level test for social studies:

1. What are man's two chief assets?
2. There are five main races of man. They are _____, _____, _____, _____, and _____.
3. Name as many characteristics as you can that make the races different.
4. Define anthropology.
5. Where is the "cradle of civilization" located?
6. What country has the oldest recorded history?
7. Give the names of two extinct ancestors of man that anthropologists have found and studied.

Social Studies

Educational goals:

1. The student shall have an understanding of the evolutionary development of man.

2. The student will gain an appreciation of the differences and similarities between man and he lower animals and between man and pre-man.

3. The student will understand and appreciate the various races and cultures that have developed over the course of history.

Objectives:

1. The student will list 5 body similarities between man and animals.

2. The student will write a paragraph describing the advantages and disadvantages of each of the following careers:
   a. archeology
   b. anthropology
   c. sociology
   d. geology
   e. paleography
   f. paleontology

3. The student will define man's two chief assets and in a one-half page paper discuss these advantages.

4. The student will draw and label illustrations of 15 artifacts.

5. In a one page paper, show the developmental advantages of man's brain.

6. In a modified scrap book, show with illustrations (picture or drawings) the 5 racial groups in the human family.

7. Write captions for the six racial characteristics for each scrap book entry. In the caption, compare and contrast the racial characteristic under discussion with that same characteristic in the other racial groups.

8. In a two page story, the student will imagine either how fire was discovered or the wheel was invented.

9. The student will be prepared to discuss whether hunting, herding or farming was man's first occupation and why.

10. The student will list 5 prehistoric "men" and tell when where and by whom they were discovered.

11. The student will choose one from the Java Man, Peking Man, Heideberg Man, Neondenthal Man, and Cro-Magnan Man and discuss in one page why this anthropological find is said to be preman.

12. The student will discuss in a one-half page paper importance to man of the development of a spoken and written language.

Social Studies Audio Visual

Movies: Grandview Library -

1.	Journey into Time -	15 min. color
2.	Story of Prehistoric Man -	11 min. color
3.	Strands Grow -	14 min. color
4.	What Color Are You -	15 min. color
5.	Why Man Creates -	25 min. color

Cassettes: IMC Park Street Middle School

1. Egypt: Prehistoric Man
2. Dawn of Civilization

Filmstrips: IMC

1. Birthplace of Civilization
2. Rise of Chinese Civilization
3. Rise of Indian Civilization
4. Rise of Egyptian Civilization
5. Rise of Mesopotamian Civilization
6. Rise of a Settled Village

Mathematics Introduction

An entry level test is not needed in that unit in mathematics as the practical aspect is being stressed and for those students who are not capable of handling percents it can be taught either with fractions or decimal equivalence.

The importance of mathematics in connection with the human body is being stressed through life expectancy and life insurance companies. The culminating activity will be a simulation of a life insurance company.

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Mathematics

Educational goals:

1. To bring about a realization of the mathematics involved in the study of the human body.

2. To acquaint the student with some of the occupations dealing with the human aspect that require mathematics.

3. To introduce the student to random sampling by using the situation whereby life expectancy is figured.

Objectives:

1. Given the biography of Alexander the Great the student will list ten reasons why the life span is greater today.

2. Given an actuarial chart the student will compute the increase in male and female life expectancy from 1850 to 1950 and will state three reasons for the difference between male and female.

3. Given the formula $l_x = \frac{10}{2}$ The student will set up a hypothetical situation using a random sampling technique and predict a mortality chart.

4. From an analysis of a guest speaker and a field trip to an insurance company, the student will list the occupations requiring mathematics.

5. From the list of occupations the students will set up a simulated life insurance company.

6. Given the % of the composition of the human skeleton, the student will figure the skeletal weight of his own body.

7. Given the mineral content, their value and their %, the student will compute his own weight and the monetary value of his body.

8. Given the fact that steam engines convert about 10% of the heat energy of fuel into useful work and that muscles convert on the average 15% of the chemical energy of food into the work of contraction the students will make a comparison and set up a proportion for this comparison.

Language Arts Introduction

Along with the writing, spelling and grammar need[illegible] various tasks assigned in the other disciplines, [illegible] will touch on literature concerning physical defe[illegible] be approached with the idea of the cause, the eff[illegible] effect could have been varied.

Language Arts

Educational Goal:

I. To bring about understanding of how the structural development of the human body influences the character of the mind.

Objectives:

1. Having been shown a picture the student will list at least twenty five descriptive adjectives that relate to the human form in the picture.

2. Using the twenty five descriptive adjectives the student will incorporate them into a biography of the subject in the picture in no less than two paragraphs.

3. When the same picture is used the student will interpret the character by oral sentence.

4. Given a selection of people having odd attributes caused by defects in the skeleton, muscles or internal organs (hunchback of Notre Dame) the student will present an oral book report with a critique explaining the actions caused by the defects and how these actions could have been avoided.

5. Given the titles of the books reported on the student will divide into two groups and play a game of charades.

Physical Education Introduction

Since physical education is the study of how to keep the body fit, this unit was taught on how to develop sound physical habits and on how to care for injuries that occur in the home, muscle and internal organs.

Physical Education

Educational Goals

1. The student will learn how exercise affects bone systems and internal organ systems of their bodies (bone, increase capacity, increases in size, movement potential).

2. The student will experience specific exercises which are designed to affect the bone and internal organ systems in the above ways.

3. The student will learn to recognize which exercises are detrimental to particular systems.

4. The student will discover competitions available to him which are associated with exercise.

5. The student will learn about injuries associated with exercise and the exercises all people are susceptible to injuries.

6. Bones

   a. Hand and fingers.
      The student will define two common injuries common to the fingers -- the student will demonstrate proper first aid for an injury to the hand.
   b. The student will list and explain five different types of bone fractures -- the student will apply first aid for a suspected bone fracture.
   c. The student will differentiate between a shoulder separation and bone break of the shoulder area by listing three characteristics associated with each injury -- the student will devise a shoulder sling.
   d. The student will list the danger signs associated with a serious head injury -- the student will explain the first aid procedures for a head injury.
   e. Spinal column
      The student will define lordosis and kyphosis -- the student will site in one paragraph specific exercises detrimental to spinal column formation -- the student will explain the importance of body posture with regard to respiration, circulation, digestion and elimination -- the student will perform exercises conducive to good posture.
   f. Rib cage
      The student will in one paragraph explain the importance of immobilization of a rib bone -- given a hypothetical situation of a rib injury the student will apply a wrap to the chest area.
   g. The student will define hip pointer.

h. Leg
The student will immobilize the upper and lower leg using wood splints -- the student will define hemotoma.

i. Knee
Given a list of knee injuries the student will match them to their definition -- the student will define torn cartilidge of the knee.

j. Ankle
The student will in one paragraph explain the use of a cast for ankle breaks -- the student will demonstrate correct use of crutches.

k. Foot
The student will define calcium deposites on bones -- the student will list preventative measures for ingrown toenails -- the student will cite in one paragraph the importance of correct fitting shoes.

Muscles

a. Arm
The student will define five specific actions associated with arm movement -- the student will match specific muscles with games in which these muscles are especially important -- the student will perform exercises designed to strengthen the upper and lower arm.

b. Shoulder and chest
The student will explain in writing in one paragraph why a thrower should arm up the shoulder with easy throws -- given a list of five exercises the student will circle those which are local (specific) and underline those which are general exercises.

c. Neck and back
The student will list three possible causes for muscle soreness in neck and back -- the student will list the correct procedure for lifting a heavy object.

d. Abdominal
The student will explain in one paragraph the importance of strong abdominal muscles in maintaining a trim appearance -- the student will list two exercises used in class to develop abdominal muscles.

e. Hip
The student will define hamstring injury.

f. Knee
The student will list ligament giving support to the knee-- the student will list two exercises detrimental to good knee development -- the student will perform three exercises conducive to good knee development.

g. Ankle, lower leg and foot
The student will define shin splints -- given the terms strain and sprain the student will list three different characteristics of both -- given a student with an ankle injury the student will list three first aid measures to

be taken to relieve pain and/or prevent further damage -- the student will perform three exercises to develop the lower leg.

III. Body Organs

a. Heart and C.V. Systems
In one paragraph the student will list the effect on the heart and c.v. system that increased work load (training) has.

b. Lungs
The student will define lung capacity -- the student will explain breathing development via exercise -- the student will define smoker's wind.

c. Digestive system
The student will define "ischemia" -- the student will cite in two or more paragraphs the relationship between eating and immediate exercise.

d. Skin
The student will explain the importance of skin care after exercise -- the student will define athletics foot listing causes, prevention and treatment.

Careers

Physical Therapy
The student in one paragraph will define the job of a physical therapist. The student will list five personal qualifications of a physical therapist. The student will list beginning, average and high level salaries for a physical therapist.

Occupational Therapy
The student will define in one paragraph the job of an occupational therapist. The student will list five areas which employ occupational therapists. The student will list the largest single employer of occupational therapists. The student will list high school subjects required of those entering programs of occupational therapy.

Post Test

Match column A to B

A		B
1. skull	_____	joining of the ribs or breastbone
2. humerus	_____	long bone in the upper arm
3. femur	_____	Latin word meaning "wise"
4. marrow	_____	soft tissue that manufactures red and white blood cells
5. rickets	_____	hc ses the brain and shapes the head and face
6. sternum	_____	the thigh bone
7. sapien	_____	deficiency in Vitamin D
8. lifting weights	_____	connect bone to bone
9. fractures	_____	loss of salt
10. fatigue	_____	increased exercise causing decrease in blood supply
11. flexion	_____	isotonic
12. cardiovascular	_____	decrease in angle (elbow-knee)
13. joint	_____	break in bone
14. lack of salt to Muscles	_____	strength, speed, endurance and balance
15. extension	_____	one who deals with rehabilitation of disease and injury
16. training	_____	obesity
17. sprain	_____	damage of ligament
18. respirators	_____	decreased ability of muscle to perform
19. ligament	_____	pumping of blood
20. physical therapist	_____	increase in angle
21. cartiledge	_____	study of life of past geological periods as known from fossil remains

22.	tension	_____	study of the origin of man
23.	overweight	_____	study of the history of the earth and its life, especially as it is recorded in rock
24.	motor fitness	_____	operates the highly technical medical equipment such as the heart-lung machines
25.	stitch in side	_____	attention geared to the impairment in the muscles especially the skeletal system
26.	tendon	_____	treats patients for manual manipulation of bones, especially the spinal column
27.	muscle	_____	treats disease of the heart and its function
28.	trainer	_____	survey the body from the inside by way of x-ray
29.	caloric	_____	designs, fabricates fittings for artificial limbs
30.	endurance	_____	diagnoses and treats deformities in the feet
31.	energy	_____	cramps
32.	taping or straping (wrapping)	_____	damage of ligaments
33.	actuary	_____	protective padding (nose)
34.	orthotests	_____	where two bones join
35.	prosthetests	_____	contraction of muscle
36.	podiatrists	_____	a person who deals with injuries and prevention of injuries to athletics
37.	dietician	_____	to prepare or make fit your body
38.	archeology	_____	added support to prevent injury or further injury
39.	anthropology	_____	sharp pain associated with heavy exercise to the unconditioned individuals

40.	sociology	_____	ability to withstand heavy and prolonged exercise
41.	geology	_____	capacity to do work or exercise
42.	pateography	_____	foot doctor
43.	paleonthology	_____	mends and fits artificial limbs
44.	cardiologist	_____	responsible for balanced meals
45.	biomedical technician	_____	makes and fits orthopedic braces
46.	chiropractor	_____	study of the development, structure and function of human gr ıps
47.	podiatrists	_____	study of ancient writings and inscriptions
48.	prosthetist	_____	study of material remains (fossils, relics, artifacts) of past human life
49.	medical radiologist	_____	
50.	technician		
51.	osteopathic		

True and false

1. _____ Bones originate in the embroyo.
2. _____ Purpose of cartilage is to reduce friction between bones.
3. _____ Man can live without the liver in our highly technical society.
4. _____ Cro-Magman man was the first "modern man".
5. _____ The more a jumper jumps the more spring he has in his legs.

Fill in the blanks

1. _____ forms together to make up all muscle tissue.
2. _____ the skeleton system consists of _____ bones.
3. _____ the bones are bound together by the _____.

4. _____ there are _____ vertebrae in the human body.

5. _____ another name for a verterbral column in _____.

6. _____ the three divisions of the brain are _____, _____, _____.

7. _____ the two largest arteries in the heart are _____, _____.

8. _____ the lungs consist of a left and right side, there are how many branches in the left side _____ and how many branches on the right side?

9. _____ the small intestines are ____ feet long.

10. _____ the large intestines are ____ feet long.

11. _____ two purposes of the liver are _____, _____.

12. _____ The first three occupations of man were _____, _____.

Label

1. Name the sections of the brain (cerebrium, medulla and cerebellum) that control the following:

   a. _____ walking
   b. _____ memory
   c. _____ heart beat
   d. _____ riding a bicycle
   e. _____ skating
   f. _____ digestion of food
   g. _____ balance
   h. _____ problem solving
   i. _____ judgment

2. Label the types of muscles (voluntary - involuntary or both) from the diagram on the right page.

3. Man is similar to animals in his
   a. external structures
   b. internal structures
   c. form of hand and feet
   d. facial expressions
   e. none of the above
   f. all of the above

4. Man's chief assets are his
   a. ability to use tools
   b. ability to talk
   c. his brain and his thumbs

Muscle
Biological Science

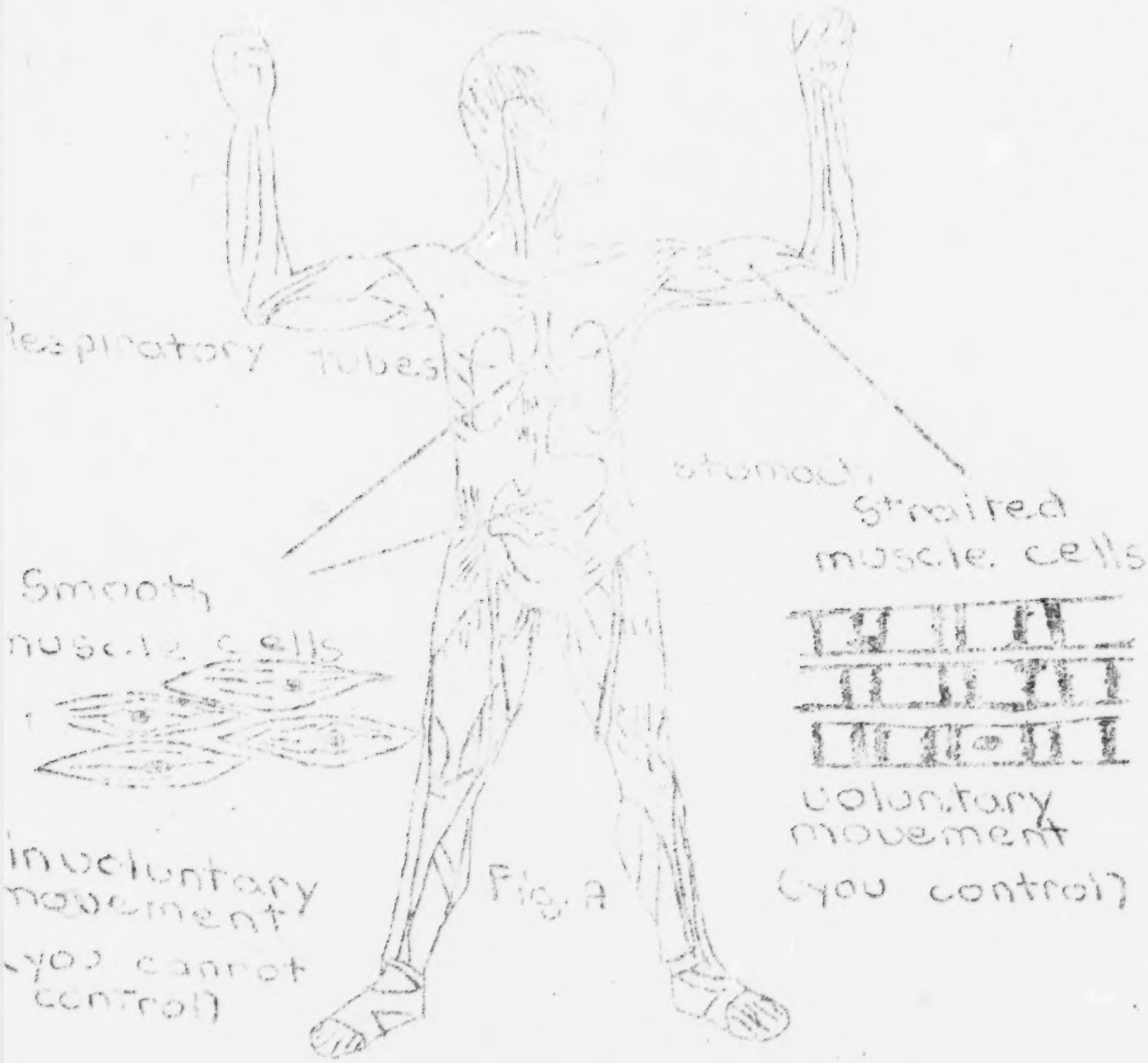

FIG. 3

1. LEPTING _____
2. DIGESTION _____
3. RUNNING _____
4. BLINKING EYES _____
5. BREATHING _____
6. HEARTBEAT _____
7. SWALLOWING _____
8. SINGING _____

STUDENT ACTIVITY

In FIG. B use the following symbols to show the kind of muscle in action: V. voluntary; I. involuntary; B. both voluntary and involuntary.

2. The dark spots seen in smooth muscle cells (FIG.) are the _____ of these muscle cells.

5. An artifact is
   a. a thing made by early man
   b. a thing used by early man
   c. things discovered and studied by anthropologists
   d. none of the above
   e. all of the above

6. Oxygen debt and fatigue concerns
   a. the bones
   b. the muscles
   c. both of these
   d. None of these

Answer

1. What is the difference between connective tissue and supporting tissue? Explain both in 3 to 4 lines.

2. List three types of muscle tissu and give one example of each muscle tissue.

3. Define the following in 2 to 3 lines each
   a. flexors
   b. extensors

4. How does the term tone relate to muscles and muscle build up? (3 to 4 lines).

5. Name four functions of the skeleton system.

6. What is a purpose of the vertebral column?

7. In 3 to 4 lines explain inha ıg and exhaling.

8. In one paragraph explain the e of the kidneys in relation to excretion.

9. Starting from inside the stomach name the 3 layers in the stomach wall.

10. Define pepsin and hydrochloric acid in relation to digestion in 2 to 3 lines.

11. Where does digestion take place in the human body?

12. Explain the function of the small intestine and large intestine.

13. Explain one short paragraph the position of the large and small intestine in relation to the stomach and rectum.

14. In a paragraph, tell how man's ability to think makes him different from animals.

15. Define anthropology.

16. In a sentence or two, tell why "homo sapiens" is used to discuss modern man.

17. List 6 characteristics that are used to determine race.

18. Name 5 human races.

19. Name one discovery by early man that was a great step forward for civilization.

20. List 10 descriptive adjectives dealing with the form of the human body.

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SMALLVILLE, U.S.A.
A Careers Simulation Game
"Planning a Perfect City"

Southwestern City Schools
Grove City, Ohio
Park Street Middle School

Phase IV
Steve Gaston
Marie Paxton
John Gills

Spring 1972

Introduction

This unit is designed as a simulation game and is keyed for the seventh grade. The game will be comprised of three forty-member teams who will compete for the award, "Best Planned City", to be awarded by a team of judges. The judges will be a social studies teacher and a science teacher from another phase.

The entry level test may show that some students have not achieved the minimum basic skills needed to participate in this section of study. Remedial work in research and language arts skills, mathematics and scale, map skills and community concepts may be necessary for some students.

EDUCATIONAL GOAL

The class will understand both the physical and cultural aspects of a well planned city.

Behavioral Objectives for Language Arts

1. Given a list of ten words each student will correctly alphabetize it.

2. Each student will list three sources of job information.

3. Each student will write a research paper of three to five pages with not more than five spelling errors, while using varied sentence patterns with correct punctuation.

4. Each student will be able to list five careers which directly relate to language arts.

5. Given a short article each student will list the five major ideas presented.

6. Each student will be able to name the system under which the career materials are listed.

7. Given a list of statements the student will demonstrate his ability to discriminate between fact and opinion by check-marking the factual statements.

8. Each student will demonstrate his research skills by including in his bibliography at least three of the following sources:

Newspaper articles	Magazine articles
Books	Career materials
Filmstrips	Encyclopedia articles
Films	

Behavioral Objectives for Social Studies

1. Each student will be able to list three prerequesites for the incorporation of a city.

2. Each student will be able to list three advantages of modern sewage plants over septic tanks.

3. Using Park St. Middle School as a point of reference, each student will be able to give directions (North, South, East, West) to various given locations.

4. Each student will be able to briefly describe the political structure of Grove City, Ohio.

5. Each student will be able to list and describe five types of zoning commonly used in many cities.

6. Each student will be able to discriminate between a mayor and a city manager.

7. Each student will be able to explain how most cities evolve rather than having been planned before they are built.

8. Each student will be able to tell why a scale must be used on a map.

9. Each student will be able to list in order of their priority the jobs of doctor, television repairman, poet, dentist, and telephone operator with 100% accuracy.

10. Each student will be able to list the approximate dimensions of a common city block, within fifty feet of the actual dimensions.

11. Each student will be able to briefly describe the interdependence of people in a community.

Behavioral Objectives for Science

1. The student will be able to briefly describe how a nuclear reactor works.

2. The student will be able to briefly describe the workings of a septic tank and a modern sewage plant.

3. The student will be able to briefly describe how a modern purification plant works.

4. The student will be able to describe the water table in Grove City and thus, explain why few homes in Grove City have basements.

5. The students will be able to tell why some cities have to pipe water in from hundreds of miles away.

6. The student will be able to briefly describe why it is unsafe to drink rain water or eat snow.

7. Each student will be able to list at least five science related careers and briefly describe their importance to the community.

8. Each student will be able to select an appropriate mode of architecture and agriculture, given a list of climatic conditions.

9. Each student will be able to briefly describe the physical properties of the sun's rays and tell how the sun may be used to generate electricity to be used as a source of power in the community.

Behavioral Objectives for Math

1. Given a fraction in lowest terms, each student will be able to write three equivalent fractions without error.

2. Given a percent, each student will be able to list the equivalent fraction and decimal ninety percent of the time.

3. Given a fraction, the student will be able to write it as a percent with 90% accuracy.

4. Given a list of pairs of ratios, the student will be able to differentiate between equalities and inequalities by demonstrating correct usage of the symbols, = , < , > to 80% accuracy.

5. Given three numbers in a proportion, each student will be able to compute the fourth number to make the two ratios equivalent 60% of the time.

6. Given a map with a scale for mileage, each student will be able to tell the actual distance between two points 75% of the time.

7. Given a linear measure or liquid measure table (ie; those commonly used) each student will be able to determine equivalent amounts 80% of the time.

8. Given a simple object, each student will be able to select an appropriate scale and draw a model with 60% accuracy.

Behavioral Objectives for Home Economics

1. Each student will be able to explain the food cycle from the farm to the consumer.

2. Each student will be able to list two advantages of comparative shopping in a community.

3. Each student will be able to explain the textile industry from the mill to the consumer.

4. Each student will be able to explain in short essay form how the clothing worn is determined by climatic conditions and environment.

Behavioral Objectives for Art

1. Each student will be able to list three important uses of landscaping.

2. Each student will be able to list differences between Gothic and Romanesque architecture.

3. Each student will be able to name two examples of each kind of architecture mentioned above that may be found in Columbus.

Behavioral Objectives for Music

1. Each student will list three characteristics of natural and man made amphitheaters.

2. Each student will be able to list two purposes for a multi-purpose building in a community.

3. Each student will be able to give a written explanation of how music affects the moods and attitudes of the public. They should include how music is used in business, professional offices and advertising.

Behavioral Objectives for Physical Education

1. Each student will be able to list two activities that are important for each of these age levels: children, teenagers, adults, elderly.

2. Each student will be able to list six characteristics of a recreational facility that would serve all age groups.

3. Each student will be able to name four reasons why exercise is important in maintaining good health.

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Behavioral Objectives for Industrial Arts

1. Each student will be able to list three necessary facilities for the repair and maintenance of community vehicles.

2. Each student will be able to write an explanation of the home utilities, and how the utility companies play an important role in homes.

3. Each student will be able to list five general types of wood in order of their relative densities, and give a written explanation of the part wood plays in building and construction.

DAY BY DAY ACTIVITY GUIDE

Day 1

Pre-test to be given, and the new unit introduced.

Day 2

Allow time for an explanation of the purposes and discussion of what is to be expected in this unit.

Days 3-5

Through group discussion name those jobs which are important to every community. Decide on a list of forty-five essential careers.

Days 6-7

Groups should decide on physical features of their city, i.e.; building size, climate, landscape and population. Zoning concepts should be introduced at this point.

Day 8

Architect talks to class explaining building design and scale.

Day 9

Assign specific careers taken from the list of forty-five (see above) to students who will then do research and report on them. Obtain ping pong tables to place city on.

Days 10-12

Students should be given this time to use career materials to find specific information pertaining to their assigned job.

Days 13-14

Lay out city in chalk on the table surface to show building sites, transportation systems, and other specific areas.

DAY BY DAY ACTIVITY GUIDE

Days 15-16

This time should be used for the construction of buildings to scale.

Day 17

This time should be used for placing buildings in the model, and revision in construction if necessary.

Days 18-19

Students will present their oral reports. Each member of the community explains his job and its importance.

Day 20

Judging.

The following is a list of forty-five occupations that we feel are necessary for the smooth operation of a well-planned city. It is our objective to guide students in compiling a similar list and to refine it according to the needs of their own community.

1. Real estate agent
2. Banker
3. Grocer
4. Mechanic
5. Truck driver
6. Policeman
7. Fireman
8. Mayor
9. City planner
10. Clergyman
11. Funeral director
12. Factory worker
13. Corporation president
14. Newspaperman
15. Garbage man
16. Lawyer
17. Doctor
18. Dentist
19. Restaurant owner
20. Veterinarian
21. Nurse
22. Television repairman
23. Plumber
24. Insurance salesman
25. Teacher
26. Farmer
27. Secretary
28. Telephone operator
29. Retailer
30. Purchasing Agent
31. New and used car dealer
32. Carpenter
33. Electrician
34. Surveyor
35. Architect
36. Armed Forces
37. Computer programming
38. Conservationist
39. Hospital administrator
40. Accountant
41. Printer
42. Public Relations
43. Pharmacist
44. Rehabilitation personnel
45. Artists ie; writers, musicians, etc.

ENTRY LEVEL AND PRE-TEST

"A Well Planned Community"

1. Is Grove City an incorporated or an unincorporated community?

_____

2. Short answer: How do you find information on a particular job in the IMC?

_____

_____

_____

3. What is the most modern means of electrical production in the United States today?

_____

_____

_____

4. Estimate the length of a common city block. _____ feet

5. Check. Which does less harm to the community environment?

_____ Septic tanks _____ Modern sewage systems

6. A yardstick has a shadow of two feet and at the same time the school building has a shadow of twenty feet. How tall is the school building?

_____ feet

7. If the scale on a map is one inch to one hundred fifty miles, how many miles is it from Columbus, Ohio to Atlanta, Georgia if the distance on the map is five inches?

_____ miles

8. If you walk from Grove City toward Columbus, which direction would you be walking?

_____

9. True or False. Some cities in the United States pipe in their water from 250 miles away or more.

_____

10. List three leisure time activities: _____

_____

_____

11. True or False. It is perfectly safe to drink rain water in the Columbus area.

_____

12. Are most cities "built before they are planned" or "planned before they are built."

_____

13. Short answer: Why do only a small percentage of the homes in Grove City have basements? _____

_____

_____

14. What is the highest political post in Grove City? _____

_____

15. List three factors which influence the types of clothing we wear. _____

_____

_____

16. Alphabetize the following list of words:

inflame	1. _____
infill	
inferior	2. _____
inflation	
infest	3. _____
infield	
infinitive	4. _____
infertile	
infinite	5. _____
inflate	
	6. _____
	7. _____
	8. _____
	9. _____
	10. _____

23. List three types of wood that are used in building and construction.

24. List two reasons why landscaping is important.

25. Illustrate the food cycle from the seed to the consumer.

26. Name one advantage in shopping comparatively.

Matching

A. A person who hauls goods and materials from one place to another for a fee.

B. One who repairs and tunes engines.

C. Political head of a municipality.

D. One who performs the religious ceremonies of the community.

E. One who is a generalist in architecture and sociology, he organizes and designs a community.

F. One who is paid for food and goods he provides for his customers.

G. Protects citizens by enforcing laws and codes of the community.

H. Handles legal matters.

I. Assembly line employee.

____1. Lawyer

____2. Corporation President

____3. Sanitary Engineer

____4. Veterinarian

____5. Plumber

____6. Teacher

____7. Fireman

____8. Mechanic

____9. Mayor

____10. Grocer

____11. Policeman

____12. Funeral Director

____13. Doctor

____14. Farmer

____15. Truck Driver

____16. Clergyman

17. What are two sections of a book that tell you about the topics that are included in the book?

_____ _____

18. List three reasons why a recreation center is an important part of a community.

_____

_____

_____

19. Short answer: What is an amphitheater? _____

_____

_____

20. If a railroad car is 80 feet long and a model railroad car is 10 inches, what is the ratio of the model to the real thing?

_____ to _____

21. The shadow of a tree is 40 feet long. At the same time a 20 foot flag pole casts a shadow of 10 feet. How tall is the tree?

_____ feet

22. <u>Essay</u>: Describe a well-planned community. Include the various people needed for proper community functioning, the type of city planning that is needed, zoning, and the type of government needed.

_____

_____

_____

_____

_____

_____

_____

J. Repairs pipes and does pipe-fitting work.

K. Main income comes from growing crops and raising produce to resell.

L. One who designs buildings.

M. One who chooses the armed forces as his life's work.

N. One whose occupation is to guide the learning of others.

O. Idustrial administrator.

P. Garbage man.

Q. Prepares a body for burial.

R. Helps maintain good health in people.

S. One who helps people in emergencies and puts out fires.

T. Helps maintain good health in animals.

____ 17. Factory Worker

____ 18. Architect

____ 19. Career soldier

____ 20. City Planner

Subject Grading Key For Pre-test

1. Social Studies (community concept)
2. Language Arts (research skills)
3. Science (scientific awareness)
4. Math (scale judgment)
5. Science (community concept)
   (scientific awareness)
6. Math (ratio and proportion)
7. Math (ratio and proportion)
8. Social Studies (map skills)
9. Science (scientific awareness)
10. Physical Education
11. Social Studies (community awareness)
    Science (scientific awareness)
12. Social Studies (community awareness)
13. Science (scientific awareness)
14. Social Studies (community concept)
15. Home Economics
16. Language Arts (research skills)
17. Language Arts (research skills)
18. Physical Education
19. Music
20. Math (ratio and scale)
21. Math (ratio and proportion)
22. Language Arts
23. Industrial Arts
24. Art
25. Home Economics
26. Home Economics

Matching - all subject areas (Community Career Awareness)

POST TEST
"A Well Planned Community"

1. List three prerequesites for the incorporation of a city.

2. Briefly describe how a nuclear reactor works.

3. List three equivalent fractions for $^{12}/_{31}$ _____ _____ _____

4. Convert the following percents to a decimal and equivalent fraction:

13.1[illegible]%	_____	_____	12.5%	_____	_____
75%	_____	_____	44.44%	_____	_____
29%	_____	_____	36%	_____	_____
33.33%	_____	_____	.5%	_____	_____
7%	_____	_____	5%	_____	_____

5. List two activities that are important for children under 12 and should be included in their recreation.

_____

_____

6. What are three common characteristics of natural and man-made amphitheaters?

_____

_____

_____

7. What are three uses for landscaping?

_____

_____

_____

8. Name three facilities used for the repair and maintenance of community vehicles.

_____

_____

_____

9. List two advantages of comparative shopping.

_____

_____

10. What are three sources of information about a job?

_____

_____

_____

11. List 5 careers that directly relate to language arts.

_____

_____

_____

_____

_____

12. List three advantages of using a modern sewage system.

_____

_____

_____

13. Convert the following fractions to percents.

2/9	_____	5/21	_____	1/5	_____		
1/3	_____	3/4	_____	1/20	_____		
3/10	_____	1/2	_____	1/100	_____	4/25	_____

14. Describe how a septic tank works.

15. Describe how a modern sewage plant works.

16. Which direction is Columbus from Grove City? _____

17. How does a modern water purification plant work?

18. True or False. Write T or F in the blanks.

_____ 5/5 = 25/25

_____ 10/12 > 5/6

_____ 4/3 < 12/9

_____ 1/13 = 3/39

_____ 1/64 < 3/192

19. Essay: Why is it important to build a home where you can use water, gas, electric, and phone provided by the utility companies?

20. List six characteristics of a recreational facility that would serve all age groups.

_____

_____

_____

_____

_____

_____

21. List two reasons why a community should have a multi-purpose building.

1.

2.

22. List two differences between Romanesque and Gothic architecture.

1.

2.

23. Briefly describe the political structure of Grove City, Ohio.

24. Describe the water table in Grove City, Ohio and tell why most houses do not have basements.

25. Complete the ratio:

8/24 = _____/12

_____/50 = 5/10

8/10 = _____/100

_____/4 = 9/6

7/8 = 49/_____

26. Alphabetize the following list of words:

inflame infill	1	6
inferior inflation	2	7
infest infield	3	8
infinitive infertile	4	9
infinite inflate	5	10

27. Briefly explain how clothing gets to the store where you buy it. Where does it come from?

28. List five general types of wood in order of their density, and tell how wood is used in building and construction.

1.

2.

3.

4.

5.

29. List four reasons why exercise is important in maintaining good health.

30. How does music affect the moods and attitudes of the public in business, professional offices and advertising?

31. Tell what part climate plays in determining what type of clothing is worn.

32. Name the system under which career materials are listed.

33. If the scale on a map is 1 inch = 60 miles, and it is 2 1/4 inches between two cities, how many miles is it?

1 1/2 in. = _____ miles

3 inches = _____ miles

16 3/4 in. = _____ miles

34. Why do some cities pipe in water from hundreds of miles away?

35. Why is it useful to draw high water and snow

36. Name five careers that are related to science.

_____ _____ _____

_____ _____

37. List and describe 5 types of zoning used in Grove City, Ohio.

_____

_____

_____

_____

_____

_____

38. What is the difference between a city planner and a mayor?

39. Using the scale 1 inch = 1 foot, draw yourself as a stick figure in the space provided.

40. What types of buildings and what types of clothing do you need in a climate like Grove City's?

41. Within 80 feet, how long is a common city block? _____ft.

42. Can the sun be used to generate electrical power? (yes or no)

_____

43. In the following statements, place a checkmark beside those which are based upon fact:

_____ The rainfall for the past two weeks measured six inches.

_____ The rainfall has been unusually heavy lately.

_____ Any wild bird can tell a man place to build a nest.

_____ Hanging lake is two miles long and five miles wide.

_____ Hanging lake is beautiful.

44. Read the article and then write the five main ideas.

Rocks are the hard substance of earth. First, the soil must contain enough fine particles of clay.

Soil comes from rocks. Tiny pieces are broken off the large solid masses of rock. The small pieces from large rocks become sand, clay, and gravel.

The hot sun may break up rocks. The sun will heat a rock and cause it to expand a little. The inside of the rock doesn't get as hot as the outside. The rock will begin to crack.

Sometimes a high wind will pick up dust, sand and gravel. This acts as a sand blast, wearing down rocks. Softer parts of the rock are worn away. This causes the rock to crumble into gravel or sand.

Water helps to break up rocks. When water freezes and becomes ice, it expands. This ice takes up more space than the water. When water freezes in the cracks in rocks, it expands and helps to break them up.

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Subject Grading Key For Post-test

1. Social Studies
2. Science
3. Math
4. Math
5. Physical Education
6. Music
7. Art
8. Industrial Arts
9. Home Economics
10. Language Arts
11. Language Arts
12. Social Studies
13. Math
14. Science
15. Science
16. Social Studies
17. Science
18. Math
19. Industrial Arts
20. Physical Education
21. Physical Education
22. Art
23. Social Studies
24. Social Studies
25. Math
26. Language Arts
27. Home Economics

28. Industrial Arts

29. Physical Education

30. Music

31. Home Economics

32. Language Arts

33. Social Studies - Math

34. Science

35. Science

36. Science

37. Social Studies

38. Social Studies

39. Math

40. Home Economics

41. Social Studies

42. Science

43. Language Arts

44. Language Arts

CHAPTER IV

CAREER EXPLORATION EVALUATION

I. STATEMENT OF OBJECTIVES

1. Organize the educational program at the 9th and 10th grade level to provide for the individualization necessary to allow students to make in-depth exploration of career opportunities.
2. Provide means to obtain an interest and aptitude inventory one correlated with the other for each student.
3. Develop a listing of job opportunities within each of the clusters of occupations that are located in the school area (30 minutes driving time).
4. Provide a program whereby each student in the ninth grade will be properly counseled as to job opportunities in the area that fit his correlated interest-aptitude inventory.
5. Provide a program whereby school facilities are used for "on the job" exploration activities during the ninth grade.
6. Provide a program whereby each 10th grade student will be given the opportunity in the course of a year to explore in depth (15 hours or more/a minimum of 3 different jobs outside the school setting).
7. Develop a program whereby parents of all 9th graders are oriented to what career exploration is about and provide

them with up to date and reliable information so they can discuss realistically with their children vocational opportunities and aspirations.

II. ACTIVITIES

All activities were limited to the 9th and 10th grades at Grove City High School which consisted of eighteen staff members and approximately one thousand students.

The program provided for 360 hours of inservice time to help staff understand the concept of Career Exploration and how to develop objectives and procedures to make it an integral part of the curriculum.

An additional 440 hours of time were distributed among the staff and were used to develop objectives and procedures to assure that Career Exploration was integrated into the curriculum.

III. EVALUATION PROCEDURES

1. The ultimate goal is for Career Exploration to become an integral part of the ninth grade curriculum at Grove City High School. If the continuum is to have true meaning to the ninth grade students it must be developed in relationship with and relevant to the regular secondary education program. A situation must be established within the high school setting whereby students can readily see inter-

relationships between the various subject areas and the relevancy of these subject areas to the world of work or areas of advanced study (college, junior college, trade school, etc.). This relationship and relevancy will not occur by chance; it must be developed in a well planned organized manner.

The approach being utilized by Grove City High School to develop this inter-relationship and relevancy of subject areas is through a team teaching interdisciplinary block-of-time. The ninth grade class will be divided into three large four (4) hour blocks-of-time with approximately 175 students per block. The teaching team for this interdisciplinary block will consist of five (5) subject area teachers: one mathematics teacher; one science teacher (Introduction to Physical Science Program); one language arts teacher; one social studies teacher; and one home economics teacher (Teen-Impact Program). In addition, one guidance counselor will share his full responsibility among the three blocks.

This group of teachers will be able to use various instructional techniques: large and small group instruction, independent study; differentiated staffing and the like.

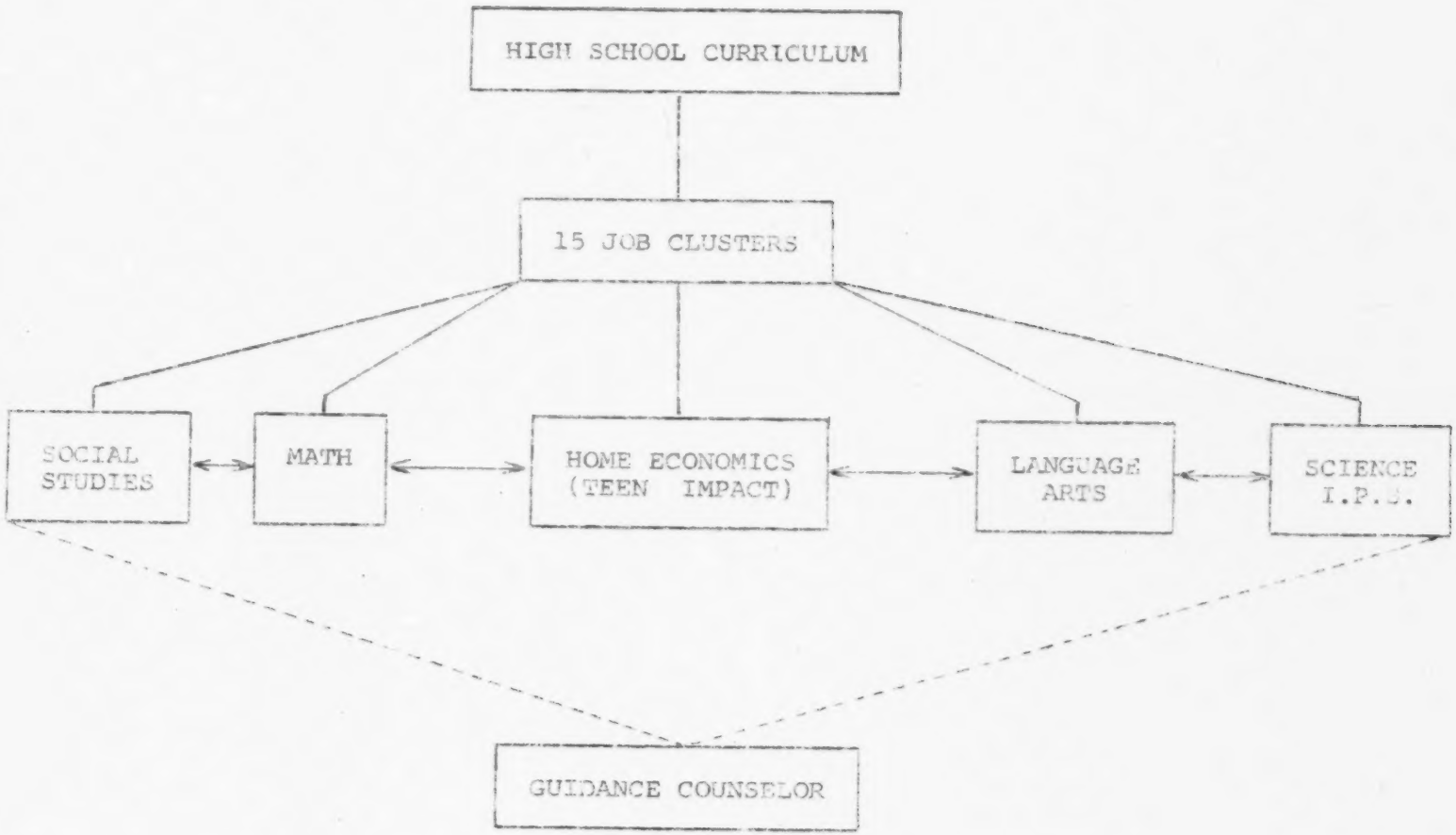
During this four hour interdisciplinary block, the teachers will function as a teaching team with each teacher presenting the basic concepts of his particular subject. Then collectively the teachers will discuss and demonstrate the cognitive,

affective and psycho-motor relationships between the five subject areas and the relevancy of these subject areas to the world of work and areas of advanced study. Major emphasis will be placed upon the relevancy of the five subject areas to the fifteen (15) job clusters.

This teaching team will have common planning time and common office facilities. The guidance counselor will work very closely with each teaching team to provide test and background data on each student within the blocks. The counselor will also hold individual and group guidance sessions with these students. In addition, all of the remaining pupil personnel services will be available to the teachers and students within the blocks.

During the 1971-72 school year the daily master schedule at Grove City High School was based upon a seven (7) period day. The regular teaching assignment consisted of five (5) periods of classes; one (1) period of supervisory responsibility; and one (1) conference or planning period.

To incorporate the interdisciplinary block into the school day involves a complete re-organization of the master schedule. Since the master schedule for the 1971-72 school year was developed in April 1971 and since the Career Continuum Proposal was not approved by the State Department of Vocational Education until January 1972, it was impossible to incorporate the four hour disciplinary block into the 1971-72 master schedule.


HIGH SCHOOL CURRICULUM
15 JOB CLUSTERS
SOCIAL STUDIES
MATH
HOME ECONOMICS (TEEN IMPACT)
LANGUAGE ARTS
SCIENCE I.P.S.
GUIDANCE COUNSELOR

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Therefore the course content for Career Exploration was presented by each of the subject area teachers during their regular daily assignment of five classes rather than as a teaching team in the four hour block. Instead of each student receiving the instructional content with a large group of students during a four hour block of time, the individual student received his instruction through his regular seven (7) period class schedule. However, there were several occasions where the teachers were able to deviate from the seven period schedule and bring the students together in large and small groups for interdisciplinary instruction.

The course content as well as teacher preparation was developed through special in-service sessions held during the school day, evenings and Saturday mornings.

These in-service sessions were devoted to developing subject area units; cognitive, affective and psycho-motor relationships between subject area units; behavioral objectives for each unit; group dynamic procedures; study of the fifteen (15) job clusters; study of occupational opportunities; and study of the professional literature.

Even though we were unable to function as a teaching team in a large block-of-time, it was the opinion of the teachers, counselors and administrators, that Career Exploration was successful. Through common planning time and special in-service

meetings, the teachers were able to develop interdisciplinary units. Because of this common planning by teachers, the students were able to comprehend interdisciplinary relationships as they moved through their daily seven period schedule.

Based upon the results that have been compiled to date from teachers and students, the Career Exploration Curriculum is meeting its goal. The interdisciplinary four hour block-of-time has been incorporated into the 1972-1973 master schedule and the ninth grade students are being assigned to the various blocks. Members of the teaching teams are devoting much of their summer to the development and refinement of instructional content and teaching techniques.

The team teaching interdisciplinary four hour block-of-time will be totally operational during the 1972-1973 school year at Grove City High School.

The GATB was administered and interpreted to all ninth grade students. Due to the limited amount of time available for testing in this year's project, the OVIS was not administered and the Occupational Information Report was not utilized. However, students were made aware of their GATB results and opportunities were provided for each student to explore his occupational interests through counseling. The GATB-OVIS Occupational Information Report will be utilized next year.

Career Tours Scheduled for Sophomore Class

Vet. Med. Clinic, O.S.U.

Fire Fighting Academy

Suburban Motor Freight

Children's Hospital

Dental Clinic, O.S.U.

W.L.W. - TV

Doctors' Hospital West

Bolton Field

General Motors

White Castle

Mount Carmel

Monterey Elementary School

Columbus Dispatch

Edwards Steel Fabricating

Ohio Attorney General

Huntington Bank (Columbus)

Kanada Inn

Spring Hollow Nature Center

City National Bank Computer

W. Engle Greenhouse

McVay's Furniture

Columbus Police Department

Children's Hospital

Electric Company

Columbus Police Department

3. A list was developed which included businesses, industries, agencies, etc., which agreed to provide in-depth occupational tours for the tenth grade students.

4. Eighty-six percent of the ninth grade students were specifically counseled regarding their interests and aptitudes. Fourteen percent were not counseled due to absenteeism. Approximately thirty-five hours of counseling time was devoted to this project alone.

5. The demand for "on the job" exploration activities using school facilities was extremely limited during this phase of project development. Thus, no school facilities were developed or used this year.

6. A survey of all tenth grade students was made to determine their first, second and third choices of occupations in which they were interested. The first choice of each student was then placed in one of the 15 career clusters. Employers were contacted about visitation of students, and students were arranged in groups of 10 to 15 to visit the places contacted. If a student could not be placed in the first choice cluster, he was placed in the second choice cluster for visitation. Each participating student spent an average of three hours in job exploration. Eighty-five percent of all tenth grade students participated. Employer and student reaction forms were developed and distributed. Two hundred eighty-five students responded

and twenty employers responded. Results of the student survey are as follows:

To the question, "Did you take a tour which represented your first career choice?", 73 percent answered yes and 30 percent answered no;

To the question,"Did you take a tour which represented your second choice?", 18 percent answered yes and 72 percent answered no;

To the question,"Did you take a tour which represented your third choice?", 3 percent answered yes, and 92 percent answered no.

To the question,"Did the tour cause you to change your opinion about a specific career?", 26 percent answered yes and 74 percent answered no.

To the question,"Did the tour cause you to strengthen your opinion about a specific career?", 61 percent answered yes and 39 percent answered no.

To the question, "Was the purpose of the tour explained to you?", 87 percent answered yes and 13 percent answered no.

To the question, "Did any of the workers talk with you or members of your group?", 88 percent answered yes and 12 percent answered no.

To the question, "Did you or members of your group ask questions of the workers?", 77 percent answered yes and 23 percent answered no.

To the question, "How would you rate the employer's interest in your group?", 8 percent answered low, 31 percent answered average, and 47 percent answered high.

To the question, "What was your overall impression of the tour?", 4 percent answered poor, 17 percent answered fair, 54 percent answered good and 25 percent answered excellent.

To the question, "Do you believe tours of this type will help students become more knowledgeable of specific occupations?", 96 percent answered yes and 4 percent answered no.

STUDENT QUESTIONNAIRE

1. Did you take a tour which represented your first career choice? Yes 73% No 27%

2. Did you take a tour which represented your second career choice? Yes 18% No 82%

3. Did you take a tour which represented your third career choice? Yes 6% No 94%

4. Did the tour cause you to change your opinion about a specific career ? Yes 26% No 74%

5. Did the tour cause you to strengthen your opinion about a specific career? Yes 61% No 39%

6. Was the purpose of the tour explained to you? Yes 87% No 13%

7. Did any of the workers talk with you or members of your group? Yes 88% No 12%

8. Did you or members of your group ask questions of the workers? Yes 87% No 13%

9. How would you rate the employer's interest in your group?

Low 2% Average 51% High 47%

10. What was your overall impression of the tour?

Poor 4% Fair 27% Good 56% Excellent 13%

11. Do you believe tours of this type will help students become more knowledgeable of specific occupations?

Yes 96% No 4%

The results of the employer survey are as follows.

To the question,"Was there adequate correspondence between you and our school district prior to the students' tour?", 100 percent answered yes and 0 percent answered no.

To the question,"Was the purpose of the tour explained to you?", 100 percent answered yes and 0 percent answered no.

To the question,"Did the students ask questions?", 100 percent answered yes and 0 percent answered no.

To the question,"Did the students talk to any workers?", 50 percent answered yes and 50 percent answered no.

To the question,"How would you rate the students' interest in the tour?", 0 percent answered Low, 50 percent answered Average, and 50 percent answered High.

To the question, "What was your overall impression of the group?", 0 percent answered Poor, 0 percent answered Fair, 40 percent answered Good, and 60 percent answered Excellent.

To the question,"Do you believe a tour of this type will help students become more knowledgeable of specific occupations?" 100 percent answered yes and 0 percent answered no.

EMPLOYER REACTION FORM

1. Was there adequate correspondence between you and and our school district prior to the students' tour?

Yes 100% No 0%

2. Was the purpose of the tour explained to you?

Yes 100% No 0%

3. Did the students ask questions? Yes 100% No 0%

4. Did the students talk to any workers? Yes 50% No 50%

5. How would you rate the students' interest in the tour?

Low 0% Average 50% High 50%

6. What was your overall impression of the group? (Conduct, appearance, attitude, interest, etc.)

Poor 0% Fair 0% Good 40% Excellent 60%

7. Do you believe a tour of this type will help students become more knowledgeable of specific occupations?

Yes 100% No 0%

7. Parents of ninth grade students were provided an orientation program regarding career exploration which included up-to-date information so they can discuss vocational opportunities and aspirations realistically with their children. A questionnaire was distributed to all parents attending the meeting. The results of the questionnaire are as follows.

To the question, "Do you feel the career education program will be useful and educational to students at Grove City High School?", 100 percent answered yes and 0 percent answered no.

To the question, "Would you be willing to have students visit your business or place of employment?", 80 percent answered yes and 20 percent answered no.

To the question, "Please list any suggestions you have to contribute to the career education program"; the respondents answered: "I am a surveyor and the local chapter of the Professional Land Survey of Ohio has a series of slides on surveying as an occupation - can be arranged through the office of the Professional Engineer's Society.", "Keep parents informed", "More encouragement on an individual level."

PARENT QUESTIONNAIRE

1. Do you feel the career education program will be useful and educational to students at Grove City High School? Yes 100% No 0%

2. Would you be willing to have students visit your business or place of employment? Yes 80% No 20%

3. Please list any suggestions you have to contribute to the career education program.

"I am a surveyor and the local chapter of the Professional Land Survey of Ohio has a series of slides on surveying as an occupation - can be arranged through the office of the Professional Engineer's Society." "Keep parents informed." "More encouragement on an individual level."

IV. EXPLORATION UNITS OF STUDY

GROVE CITY HIGH SCHOOL

UNIT OF STUDY

THE STUDY OF CAREERS IN THE LANGUAGE ARTS PROGRAM

High School Unit:
Martin Davis

Grove City High School
Norman Gaines, Principal

The Study of Careers in the Language Arts Curriculum

Philosophy

The language arts curriculum provides a program in which students can develop the communication skills necessary to lead a productive life in their future careers. And, since each student is a unique individual with his own needs and aspirations, it is the role of the language arts teacher to recognize individual differences and to provide learning experiences that will aid each student in developing an awareness and an understanding of these skills.

Goals

1. To provide a program in which students become aware of the importance of expressing themselves clearly and logically in written and spoken compositions.
2. To motivate students to increase their reading skills so they may establish criteria for the selection of reading material in the fifteen job clusters.
3. To help students understand the organization and function of decision-making groups and to help them participate effectively in such groups.

4. To provide a program that will aid students in developing an awareness of the skills necessary for a successful career in the media, fine arts, and humanities areas.

Objectives

1. By participating in various role playing situations, the student will show his understanding of appropriate and inappropriate forms of conversation.
2. Through simulated and actual experiences, the student will show that he can plan and conduct personal interviews.
3. The student will demonstrate that he can select reading material suitable to his reading level.
4. The student will demonstrate that he can write friendly and business letters using the correct format.
5. The student will demonstrate that he can participate in decision-making groups in which personal opinions and values are being expressed.
6. The student will demonstrate that he can use information about various occupations to form long-range goals.

Activities

Activity for Objective One

Students will form groups. Each group will be given a different situation that involves person-to-person conversation, group conversations, and telephone conversations. First, students

will establish guidelines for acceptable conversation in their situation. Next, they will show what may happen when the guidelines are not followed. Thirdly, they will present a situation in which the guidelines are followed.

Activity for Objective Two

Students will first prepare a list of questions they will ask someone in a particular job. They will then interview this person and write a report or share orally with the class what they have learned.

Activity for Objective Three

Students will be given reading material. Then they will answer questions about details. Then with results of this exam and what information can be supplied by the counselor, the student can form a general idea of reading ability.

Activity for Objective Four

After being given the appropriate information about letter writing, the students will write a letter to an association, organization, employer, etc., requesting information about a given career.

Activity for Objective Five

Students (class) with guidance of teacher will establish

guidelines for successful participation in decision-making groups. Next, the teacher will present a problem to a given group. The group will be told to solve the problem by working together. However, one student will detract from the efforts of the group by failing to follow the guidelines. This activity can be repeated several times with different groups.

Activity for Objective Six

Given the appropriate information and materials, students will prepare a resume of their qualifications for a job. They may include the following type of information: 1) personal data, 2) educational background, 3) type of work desired, 4) special abilities, 5) work experience, 6) references.

UNIT OF STUDY

THE STUDY OF CAREERS IN THE
MATHEMATICS PROGRAM

High School Unit:
Jim McCormick

Grove City High School
Norman Gaines, Principal

The Study of Careers in the Mathematics Curriculum

Rationale

For too long, many subject areas have not seemed relevant to many students and have not seen a need for many concepts being taught. Career education provides a rational direction of change.

Why the study of careers in the mathematics curriculum?

1. To enhance motivation of the student
2. To show applications of mathematics in various careers
3. To correlate mathematics with other fields of study
4. To explore the importance of mathematics in the various careers.

Philosophy

The math curriculum should provide the opportunity for each child to explore the importance of mathematics in the various careers. It is to provide a reality situation for those it serves.

Goals

A. Each student will be provided the opportunity for exploration of specific jobs which will result in better student awareness of the mathematical skills and abilities necessary for those jobs.

Goals (Continued)

B. To provide a program which will result in each student having the mathematical skills necessary for present exploration of jobs and future training in the job.

Objectives

1.A By the end of the school year each student will have been provided one half-hour given to discussion of the mathematical skills and abilities necessary for each of the three specific jobs the student chooses.

2.A At the conclusion of the school year each student will have been provided one hour of research time for each of the three jobs chosen.

3.A Using evaluative instruments we will be able to find a significant increase in the level of student awareness of the mathematical skills and abilities necessary for the chosen careers.

1.B Using pre- and post-tests there will be a statistically substantiated significant increase in each student's mathematical skills related to exploration of the three chosen careers and in the skills related to future training in the careers.

Learning Activities

1. Full class discussions to be utilized to provide and obtain information about the purpose of career education.

2. With the aid of GATB information and the Dictionary of Occupational Titles, small group discussions are to be employed with students having similar interests.

3. Individual conferences between the teacher (helper-learner) and student will be used. This will be an attempt to further the knowledge and awareness of a particular career.

4. Large group instruction to be employed for relating mathematical concepts to the various job clusters.

CHAPTER V

CONTINUUM STAFF QUESTIONNAIRES

I. QUESTIONNAIRE FOR MOTIVATION TEACHERS

A questionnaire was distributed to motivation teachers at Kingston Elementary School and Park Street Middle School. A total of seventeen teachers responded to the questionnaire. The results of the questionnaire are as follows.

To the question,"In your opinion, does the career curriculum help students gain a better understanding of the world of work?", 100 percent answered yes and 0 percent answered no.

To the question,"Did the integration of careers into the curriculum cause you any educational problems?", 34 percent answered yes, and 66 percent answered no.

To the question,"Did you have enough career information available to use with your students?", 66 percent answered yes and 34 percent answered no.

To the question,"Please circle the number on the continuum which best represents your attitude toward career education", 0 percent answered 1, 9 percent answered 2, 19 percent answered 3, 36 percent answered 4, and 37 percent answered 5. The mean number for all respondents was 4.

QUESTIONNAIRE FOR MOTIVATION TEACHERS

1. In your opinion, does the career curriculum help students gain a better understanding of the world of work?

   Yes 100% No 0%

2. Did the integration of careers into the curriculum cause you any educational problems?

   Yes 34% No 66%

3. Did you have enough career information available to use with your students?

   Yes 66% No 34%

4. Please circle the number on the continuum which best represents your attitude toward career education.

   Very Negative 1 2 3 4 5 Very Positive

II. QUESTIONNAIRE FOR ORIENTATION TEACHERS

A questionnaire was distributed to Orientation teachers at Park Street Middle School. A total of 25 teachers responded to the questionnaire. The results of the questionnaire are as follows.

To the question, "In your opinion, does the career curriculum help students gain a better understanding of the world of work?", 91 percent answered yes and 9 percent answered no.

To the question, "Did the integration of careers into the curriculum cause you any educational problems?", 25 percent answered yes and 75 percent answered no.

To the question, "Are career materials in the I.M.C. available for your use?", 100 percent answered yes and 0 percent answered no.

To the question, "Are the career materials in the I.M.C. catalogued in accordance with the Dewey Decimal System?", 100 percent answered yes and 0 percent answered no.

To the question, "Please circle the number on the continuum which best represents your attitude toward career education", 0 percent answered 1, 0 percent answered 2, 25 percent answered 3, 42 percent answered 4, and 33 percent answered 5. The mean number for all respondents was 4.

QUESTIONNAIRE FOR ORIENTATION TEACHERS

1. In your opinion, does the career curriculum help students gain a better understanding of the world of work?

Yes 91% No 9%

2. Did the integration of careers into the curriculum cause you any educational problems?

Yes 25% No 75%

3. Are career materials in the I.M.C. available for your use?

Yes 100% No 0%

4. Are the career materials in the I.M.C. catalogued in accordance with the Dewey Decimal System?

Yes 100% No 0%

5. Please circle the number on the continuum which best represents your attitude toward career education.

Very Negative 1 2 3 (4) 5 Very Positive

III. QUESTIONNAIRE FOR EXPLORATION TEACHERS

A questionnaire was distributed to Exploration teachers at Grove City High School. A total of ten teachers responded to the questionnaire. The results of the questionnaire are as follows.

To the question, "In your opinion, does the career curriculum help students gain a better understanding of the world of work?", 100 percent answered yes and 0 percent answered no.

To the question, "Did the integration of careers into the curriculum cause you any educational problems?", 17 percent answered yes and 83 percent answered no.

To the question, "Did you have enough career information available to use with your students?", 50 percent answered yes and 50 percent answered no.

To the question, "Please circle the number on the continnum which best represents your attitude toward career education", 0 percent answered 1, 0 percent answered 2, 0 percent answered 3, 30 percent answered 4, and 70 percent answered 5. The mean number for all respondents was 4.

QUESTIONNAIRE FOR EXPLORATION TEACHERS

1. In your opinion, does the career curriculum help students gain a better understanding of the world of work?

Yes 100% No 0%

2. Did the integration of careers into the curriculum cause you any educational problems?

Yes 17% No 83%

3. Did you have enough career information available to use with your students?

Yes 50% No 50%

4. Please circle the number on the continuum which best represents your attitude toward career education.

Very Negative 1 2 3 4 5 Very Positive

IV. QUESTIONNAIRE FOR ADMINISTRATORS, COUNSELORS, CURRICULUM COORDINATORS, AND DEPARTMENT HEADS

A questionnaire was distributed to all administrators, counselors, curriculum coordinators, and department heads at Kingston Elementary School, Park Street Middle School, and Grove City High School. A total of six persons responded to the questionnaire. The results of the questionnaire are as follows.

To the question, "In your opinion, does the career curriculum help students gain a better understanding of the world of work?", 100 percent answered yes and 0 percent answered no.

To the question, "Did the integration of careers into the curriculum cause you any educational problems?", 50 percent answered yes, and 50 percent answered no.

To the question, "Please circle the number on the continuum which best represents your attitude toward career education", 0 percent answered 1, 0 percent answered 2, 16 percent answered 3, 34 percent answered 4, and 50 percent answered 5. The mean number was 4.

QUESTIONNAIRE FOR ADMINISTRATORS,
COUNSELORS, CURRICULUM COORDINATORS, AND
DEPARTMENT HEADS

1. In your opinion, does the career curriculum help students gain a better understanding of the world of work?

Yes 100% No 0%

2. Did the integration of careers into the curriculum cause you any educational problems?

Yes 50% No 50%

3. Please circle the number on the continuum which best represents your attitude toward career education.

Very Negative 1 2 3 4 5 Very Positive

CHAPTER VI

A COMPARISON STUDY OF OCCUPATIONAL INTEREST CHOICES

I. THE STUDY

A comparison study was made of the occupational interest first choices among 400 10th grade students at Grove City High School and 400 5th grade students at five elementary schools in the Grove City High School attendance area. All students in all schools were given the following directions, "Please list three types of vocations or jobs you would like to know about. Examples - Machinist, Nurse, Secretary, Truck Driver, Salesman, Fireman, Highway Patrolman, Doctor, Designer, Stewardess, Cook."

The following are results of the 10th grade study.

Twenty-two and two tenths (22.2) percent of all first choices were within the Transportation Cluster.

Twenty and six tenths (20.6) percent of all first choices were within the Health Occupation Cluster.

Sixteen and five tenths (16.5) percent of all first choices were within the Public Services Cluster.

Fifteen and eight tenths (15.8) percent of all first choices were within the Business and Office Cluster.

Four and six tenths (4.6) percent of all first choices were listed within the Manufacturing Cluster.

Three and nine tenths (3.9) of all first choices were listed within the Marketing and Distribution Cluster.

Three and four tenths (3.4) percent of all first choices were listed within the Communication and Media Cluster.

Three and four tenths (3.4) percent of all first choices were listed within the Construction Cluster.

Three and two tenths (3.2) percent of all first choices were listed within the Agri-Business, Natural Resources Cluster.

Two and seven tenths (2.7) percent of all first choices were listed within the Personal Services Cluster.

Two and one tenths (2.1) percent of all first choices were listed within the Consumer and Homemaking Cluster.

Nine tenths (.9) of one percent of all first choices were listed within the Hospitality and Recreation Cluster.

Five tenths (.5) of one percent of all first choices were listed within the Fine Arts and Humanities Cluster.

Two tenths (.2) of one percent of all first choices were listed within the Marine Science Cluster.

No first choices were listed within the Environment Cluster.

Sixty (60) percent of all first choices were listed within three career clusters.

Eighty-four (84) percent of all first choices were listed within twenty specific occupations.

The following are results of the 5th grade study.

Twenty-one and one tenths (21.1) percent of all first choices were within the Public Services Cluster.

Seventeen and two tenths (17.2) percent of all first choices were within the Health Occupation Cluster.

Fifteen and eight tenths (15.8) percent of all first choices were within the Hospitality and Recreation Cluster.

Eleven and eight tenths (11.8) percent of all first choices were within the Transportation Cluster.

Six and four tenths (6.4) percent of all first choices were within the Business and Office Cluster.

Five and three tenths (5.3) percent of all first choices were within the Marketing and Distribution Cluster.

Four and eight tenths (4.8) percent of all first choices were within the Personal Services Cluster.

Four and five tenths (4.5) percent of all first choices were within the Manufacturing Cluster.

Three and two tenths (3.2) percent of all first choices were within the Construction Cluster.

Two and eight tenths (2.8) percent of all first choices were within the Agri-Business, Natural Resources Cluster.

Two and two tenths (2.2) percent of all first choices were within the Fine Arts Cluster.

One and nine tenths (1.9) percent of all first choices were within the Consumer and Homemaking Cluster.

One and two tenths (1.2) percent of all first choices were within the Marine Science Cluster.

Nine tenths (.9) of one percent of all first choices were within the Communication and Media Cluster.

Nine tenths (.9) of one percent of all first choices were within the Environment Cluster.

Sixty-six (66) percent of all first choices were listed within four career clusters.

Seventy-seven (77) percent of all first choices were listed within twenty specific occupations

STUDENT OCCUPATIONAL INTEREST CHOICES

CAREER CLUSTERS	% OF 1ST CHOICES WITHIN THE CLUSTER	
	5th Grade Students	10th Grade Students
1. Agri-Business, Natural Resources	2.0%	3.2%
2. Business and Office	6.4%	15.0%
3. Communications and Media	.9%	3.4%
4. Consumer and Homemaking	1.9%	2.1%
5. Construction	3.2%	3.4%
6. Environment	.9%	.0%
7. Fine Arts and Humanities	2.2%	.5%
8. Health Occupations	17.2%	20.6%
9. Hospitality and Recreation	15.8%	.9%
10. Manufacturing	4.5%	4.6%
11. Marine Science	1.2%	.2%
12. Marketing and Distribution	5.3%	3.9%
13. Personal Services	4.0%	2.7%
14. Public Services	21.1%	16.5%
15. Transportation	11.0%	22.2%

II. SUMMARY

The growth of student awareness of the range of occupations within the 15 Career Clusters has been minimal between the fifth grade and tehth grade. There is heavy concentration of student interest in three or four clusters and very little concentration of student interest in the remaining clusters. Also, the range of student interest in specific occupations was limited in both the fifth and tenth grades.

III. CONCLUSIONS

As an outgrowth of the comparison study, the following conclusions were drawn:

Relative to evaluation. As students progress through the continuum curriculum, their career awareness will increase and this will be reflected in their occupational interests. It is expected that a wider range of student occupational choices will be evident in succeeding years. The results of this study will serve as one basis for evaluation of future projects.

Relative to curriculum. It is understandable and acceptable that elementary school children do not have a wide range of awareness of specific occupations This is not the intent of the elementary school curriculum. It is not acceptable that tenth grade students, who soon will make individual career dicisions,

are not aware of the many occupations open to them. The Career Continuum Curriculum will provide the opportunity for students to grow in career awareness and to gain information which will enable each student to make appropriate career decisions.

VT 017 833

EXPERIMENTATION, DEMONSTRATION, AND UTILIZATION PROGRAM ACTIVITIES (JANUARY 1-JUNE 30, 1972). SUMMARY REPORT. TRAINING AND TECHNOLOGY.

OAK RIDGE ASSOCIATED UNIVERSITIES, TENN.
MANPOWER ADMINISTRATION (DOL), WASHINGTON, D.C. OFFICE OF RESEARCH AND DEVELOPMENT.

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IDENTIFIERS - TRAINING AND TECHNOLOGY; TAT

ABSTRACT - DIVIDED INTO FOUR TOPICAL AREAS, THIS REPORT SUMMARIZES THE OBJECTIVES, ACTIVITIES, AND ACCOMPLISHMENTS OF THE TRAINING AND TECHNOLOGY EXPERIMENTATION, DEMONSTRATION, AND UTILIZATION (TAT-EDU) PROGRAM CONDUCTED IN OAK RIDGE DURING THE PERIOD FROM JANUARY TO JUNE, 1972. ACTIVITY AREAS DISCUSSED ARE: (1) APPLICATION AND EXTENSION, (2) EXPERIMENTATION AND RESEARCH, (3) INDUSTRIAL SKILL AND TECHNICAL TRAINING, AND (4) DOCUMENTATION AND DISSEMINATION. THE ACTIVITIES OF TAT-EDU STAFF ARE DIRECTED PRIMARILY TOWARD ACHIEVING INCREASED UTILIZATION OF AVAILABLE INDUSTRIAL, EDUCATIONAL, AND GOVERNMENTAL RESOURCES IN A PARTNERSHIP THAT WILL PROVIDE QUALITY TRAINING FOR DISADVANTAGED PERSONS. (AUTHOR/SN)

VT 017 833

SUMMARY REPORT

EXPERIMENTATION, DEMONSTRATION, AND UTILIZATION PROGRAM ACTIVITIES

JANUARY 1 - JUNE 30, 1972

OAK RIDGE ASSOCIATED UNIVERSITIES, OAK RIDGE, TENNESSEE

Contract Number: 82-47-72-05

Interagency Agreement Number: AEC-40-318-71

VT017833

TRAINING AND TECHNOLOGY

Operated by Oak Ridge Associated Universities and the Nuclear Division, Union Carbide Corporation, in cooperation with the University of Tennessee at the U. S. Atomic Energy Commission's Y-12 Plant, Oak Ridge, Tennessee.

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This report on a special manpower project was prepared under an agreement with the Office of Research and Development, Manpower Administration, U. S. Department of Labor, under the authority of the Manpower Development and Training Act. Organizations undertaking such projects under Government sponsorship are encouraged to express their own judgment freely. Therefore, points of view or opinions stated in this document do not necessarily represent the official position or policy of the Department of Labor.

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Oak Ridge
Associated
Universities

Training
and
Technology

SUMMARY REPORT

Experimentation, Demonstration, and Utilization Program Activities

January 1-June 30, 1972

7-72-9

JULY 1972

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INTRODUCTION

This Summary Report describes Training and Technology Experimentation, Demonstration, and Utilization (ETDU) activities and accomplishments during the period January-June 1972. The report is divided into four major topic areas representing the major activities and scope of the program as follows: (1) Application and Extension, (2) Experimentation and Research, (3) Industrial Skill and Technical Training, and (4) Documentation and Dissemination. Major topics are subdivided into specific projects using a format that permits the reader to determine project objectives, accomplishments made toward those objectives, and remaining necessary work to meet objectives.

Although ETDU activities are funded on a periodic basis, usually 12-18 months, they often are continued from one funding period to another. Appropriate headings have been included to identify various activities as new or continuing. For background on continuing activities, refer to the Annual Summary of ETDU activities, dated March 1972, which covers all projects for the period January-December 1971.

The activities of TAT ETDU staff are directed primarily toward achieving increased utilization of available industrial, educational, and governmental resources in a partnership that will provide quality training for disadvantaged persons. Other priority areas are the assessment of the TAT program and transfer of findings to industry and other interested organizations.

The integrated operation of TAT Industrial Skill and Technical Training and ETDU units, plus the utilization of industrial, educational and governmental resources in the ships, provide an opportunity to make significant progress toward the improvement of manpower development and training practices.

Activity Area	
TAT APPLICATION & EXTENSION	

TAT APPLICATION & EXTENSION

- Overall Objectives

To apply TAT approach to government contractor and private industry groups willing to utilize current plant or laboratory facilities and skilled personnel to train target manpower populations for career job opportunities within their own operations and in other companies. Other objectives are to bring about closer relationships and cooperative manpower development activities between industry and manpower, education, and community agencies, in order to develop greater effectiveness and coordination in manpower services and to extend a wider range of career employment opportunities for disadvantaged and underemployed youth and adults.

Basic Methodology for Application and Extension

I. Exploration
- Assess potential targets
- Identify essential parties and resources for development
- Establish what levels and types of interest exist, plus potential constraints

II. Specific Program Development
- Use target in an industry manpower application, vector industrial-technical training checklist (DOL, Training and Technology: An Industry/Education Partnership for Industrial Manpower Development - June 1972)
- Establish planning group or local coordinating unit
- Secure request for manpower development services
- Develop preliminary program design
- Review plans with potential funding sources, other supporting agencies, and TAT administrative and training staff
- Determine program development timetable

III. Implementation
- Identify technical assistance needs
- Review staff and timing requirements
- Arrange for technical assistance implementation
- Establish program
- Develop evaluation, followup, and documentation systems

Regional Utilization Network

- Objectives

To provide for the systematic utilization of manpower planning and program information across the region. This effort proposes to accomplish this by forming a network of manpower planners and administrators, E and D project leadership, and appropriate university representation in the states served by ORAU.

Activity Area	
TAT APPLICATION & EXTENSION	• Accomplishments Discussions have taken place at national, regional, and state levels in DOL in relation to this project and further development of the idea has been encouraged. TAT staff has developed the concept and proposed that ORAU as a device or structure be used to accomplish the project objectives. ORAU could effectively accomplish the coordinative function for the Regional Utilization Network through its present network of 43 colleges and universities, its long standing relationship with the Manpower Administration, and its other contacts with governmental agencies at the state and local level. The E and D and other specially funded projects in the region would be placed in contact with resources of information through ORAU member institutions. The projects would learn of resources, personnel, and programs at the universities that are applicable, while member universities gain real laboratory capability in which the graduate students and faculty could participate. Such an arrangement would effectively increase the region's stock of such a manpower expertise. As a result of network, manpower planners and administrators would be able to utilize the findings and program activities resulting from E and D projects as well as university projects and resources. The network as proposed should prove complimentary to new regional responsibilities related to further decentralization of national manpower functions, i.e., the emerging need for coordination and dissemination of research findings, program procedures, and general information on manpower delivery systems at the state and local level. • Work to be Done Plans are presently being drawn for a meeting in late summer of the principal interest groups effected by this proposal. Among those included are the Manpower administration (national and regional), state and local government manpower planners in Region IV, selected ORAU member institutions and TAT staff. The nature of this meeting will be to allow participants an opportunity to react to the proposal concept and suggested administrative structure on the basis of merit, objectives, membership, and subsequent conference program.

Activity Area	
TAT APPLICATION & EXTENSION	Community Career Education Resources Project • Background This project represents a part of TAT continuing work with State Vocational Education agencies in the interest of application or extension of TAT findings and experience in the utilization of industrial and community resources. It is based in part on the premise that all education is career education and that such programs to be effective encompass three major goals: (1) career guidance and orientation, (2) career exploration, and (3) career educational training. Additionally the assumption is that the school cannot meet these goals as well alone as it can through a joint community/school effort. TAT involvement in this project is also based on the current national and state interest in career education and vocational training and the potential impact on the use of manpower training and development resources as positive changes occur in present educational systems. • Objectives To develop a survey instrument and test it in two county areas which could be used elsewhere to build a Community Career Education Resources data bank. Such a bank would contain retrievable information concerning: (1) community resources (public and private) available and interested in participating in joint career education programs; (2) ways in which community organizations and institutions would like to be involved; (3) capabilities of interested organizations and institutions in relation to joint programs. • Accomplishments A conference co-sponsored by ORAU-TAT and the Tennessee Division of Vocational-Technical Education was held in Oak Ridge on April 25-26 to explore the use of industrial resources in vocational training programs within Oak Ridge and the surrounding area. During the conference, which resulted from extensive work related to ORAU-TAT application interests in the vocational education system as well as Tennessee legislative interests, recommendations were made by conference participants for the development of a number of activities designed to acquaint high school vocational students with the "world of work." A steering committee was established to guide the development and testing of a survey instrument which could be used to catalog public and private community resources appropriate to career education activities,

Activity Area	
TAT APPLICATION & EXTENSION	e.g., the enrollment of high school students in TAT's Industrial Skill and Technical Training Program described elsewhere in this report. The Steering Committee held its first working session on May 25, 1972, and approved a project proposal, (see Objectives section), sponsored by ORAU-TAT to be conducted by two faculty members and a student at Oak Ridge High School. Actual project work is scheduled to begin on July 3, 1972. • Work to be Done The project staff under the direction of Dr. James L. Schott, Principal of Oak Ridge High School, will develop the survey instrument, conduct a pilot survey for the refinement of the instrument, design a plan for the survey administration, oversee the actual administration of the instrument, tabulate and analyze survey data and prepare a final report. Each of these steps will be presented to the Steering Committee at appropriate times for suggestions and advice. The final report is to be presented to the Steering Committee on October 9, 1972. Work With AEC Eastern Area Contractors • Background Beginning in October 1971, Training and Technology became an AEC Industrial Training Center for all eastern area contractors. The program was designed to utilize the present TAT facility to conduct comprehensive and coordinated training programs for eastern AEC contractors. During the first year of operation, the program was designed to train up to 200 disadvantaged persons to meet AEC manpower needs. • Objectives To encourage AEC eastern contractors to participate in the Training and Technology program and to visit the training facility to keep up-to-date on program activities. Objectives also include exploring and developing replication possibilities, giving the western part of the United States the highest priority. • Accomplishments TAT staff contacted via telephone all eastern AEC contractors to urge their participation in the April training cycle during the reporting period. In addition, visits were made by TAT staff to National Accelerator Laboratory, Batavia, Illinois and Goodyear Atomic Corporation, Piketon, Ohio. Representatives of the General Electric Pinellas Plant, Clearwater, Florida and

Activity Area	
TAT APPLICATION & EXTENSION	Paducah Gaseous Diffusion Plant visited and toured TAT facilities. Nuclear Division, Union Carbide Corporation sponsored 80 trainees in April, including those slots available at their Paducah, Kentucky plant. Goodyear Atomic Corporation sponsored 10 trainees, mostly in mechanical operations. In support of the upcoming September training cycle, all AEC eastern contractors were contacted by telephone, and followup visits were made to National Lead of Ohio, The National Accelerator Laboratory, Argonne National Laboratory, Goodyear Atomic Laboratory, du Pont Corporation, and Brookhaven National Laboratory. Program information was provided to the contractors, and arrangements were made for some of the contractors to visit the training site. Commitments have been received from three contractors to participate in the October 1972 training cycle. • Work to be Done Maintain contact and continue to support AEC eastern contractors in their participation efforts, and urge them to visit the facility if they have not done so recently. Attempt to channel their thinking along the lines that TAT is their training program and a valuable source from which to recruit trained personnel. Work With AEC Western Area Contractors • Background As proposed in the current training proposal, Manpower Development for Industry, TAT application and extension efforts include assistance in the establishment of a western area AEC Industrial Training Center to serve AEC contractors west of the Mississippi River. As a result of a staff visit to Sandia Corporation in Albuquerque, New Mexico in February, AEC and Sandia personnel visited TAT on March 29-30 to discuss replication possibilities at Sandia. During the two-day visit, the visitors were able to gain considerable insight into the operation of an industrial training program, and TAT staff was able to explore training resources and needs in Albuquerque and assess the feasibility of the site for training the disadvantaged. • Accomplishments TAT staff, accompanied by ORAU and Nuclear Division, Union Carbide Corporation personnel, met in Albuquerque during the reporting period to visit facilities and present recommendations concerning a proposed training program at the AEC-Albuquerque site. Discussions there revealed the need at this

Activity Area	
TAT APPLICATION & EXTENSION	time for a program geared to meet the immediate training needs of Albuquerque and the State of New Mexico, as opposed to the establishment of a regional training center. • Work to be Done As a result of visiting Albuquerque, TAT staff observed that resources for a training program were ample in terms of facilities, qualified personnel and technology. In addition, the local Technical-Vocational Institute was observed to be a strong and flexible institution possessing the resources for recruitment, guidance and counseling, and program management. Current efforts are underway on the part of Albuquerque personnel to develop a proposal for funding considerations from the U. S. Department of Labor. TAT staff has agreed to provide any assistance possible to realize a positive replication effort. Extension of TAT Services to Functional Industrial Training (FIT) Program • Objectives To provide technical and supportive service support such as placement service to Functional Industrial Training (FIT) staff on an "as needed" basis, and to serve in an advisory capacity in matters relating to contractual agreements. • Accomplishments TAT staff worked with FIT personnel to develop a standardized reporting system compatible with the TAT Data Bank system. Since TAT staff has administrative reporting responsibilities for both TAT and FIT, it was mandatory that their reporting system be identical to TAT's system. The standardization of systems was accomplished by a visit of TAT staff to the FIT training site. TAT staff also conferred with FIT staff on the development of an industrial electricity curriculum to be included as part of the TAT program in October. • Work to be Done To continue providing technical assistance to FIT, and interchange ideas intended to improve the operation of both programs. Standard Oil/State of Illinois • Background Entering into a unique experimental partnership with Standard Oil Company

Activity Area	
TAT APPLICATION & EXTENSION	(Indiana) and TAT for training and employment of disadvantaged as chemical technicians, Illinois' Employment Security Administrator formally suggested in 1971 that TAT use its experience to help develop "a manpower training model which might be applied by a variety of Illinois industries and agencies." Department of Labor and TAT responded by giving this aim priority in TAT's 1972-73 manpower development objectives. • Accomplishments Meetings were held in early 1972 to assess training results of joint chemical technician project and to discuss future training potential of a variety of Standard Oil operations. In February, preliminary exploration was begun with senior executives in the corporation's urban affairs, information systems (AMOCO), and research operations. Basic interest was seen in opening up technical-level occupations in computer systems to disadvantaged and underemployed residents of Chicago's metropolitan area, as a first step. The president and Midwest regional manager, respectively, of Banneker Systems, a Standard Oil associate, visited Oak Ridge for review of TAT and overall program development considerations. Banneker, a minority-owned software services organization which operates under both private and government contracts, has since 1968 successfully conducted manpower training and upgrading of 170 minority persons in data processing fields for San Francisco/Oakland and Chicago area employers, with a record of 90% retention in training and over 85% placement in jobs paying entry salaries between $6,600 to $8,400 per year. During month of May, program development meetings at Standard Oil and Banneker Systems headquarters resulted in agreement on basic plans for a "Technology Training Consortium of Chicago" program: • Standard Oil pledged facilities, equipment, and certain trainee stipend contributions, in context of consortium with several area companies which would co-sponsor and pledge jobs for qualified graduates. • Banneker Systems to serve as training services administrator, with cooperating staff assistance from consortium members. • TAT Manpower Development Program to assist by mutual agreement, in program design, proposal development, and mix of training resources, and technical areas as necessary.

Activity Area	
TAT APPLICATION & EXTENSION	• Program foreseen in two phases: first, one to two cycles of computer systems training in initial program, a cycle to include 12-13 weeks' skill training and followup OJT for approximately 15 trainees. Second phase (to be developed in course of initial year) to involve exploration and development of training in chemical technology and allied occupations for Chicago area industries, utilizing Standard Oil and possibly other facilities for the program. Followup efforts in May and June included: • activation of Banneker Systems/Standard Oil work group, canvassing Chicago area employers for job pledges and trainee co-sponsorship interest, and • early discussions with Illinois state agencies to determine potential funding mix, preferred program design and population targets, and other considerations, and • development of final curricula, program certification by education and training agencies, and alternative budgets. • Work to be Done Completion of job-pledge and trainee sponsorship survey. Determination of funding sources, proposal development, and negotiation with Illinois state and federal agencies. Implementation of first-phase training project. Review of Naperville and other industrial facilities for development in 1973 of second-phase technician project. State of West Virginia • Background A key finding of TAT's regional manpower training demonstration project (1969-1971) was, as the Appalachian Regional Commission noted, that "the potential combination of industrial, education, and government resources, which TAT represents ... seems particularly relevant for industrial development in Appalachia." Following up its participation in that project, the state of West Virginia sponsored experimental referrals of manpower trainees and joined TAT in exploring development of cooperative industry-site manpower training programs in high unemployment areas. • Accomplishments • As a result of recent federal and state safety requirements and increased mechanization of the deep-mining industry, a southern West Virginia planning

Activity Area	
TAT APPLICATION & EXTENSION	group formally requested the assistance of TAT staff in developing a proposed "McDowell Mine Technology Training Center" to meet critical employment needs in the region's coal industry. The partnership would involve Concord College of Athens, West Virginia, the Free State Training Association, the M and C Coal Company of Northfork, West Virginia, and various state agencies. Follow-up program development meetings were held in late spring in Oak Ridge and Charleston on the proposal, which provides for training or retraining of 80-100 disadvantaged persons as skilled, entry-level miners during the first year of operation. The training would utilize an existing underground mine, experienced industrial personnel, plus shops and classrooms located above-ground for trade-related instruction and remedial services. In June, Governor Arch Moore endorsed the proposal and submitted it as a state project to ARC for review and funding consideration. • Further planning and development activities occurred during the first quarter of the year on establishment of a multi-occupational training program which would combine the resources of Union Carbide industrial plants and educational agencies in Charleston/Kanawha Valley, West Virginia. A Union Carbide headquarters executive, TAT staff, and West Virginia officials met in late March with the managers and personnel officers of the 4 plants to discuss the feasibility of such an operation. However, the serious economic problems of the area's chemical industry have held back implementation. An alternative approach under discussion is the possible use of various industry facilities and personnel to offer career education in industrial trades to area high school seniors. • <u>Work to be Done</u> On McDowell mine training project, implementation will include: - funding commitments to be secured from sponsoring federal, state and regional agencies; - interagency pre-activation site visit to identify specific training and technical assistance needs; - establishment of training project, with provision for on-going experimentation and program evaluation. On Union Carbide project in Charleston/Kanawha Valley, further development must await decision by corporation's regional and plant officials.

Activity Area	
WORKER TRAINING ASSESSMENT, EXPERIMENTATION, AND RELATED RESEARCH *(CONTINUING)*	EXPERIMENTATION AND DEMONSTRATION: ASSESSMENT AND RESEARCH *(CONTINUING)* · Overall Objectives The overall objective of Experimentation and Demonstration: Assessment and Research is two fold: (1) to assess and evaluate current program operations to improve the delivery of manpower services and (2) to interject new methods, approaches and techniques in training, under experimental conditions, to determine their effect on desired outcomes. Upgrading in an Industrial Setting *(New)* · Objectives To assess industrial upgrading practices in the three AEC plants in Oak Ridge operated by the Nuclear Division, Union Carbide Corporation; To develop techniques that would allow the plants to improve their upgrading practices; To assess the effectiveness of the adopted techniques; To assist in the application and utilization of proven methods of upgrading in the AEC contractor system and in private industry. · Accomplishments Staffing activities were completed during the period. Manpower flows were traced over the nine year period by plant, race, and sex. Interviews with a sample of Nuclear Division employees were conducted to identify training resources and selection criteria. Meetings were held with Nuclear Division management to exchange information. A draft of a recommendation to modify upgrading practices was submitted to the Nuclear Division management. · Work to be Done Computer analysis will be performed to isolate, in more precise terms, the factors which have affected upgrading in the past. Pre-and post-measurement techniques will be developed to evaluate the effectiveness of adopted activities. Assistance to plants in implementing activities to affect upgrading within the plants will be given as needed.

Activity Area	
WORKER TRAINING ASSESSMENT, EXPERIMENTATION, AND RELATED RESEARCH *(CONTINUING)*	A document of findings, courses of action, and effectiveness will be written for distribution to interested parties. Assessment of Upgrading for Industrial Employees *(Continuing)* · Objectives (1) To provide non-high school graduates with sufficient instruction and opportunity to learn to enable them to pass the state high school equivalency examination. (2) To provide high school graduates with a basic introduction into a skills area that will permit further advancement. (3) To provide advanced experience as a teacher and worker in a skills area. (4) To provide elementary administrative and pre-foreman training. (5) To make college credit in skill, technical, and academic courses available. · Description Upgrading for industrial employees was developed during the previous year as part of the Industrial Skill and Technical Training component of TAT by Union Carbide Corporation. The program, designed as a pilot study, is intended to provide necessary training and experience to different educational levels of employees that will make them eligible for promotion to higher status. The program has five different programs to accommodate different educational level ranging from non-high school graduates to employees with college credit. During the current reporting period, EDU staff of ORAU in cooperation with Union Carbide personnel, began an evaluation of the program designed to strengthen individual program areas. · Accomplishments (1) All programs components were reviewed for content and effectiveness, and a report was issued which presented recommended changes and improvements. (2) A total of 262 employees completed various components during the life of the pilot project. (3) Two new programs similar to the pilot program were initiated at a separate plant involving ten employees. · Work to be Done (1) Review the program changes to determine effectiveness and sample trainees' attitudes toward program effectiveness.

Activity Area	
WORKER TRAINING ASSESSMENT, EXPERIMENTATION, AND RELATED RESEARCH *(CONTINUING)*	(2) Develop acceptable pre- and post- measures to assess effectiveness. (3) Develop new program components for employees. (4) Develop report forms that are acceptable to DOL, TAT, and ND,UCC uses to reduce information redundancy. Post-Placement Survey of TAT Graduates *(New)* · Objectives To define and describe, through personal interview and questionnaire media, the post-placement adjustment period of TAT graduates and to catalogue these experiences in terms of problems they have faced and how these problems were resolved. The survey will also provide a practical, educational experience for a group of ten university interns serving as interviewers and independent researchers. · Accomplishments (1) A preliminary mail-out questionnaire was mailed to all graduates to determine their present location, to provide necessary data to develop more detailed questionnaires, and to identify critical demographic strata for probability sampling. (2) Selection devices and techniques were developed to aid in the collection of background, aptitude, and other information for intern applicants. (3) An intensive, three-day training program was developed to provide instruction and practice in interviewing for the interns. The training program was completed June 16, 1972. (4) Intern committees were established in Knoxville, Chattanooga, Oak Ridge, and Chicago, Illinois to support the interns in their interviewing and independent research projects. · Work to be Done Intern collection of survey data will continue until August 28, 1972, during which time between 600 and 700 interviews will be completed. Statistical analysis of returned data will occur on an on-going basis to provide self-correcting feedback to survey progress. Report preparation will be completed by November 30, 1972. Analytical Assessment of TAT Welding Program *(New)* · Objective

Activity Area	
WORKER TRAINING ASSESSMENT, EXPERIMENTATION, AND RELATED RESEARCH (CONTINUING)	To prepare a statement of facts and conclusions summarizing TAT's experience and research in training welders that could have external validity in other MDTA sponsored welding programs. - Accomplishments TAT welder training program has been separated into its component parts (e.g., recruitment, selection, diagnosis, training performance measures, and curriculum), and research related to any one part has been synthesized. Much of the curriculum which heretofore was not documented has been formulated and will be produced as a curriculum document soon. - Work to be Done Analysis of each part of the welding program will continue, and where empirical data exists to support conclusions, they will be incorporated into the study. A description of participants in other welding programs will be compared with the description of TAT welding students. Finally, a synthesis of all information generated will be used to summarize the statement of facts and conclusions. Assessment of Current Trainees, Veterans, High School Students, Law Offenders *(New)* - Objectives (1) to determine the degrees of similarity or difference in the training performance of veterans, high school students, and law offenders. (2) to determine what influence participation in TAT has on work attitudes and values among high school students and law offenders. (3) to identify and document areas of conflict between program operations (e.g., policies, teaching methods, curriculum, etc.) and individual trainee needs. (4) to identify elements, factors, or components in the TAT program which are preceived to be reinforcing to participants in helping maintain learning behaviors. - Accomplishments *Preliminary steps have been taken to ensure sponsor cooperation and to determine sponsor interests. Tests and work value inventories have been examined for appropriateness, and problem areas have been documented.* - Work to be Done Appropriate statistical tests will be used to determine significant

Activity Area

WORKER TRAINING ASSESSMENT, EXPERIMENTATION, AND RELATED RESEARCH (CONTINUING)

differences in training performance among each group of participants, and data collection reflecting program conflicts will continue. An attitude survey structured to identify factors perceived to be reinforcing to participants will be constructed and both program participants and non-participants will be tested using a standardized measure of work values.

Analytical Assessment of TAT Communications and Feedback *(New)*

- **Objectives**

To describe the TAT communication and feedback system in order to develop a communication model that will maximize both efficient operation of an industrial skills training program and trainee learning.

- **Accomplishments**

Interviews of TAT staff members have been conducted to determine what types of communications and communication linkages exist within the present structure. Several categories of information types and modes of communication have been identified.

- **Work to be Done**

A series of information dissemination problem solving sessions will be conducted involving TAT staff members. Of particular importance to the development of the communication and feedback model will be the consideration of trainee needs and sound learning theory.

TAT Data Bank *(Continuing)*

- **Objective**

To organize and select data on TAT trainees for: (1) use by researchers and program analyst in their respective studies, and (2) use by worker training project administration for current operations information and reporting.

- **Description**

TAT trainee data bank format is divided into five main parts as follows: (1) enrollment, (2) personal history, (3) guidance, (4) placement, and (5) followup. There are over 140 individual items of data for each of these five parts.

- **Accomplishments**

Encoding, punching, and taping of data on all trainees in the TAT program

Activity Area

WORKER TRAINING ASSESSMENT, EXPERIMENTATION AND RELATED RESEARCH (CONTINUED)

has been completed for 1970-71, and provisions have been made for encoding to be done during enrollment of future TAT trainees. Encoding, punching, and taping of TAT trainees prior to January 1970 will be accomplished as time permits.

Two manuals have been developed to assist researchers and program analysts. The first manual entitled "User's Manual for TAT Data Bank" is intended to provide university and staff researchers with necessary information needed to retrieve data from the system. The second manual, a manual for programmers, is a looseleaf notebook of coding and programming information which is used for program maintenance and is in a continuing stage of development. The following programs have been written for retrieval of special sets of information:

- Statistical Supplement to TAT 1972 Annual Report (March 1972).
- Graduate Location Listing by states.
- Address listings and alphabetical listings of graduates.
- Labeled-columned list of master file information on selected funding agencies by graduate, non-graduate, and present enrollment groups.
- Notebook record system for placement data.
- Monthly enrollment report.
- Descriptive statistics for followup study.
- Listing of placement data for occupational choice study.

In addition, several programs have been written to manage the arrangement and storage of data in the bank.

- Work to be Done

Turnaround time for information retrieval has often been found to be somewhat less than satisfactory for both administrative and research uses. An evaluation of alternatives to improve the situation is currently in progress. Basically, three alternatives are available: (1) move the data bank to a larger, faster computer system, (2) install an on-line terminal to another computer system, and (3) use the ORAU data processing system to accumulate data and build tapes which could be run when necessary on a faster system. A decision will be made among these alternatives during the next reporting period.

Accumulation of data in the bank will continue, accuracy will be improved, and TAT data bank usage will be encouraged among staff and university research personnel.

Activity Area	
INDUSTRIAL SKILL AND TECHNICAL TRAINING ASSESSMENT, EXPERIMENTATION, AND RELATED RESEARCH	

INDUSTRIAL SKILL AND TECHNICAL TRAINING
ASSESSMENT, EXPERIMENTATION, AND RELATED
RESEARCH

• Overall Objectives

The Industrial Skill and Technical Training Center serves as a manpower laboratory for both university experimentation and continuing assessment and analysis by TAT professional staff. The objectives of Industrial Skill and Technical Training experimentation and assessment are (1) to improve the existing training program, (2) to expand knowledge in the field of human resource development, and (3) to influence improvement in other training programs. Means to accomplish these objectives are (1) identification of training elements essential to success for a variety of trainee populations, (2) facilitating use of the training program as an experimentation laboratory for industrial, educational, and other manpower agencies, and (3) critical analysis of training center components.

Remodeling of Trainee Intake System

• Objectives

To remodel the trainee intake system to mesh open enrollment policy with curricula based on the need to group trainees. Past practices have involved detaining trainees who enter the program [illegible] middle of a cycle until sufficient numbers have entered to form a group.

• Accomplishments

A task force to study the current intake system was formed, and the study was completed during the reporting period. Their recommendations, including curriculum and administrative changes, are currently being designed and implemented.

• Work to be Done

Curriculum revisions necessary for adoption of the recommendations for modifying the trainee intake system will be finished during the forthcoming six-month period, and the new system will be in effect for students entering in October, 1972.

Activity Area	
INDUSTRIAL SKILL AND TECHNICAL TRAINING ASSESSMENT, EXPERIMENTATION, AND RELATED RESEARCH	**Revision of Trainee Evaluation System** • Objectives To revise the trainee evaluation system in order to clarify assessment information and reduce distortions created by lack of standardization procedures. Previous methods of evaluation varied according to department and individual. Some instructors used absolute scales while others used relative scales. • Accomplishments An alternate model of evaluation which emphasized disaggregating performance categories and utilizing a two point grading system has been developed for testing in the machining training area. • Work to be Done The alternate trainee evaluation model will be tested for three months and further revisions made after reviewing its operating performance. **Development of an Evaluative Reporting System** • Objectives To devise a reporting system which will facilitate testing supportive services inputs, especially counseling, using trainee performance measures. • Accomplishments A format for summarizing both counseling and trainee performance information, which is tied to measurement of a hypothetical intervening variable (self-concept), was designed and instituted during the reporting period. • Work to be Done During the period July-December 1972, information being collected through the nee format for counseling data will be analyzed both for content and possible modifications in the information system. **Establishment of "Management by Objectives" Administrative Procedures** • Objectives To establish program administration procedures which will clarify the objectives of the various departments, highlight the necessary relationships between these departments, and lead to systematic measurement of program progress.

Activity Area	
INDUSTRIAL SKILL AND TECHNICAL TRAINING ASSESSMENT, EXPERIMENTATION, AND RELATED RESEARCH	• Accomplishments A program for instituting management by objectives for all functions except skill training was begun during the reporting period. • Work to be Done Verifiable objectives will be developed for each unit, exclusive of skill training areas, along with appropriate measurement mechanisms, for institution as a system around October 1, 1972. Training of Oak Ridge High School Students • Objectives To provide selected Oak Ridge High School senior students with career type education opportunities in conjunction with their academic studies. Upon graduation, after approximately six months' training from the TAT program, graduates will receive their high school diploma in addition to their TAT diploma. Supportive services for the students, including placement will be provided by TAT staff; student selection will be made by Oak Ridge High School staff. • Accomplishments Preliminary discussions were held with Oak Ridge High School and Anderson County Board of Education officials during January regarding the possibility of training selected high school seniors in an industrial skill at the Oak Ridge Y-12 Plant training site. As a result of these discussions, a proposal was developed in February by Oak Ridge High School administrative personnel providing for the training of up to 20 high school seniors in the program beginning in September. The Anderson County School Board, which according to the proposal would provide institutional funding, approved the program. To provide necessary data needed to evaluate and refine the actual program when it gets underway, preparations were made during March to initiate a pilot program for up to 20 students in the April training cycle. These students who began training on April 6, are scheduled to graduate in September. The pilot program has been very successful and those students enrolled have made better than average progress. One meeting, involving students, Anderson County Board of Education members, and Oak Ridge High School officials was held during June to determine students' feelings toward the program. Opinions expressed during this meeting were favorable toward the TAT program.

Activity Area	
INDUSTRIAL SKILL AND TECHNICAL TRAINING ASSESSMENT, EXPERIMENTATION, AND RELATED RESEARCH	• Work to be Done To collect data on the pilot program that will be used to evaluate the experience and refine the regular program scheduled to begin in September. Public Offender Training Program • Objectives To provide Industrial Skill Training to selected public offenders from correction institutions across the state at the TAT training site. • Accomplishments Early exploration into the possibility of developing a program to train public offenders at TAT began in January when a TAT staff member visited a nearby prison to explain the TAT program to a group of inmates and prison staff. After the visit by TAT staff, the prison warden toured TAT training facilities and met with TAT staff to explore the development of a pilot program. The warden was enthusiastic about such a program and pursued its development with the Commissioner of the Tennessee Department of Correction. A letter agreement outlining the pilot program was submitted by TAT to the Department of Correction and concurrence with the agreement by Governor Dunn was communicated in early April to the Laboratory and University Division of the U. S. Atomic Energy Commission (AEC) in Oak Ridge. In late April AEC approval of the program was transmitted to the Nuclear Division, Union Carbide Corporation, and at that time five honor inmates were enrolled in TAT. Two additional inmates were enrolled several weeks later. Of the seven trainees in the program, four are enrolled in welding and three in machining. TAT staff feel that the public offender trainees are above average in their performance, both in trade related instructions and skilled training. Of the four welders, three have been certified as job ready. • Work to be Done TAT staff is currently developing a joint funding proposal to seek funding from local, state, and regional organizations, that might be interested in funding a rehabilitation program for public offenders. The proposal will be distributed during September. The pilot program has demonstrated that the public offenders can be integrated successfully with other trainees and that they can perform in an above average manner under these integrated conditions. Data gathered from the pilot program will be used to evaluate and refine the proposed program provided funding sources are obtained.

Activity Area	
DOCUMENTATION AND DISSEMINATION *(CONTINUING)*	DOCUMENTATION AND DISSEMINATION *(CONTINUING)* · Objectives Production of reports, research studies, articles, and news releases useful to Training and Technology and other manpower programs. Dissemination of manpower information to professionals and the public by mail, conduct of institutes and workshops, tours, and staff presentations elsewhere at conferences. Staff Publications *(New)* The following staff publications were issued to document project experience for dissemination and utilization of manpower research findings. (1) University Participation in Manpower Training Programs through Manpower Research Activities (January 1972), which describes the steps involved for university faculty and students to utilize the potential research opportunities available at TAT. (2) Preparing Rural Appalachians for Skilled and Technical Jobs (March 1972), which covers the second year of ARC participation in training and program development from October 1970-December 1971. (3) User's Catalog for TAT Trainee Data Bank (March 1972), which lists and describes data items included in TAT data bank, including codes, and sources of data. (4) Training and Technology: An Industry/Education Partnership for Industrial Manpower Development (June 1972), which outlines the TAT operating experience, to serve possibly as both guide and stimulus to the building of new industry-education partnerships. Regular Project Reports (1) Annual Summary (January 1972) - TAT Experimentation and Demonstration Program Activities, January 1-December 31, 1971. (2) TAT 1971 Annual Report (March 1972). (3) Statistical Supplement to TAT 1971 Annual Report (March 1972). (4) Quarterly Report (April 1972) to DOL, January 1-March 31, 1972. (5) Project Highlight Reports (monthly). Proposals (1) Survey of Post-Placement Experience of TAT Graduates (March 1972).

Activity Area	
DOCUMENTATION AND DISSEMINATION *(CONTINUING)*	DOCUMENTATION AND DISSEMINATION *(CONTINUING)* (2) AEC Industrial Training Center-Operational Plan (March 1972). University Research Reports *(Continuing)* (1) Analysis of the Attitudes of the Unemployed Toward Work and the Development of an Employment Readiness Scale to Measure these Attitudes (March 1972). • Work to be Done The following are publications to be completed during 1972: (1) Upgrading Final Report (Phase I, Part 1), which will describe research conducted and data collection techniques carried out during the first six months' of the project. The report will also present an upgrading model and compare Nuclear Division, Union Carbide Corporation upgrading practices with the ideal conditions set forth in the model. (2) The Role of Placement Function in a Manpower Development Program will describe the placement function at TAT and provide examples of each component and its role in the overall placement effort. (3) Training Welfare Recipients in Industrial Skills will describe TAT's experience in training welfare recipients from West Virginia. (4) Welding Study will be prepared as an analysis of individual components of the TAT welding program which will have application value to other MDTA sponsored programs. (5) Post-Placement Survey of TAT Graduates will present an in-depth analysis of adjustment problems experienced by TAT graduates in making the transition from training to the real "world of work." (6) Communication, Feedback Analysis will document efforts to build an internal communications model which maximizes communications between employers and training staff to maintain credibility of the training program. The model will also provide feedback to the trainees concerning their training performance. (7) High School Program Study will document the effect in the program of high school student participation in training and analyze student attitudes toward the "world of work." (8) Prisoner Program Study will document the history of the work release program, and describe how TAT became involved in the program.

Activity Area	
DOCUMENTATION AND DISSEMINATION *(CONTINUING)*	DOCUMENTATION AND DISSEMINATION *(CONTINUING)* An assessment of our experience with the pilot program will also be included. Dissemination of Information *(Continuing)* Information valuable to government, industry, education, and other local, state, and national manpower agencies was disseminated through publications, conferences, meetings, visits, and visitors. Names of more than 300 manpower agencies are included on the regular mailing list, and numerous requests are received and answered for information on program activities. During the first half of the 1972 EDU year, approximately 3,546 project publications were distributed to manpower agencies and officials and some 224 persons visited Worker Training and consulted with program staff. Visits to Worker Training constitute a major dissemination activity. The typical visitor to TAT receives a tour of all training areas and talks with training supervisors, instructors, counselors, and trainees. Generally, a TAT staff member spends from one-half to one full day with visitors and many short consultations are conducted with TAT staff in accordance with visitors' special interests. Meetings, conferences, and workshops which also contribute to the dissemination process are summarized in the charts on pages 23 through 29.

VISITORS

DOCUMENTATION AND DISSEMINATION *(CONTINUING)*

January	February	March
Richard McAllister and Charles Phillips, Department of Labor, Research & Development Division, attended the Upgrading Research Coordinating Council Meeting and visited the Worker Training site. B. E. Childers and Janie Jones, Southern Association of Colleges and Schools, also visited in connection with the Upgrading Research Coordinating Council Meeting. Donald Rathbun of the American Vocational Association visited TAT in connection with the preparation of an article on the program for AVA Journal. David Bartlett and Lois Engel, U. S. Department of Labor, Washington. John H. Colvett and Brooks S. Fitzpatrick, Kusan Plastics, Nashville. James Schott and Kenneth Loflin, Oak Ridge High School. Warren Cannon and Kenneth Williams, National Accelerator Lab. Arthur B. Bowers, John E. Owens, Donald R. Marshall and Robert W. East, First Tennessee Development District.	Dr. Louis Levine, Institute for Research and Human Resources. William R. Ramsay, Berea College. Donna Seay and Ivan Horabin, Technical Education Research Center, Montgomery, Alabama. Dr. Charles Allen, University of Tennessee. Louis Woods, Chattanooga Concentrated Employment Program. Kirk Robinson, Knoxville Urban League. David Deahl and David Agneason, Awareness House, Oak Ridge. D. W. Menke, U. S. Atomic Energy Commission, Nevada Operations. Dr. P. M. Dings and Robert Brooks, Anderson County Health Clinic. Mark H. Nelson and L. Patrick Riordan, Awareness House, Oak Ridge. Malcolm H. Lee, Randall P. Middleton, and George Barton, Argonne National Laboratory. Jeff Beck, Evlene Montgomery, Charles Webb, Morgan County Community Action Center.	Willis Creamer, AEC/ Albuquerque Operations Office. Henry Willis, Sandia Corporation. Louis Saavedre, Albuquerque Technical Vocational Institute. Mr. Willard Yarborough, staff writer for the Knoxville News-Sentinel. David A. Hake, University of Tennessee. Louis Roberts, Paul Ellis, Lowell Whaley, Mildred Dillon, Deanne Goodgain, and Imelda Van Fleet, Roane State Community College. Owen Heiserman, University of Iowa. Joyce Howell and Kennard Williams, National Accelerator Laboratory. James E. Young, South Central Bell. Robert H. Moore, Warden Brushy Mountain Penitentiary. Richard Gaskell, Knoxville Work Release Program. Douglas L. Dunlap, Kalamazoo College.

VISITORS

	January	February	March
DOCUMENTATION AND DISSEMINATION *(CONTINUING)*	Jerry M. Patterson, Technical Education Research Center, Montgomery Alabama. William S. Franklin, University of Texas, Austin, Texas. Paul M. Campbell and Frank J. Spicuzza, East Tennessee Development District. Robert S. Avery, University of Tennessee. Louis M. Woods, Brady Harden, Jr., Carolyn S. Walton, and Wallace Grisson, Chattanooga Concentrated Employment Program.		

VISITORS

	April	May	June
DOCUMENTATION AND DISSEMINATION (CONTINUING)	Bill Bridwell, Tennessee Department of Employment Security, visited TAT in connection with assistance Employment Security is to provide in the post-placement survey. John S. Harris, TAT consultant from the University of Wisconsin, visited TAT on April 27 and 28 to develop plans for implementation of backup groups concerning application work, development of information seminars and individual development plans for the professional staff. Robert W. Lodge and James G. Skander, Grinnell Corporation/North Carolina, and Ronald B. Berlin, Grinnell/Indiana, visited TAT to interview perspective employees. Joan Wallace, a reporter for the Oak Ridger, visited TAT in preparation for a newspaper article. Mr. Ted Giffin, Veterans Administration, visited TAT on April 28 to tour the TAT Y-12 facilities.	Chuck Phillips and Richard McAllister, Office of Research and Development, Manpower Administration, Department of Labor, visited TAT on May 8 and 9. On May 26, they again visited TAT, along with Howard Rosen, Director and Seymour Brandwein. Bill Penry, Paducah, visited on May 16, to discuss reporting and record requirements for the FIT program there. Other visitors during the month were George Gee and James Carter, Banneker Systems, Chicago, and N. W. Stringfield, Tennessee State Probation Office.	Dean Kenny, director of Economic Action Center at Concord College; and Paul Miller, president, and C. Randy Farmer, shop superintendent, M & C Coal Company, West Virginia, visited TAT on June 2, in connection with plans for a new training program. Leonard Bradley, Special Assistant to the Governor of Tennessee, visited the project to review TAT activities. C. Wilson Cole, Wheeler H. Caney and Charles F. Mauney of E. I. du Pont Company, AEC Savannah River Operations, Aiken, South Carolina. Irwin Feifer and Richard Tobias from Mobilization for Youth, Inc., New York, N. Y. Louis Woods, Ralph T. Flynn and Kay B. Keally, Chattanooga Concentrated Employment Program. Thomas M. Simpson and Bart C. Tate, University of Tennessee, Knoxville. L. David Leggett, Litton Ship Systems, Pascagoula, Mississippi. Max R. Bohnstedt, Consultant, Oak Ridge School System. Reginald Ferguson, Edward Joe and William Holloway, Argonne National Laboratory.

MEETINGS

	January	February	March
DOCUMENTATION AND DISSEMINATION *(CONTINUING)*	TAT Advisory Committee met January 17 and received reports on TAT Worker Training, placement, and skill training for Oak Ridge High School seniors. The Experimentation Committee met January 24 and discussed new areas of research to be implemented during 1972-73. The Upgrading Research Coordinating Council met January 7 to review progress made during the past two months.		The Upgrading Research Coordinating Council met March 2 to review progress and make recommendations for future activities.

MEETINGS

	April	May	June
DOCUMENTATION AND DISSEMINATION *(CONTINUING)*	A conference on "The Use of Industrial Resources in Vocational Training Programs" was held in Oak Ridge on April 25 and 26, with representatives from Union Carbide, Knoxville vocational education personnel, and ORAU-TAT staff attending. A meeting was held in Johnson City on April 20 with officials of the First Tennessee-Virginia Development District, to explore possibility of application or extension activities on a district basis related to use of industrial/education resources, and to investigate a Development District's role in planning for maximum utilization of those resources. TAT staff met with Benny Solomon, District Supervisor (Tennessee-Kentucky) Regional OEO, and Bobby Thompson, State Director, OEO, to discuss possible extension activities in training of CAA manpower personnel. The TAT Advisory Committee meeting was held on April 24, receiving reports by OMD staff on current developments in the AEC Industrial Training Center and review of operational plans for Worker Training 1973.	A meeting of the Research Coordinating Council was held on May 8, in which status reports were given on all research projects. TAT staff attended the annual meeting of the International Association of Personnel of Employment Security in Gatlinburg on May 10 and 11. TAT staff was represented at a meeting of the Clinch-Powell River Valley Association on May 4, in which continued operation of organization was discussed.	A meeting was held by ORAU and Union Carbide to review major program activities and plans on the Worker Training and Research and Development activities.

VISITS

	January	February	March
DOCUMENTATION AND DISSEMINATION *(CONTINUING)*	TAT staff visited FIT Paducah facility at Paducah, Kentucky to work with FIT staff in preparing forms used in that training program. TAT staff visited the Knoxville Employment Security Office to discuss activities relating to TAT-MED proposal. TAT staff visited DOL, ARC, and DHEW, Washington to confer with respective staffs on Worker Training applications.	TAT staff visited National Accelerator Laboratory in support of trainees sponsored by that organi- in the AEC Industrial Training Center. TAT staff visited Standard Oil Company in Chicago, Illinois to explore the possible creation of a Chicago area consortium for industrial manpower training. Staff visited National Lead, Cincinnati, Ohio, to discuss their sending trainees to the April 1972 cycle of Worker Training. Staff visited Otis Engineering, Dallas, Texas, to explore the possibility of their participating in the AEC Industrial Training Center. Staff visited Nashville Vocational Education to explore possibilities of Skill Center designation of TAT Worker Training program. TAT staff visited Sandia, Albuquerque to explore replication possibilities of TAT with Sandia and Vocational Education personnel.	Staff visited Union Carbide, West Virginia to discuss application possibilities with Carbide officials. Staff visited ARC, Washington to present final report on two-year ARC training project between TAT and ARC and to discuss followup proposal. Staff visited Memphis to meet with Shelby County correction officials concerning possible referral of work/education release inmates. TAT staff attended the American Society of Public Administration conference in New York City March 21-24. In support of AEC sponsorship in the Industrial Training Center, TAT staff visited Goodyear Atomic Corporation, Portsmouth, Ohio. TAT staff attended MDTA 10th anniversary party in Washington, March 16-17. Staff visited Industrial Training Services, Newark, New Jersey, March 21 to gain information on upgrading. Staff visited Institute for Public Administration, New York, on March 22 to discuss upgrading activities with IPA staff.

VISITS

	April	May	June	
DOCUMENTATION AND DISSEMINATION *(CONTINUING)*		TAT staff visited Standard Oil Corporation, Banneker Systems, and other manpower agencies, in support of program development efforts aimed at replicating TAT in the Chicago area.	TAT staff visited the Department of Labor's Regional Director's Office in Atlanta to discuss proposed "Regional Utilization Network." TAT staff met in Atlanta with representatives from the Department of Labor, Department of Health Education and Welfare, and Office of Equal Opportunity for a joint review of the 1971-72 TAT program. TAT staff visited Charleston, West Virginia, to meet with the McDowell Mine Technical Training Center project planners.	

VT 017 834
DLUGACH, SAMUEL GILBERT
DRAFTING SKILLS AND RELATED KNOWLEDGE NEEDED FOR EMPLOYMENT IN ENGINEERING AND ARCHITECTURAL FIRMS IN THE STATE OF TENNESSEE.
TENNESSEE OCCUPATIONAL RESEARCH AND DEVELOPMENT COORDINATING UNIT, KNOXVILLE.
RES-SER-13
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PUB DATE - MAY72 39P.

DESCRIPTORS - RESEARCH PROJECTS; *JOB SKILLS; *SKILL ANALYSIS; *DRAFTING; *VOCATIONAL EDUCATION; *CURRICULUM DEVELOPMENT; GUIDELINES
IDENTIFIERS - *TENNESSEE; EMPLOYMENT SKILLS

ABSTRACT - THE PURPOSES OF THIS STUDY WERE: (1) TO REVIEW LITERATURE IN THE FIELD OF DRAFTING TO DETERMINE WHAT CONTENT WAS BEING OFFERED IN ARCHITECTURAL AND ENGINEERING DRAFTING COURSES, (2) TO ASCERTAIN THE SKILLS AND KNOWLEDGE ARCHITECTURAL AND ENGINEERING FIRMS IN TENNESSEE DESIRED THEIR DRAFTSMEN TO POSSESS, AND (3) TO ARRANGE THESE SKILLS AND KNOWLEDGE INTO TABLES WHICH COULD BE USED TO DEVELOP A CURRICULUM FOR VOCATIONAL SCHOOLS. A RANDOM SAMPLE OF 75 REGISTERED ARCHITECTS AND 75 REGISTERED ENGINEERS WAS CHOSEN TO RECEIVE A DRAFTING QUESTIONNAIRE WHICH WAS DEVELOPED WITH THE USE OF VARIOUS DRAFTING TEXTBOOKS. QUESTIONNAIRE RESULTS INDICATED THAT A DRAFTSMAN SHOULD HAVE A GOOD BACKGROUND IN DETAILING, BLUEPRINT READING, DIMENSIONING, SECTION LETTERING, SITE PLANS, FLOOR PLANS, FOUNDATION PLANS, AND FRAMING PLANS. THE RESULTS OF THIS STUDY FACILITATED THE DEVELOPMENT OF SPECIFIC GUIDELINES FOR CURRICULUM DEVELOPMENT IN DRAFTING. (AUTHOR)

VT 017 834

Mini-Grant Project Research Reports

Mini-Grant Project Research Reports

Mini-Grant Project Research Reports

DRAFTING SKILLS AND RELATED KNOWLEDGE
NEEDED FOR EMPLOYMENT
IN ENGINEERING AND ARCHITECTURE FIRMS
IN THE STATE OF TENNESSEE

1971-1972

1971-1972

1971-1972

Tennessee Research Coordinating Unit

Research Series No. 13

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DRAFTING SKILLS AND RELATED KNOWLEDGE NEEDED FOR EMPLOYMENT IN ENGINEERING AND ARCHITECTURAL FIRMS IN THE STATE OF TENNESSEE

A Mini-Grant Research Project
Presented to
The Tennessee Research Coordinating Unit

by
Samuel Gilbert Dlugach

May 1972

ABSTRACT

The purposes of this study were to (1) review literature in the field of drafting to determine what content was being offered in architectural and engineering drafting courses; (2) to ascertain the skills and knowledge architectural and engineering firms in Tennessee desired their draftsmen to possess; and (3) to arrange these skills and knowledge into useful tables which could be used to develop a curriculum for vocational schools.

A random sample of 75 registered architects and 75 registered engineers were chosen to receive a drafting questionnaire which was developed with the use of various drafting textbooks.

Questionnaire results indicated that a draftsman should have a good background in detailing, blueprint reading, dimensioning, section lettering, site plans, floor plans, foundation plans, and framing plans. The results of the study facilitated the development of specific guidelines for curriculum development in drafting.

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INTRODUCTION

The area of architectural drafting deals with planning and drawing plans for structures. Architectural draftsmen are employed by architectural firms specializing in houses, supermarkets, schools, apartments, office buildings, or industrial buildings.

The draftsman makes presentation drawings for the architect to show to his clients which include plot plans, floor plans, elevations, and detail sections. On occasion, the draftsman will write specifications upon which a contractor places his bid. (Squires, p. 72)

The junior draftsman is assigned rather minor jobs, including the tracing of drawings, lettering, and simple drafting work. After two or three years, he may assume the responsibilities of senior draftsman and thus become qualified to carry a drawing through all the stages involved in its completion. Those who demonstrate ability in all phases of work will usually advance to more responsible positions. (Hopke, p. 241)

The engineering profession utilizes knowledge gained by scientists from the mathematical and natural sciences to solve technological problems of mankind. There are about 25 branches in the profession. A few of these specialities which offer employment to draftsmen are industrial, structural, electrical, and civil. (Robbins, p. 261)

The engineering draftsman prepares clear, complete, and accurate working drawings from rough or detailed sketches prepared by engineers. These drawings are used for engineering or manufacturing purposes, according to specified dimensions. The engineering draftsman needs a good knowledge of

machines, engineering practices, mathematics, and other physical sciences to complete the drawings. (Hopke, p. 436)

There was an increase of over 38 percent in the U. S. population during the 20 years following World War II. By the mid-1960's, most of the babies born right after World War II had reached maturity, married and were forming families and moving into homes of their own. This larger than average increase not only called for more homes, but also schools, stores, churches, places to work, bridges, roads, and public buildings. (Office of Education, p. 1)

> The vast building requirements have created a serious shortage of highly skilled technicians in architecture and building constructions to assist the architects and engineers in meeting the nation's needs for housing and other buildings. (Squires, p. 1)

A report by Richard Wilson indicates that more draftsmen are hired who have attended a vocational-technical school than those with just a high school education. Those with a minimum level of high school education and some architectural drafting in high school were hired second. (Wilson, p. 14)

Since there is so much to be taught and learned in the field of drafting, the task of determining curriculum content becomes a never ending process. This project is an attempt to ascertain what architects and engineers in the state of Tennessee would indicate were the most important knowledge and skills a draftsman should have.

Statement of Problem

The problem was to determine the skills and knowledge needed for employment as an architectural or engineering draftsman.

Objectives

The specific objectives of this study were as follows:

1. To review literature in the field of drafting to determine what content is being offered in architectural and engineering drafting courses.

2. To develop a questionnaire to be sent to architectural and engineering firms in Tennessee to ascertain the skills and knowledge these firms desired their draftsmen to possess.

3. To develop conclusions and recommendations from data received from the questionnaire.

Definition of Terms

1. Vocational-industrial education provides instruction for the development of basic manipulative skills, safety judgment, technical knowledge, and related industrial information to fit persons for useful employment in trades and industries. (Giachino and Gallington, p. 42)

2. Technical education is designed to meet the complex technological needs of modern industry. It is a post-high school program and produces a classification of workers referred to as technicians. (Giachino and Gallington, p. 51)

3. A technician is a person falling between skilled craftsman and the graduate engineer or scientist. (Giachino and Gallington, p. 52)

METHODOLOGY

Sample

The sample was chosen from a list of registered and practicing architects and engineers in Tennessee published by the Tennessee State Board of Architectural and Engineering Examiners in 1971. Seventy-five

registered architects and seventy-five registered engineers were randomly chosen to receive a drafting questionnaire.

Design

A questionnaire (Appendix A) was developed from various drafting textbooks and included items which architects and engineers ranked according to importance of application in their field. (See Tables X and XI in Appendix B for individual ranked items.) Data were ranked by importance according to the following scale:

1---no value; 2---little value; 2---desirable; 4---important; 5---essential

One hundred and fifty questionnaires with letters of transmittal were mailed on February 15, 1972. Seventy-five were sent to architects and seventy-five to engineers stating in the letter that the forms should be returned before March 7, 1972.

It was decided prior to mailing out the forms that the first one-hundred questionnaires returned would be used in the study. Follow-up letters were not sent to architects and engineers who failed to respond to the original questionnaire because the one-hundred needed were returned within two weeks.

A total of forty-eight architects and fifty-seven engineers returned questionnaires. Tables of responses to individual questionnaire items were developed from forty-six architects and fifty-four engineers composing the first one-hundred usable returns. (Appendix B)

Interpretation of the Data

Tables were developed to determine what items architects and engineers indicated were of no value, little value, desirable, important or essential in their field.

Table I reflects the responses of architects for items which they indicate are essential.

TABLE I

ITEMS WHICH ARCHITECTS INDICATE ARE ESSENTIAL

ITEM	NUMBER OF RESPONSES	PERCENTAGE OF RESPONSES
Details	37	81
Sections	33	75
Dimensioning	33	72
Floor Plans	33	72
Elevations	31	68
Blueprint Reading	31	68
Foundation Plans	27	60
Site Plans	27	58
Lettering	26	57
Framing Plans	20	45
Line Value	20	44
Symbols	16	35

The highest four items to which architects responded were details, sections, floor plans, and dimensioning. This is probably due to the fact that these four items are the ones most used by a draftsman for making working drawings for a building of any kind. Most architects do their own designing, and it is the draftsman's job to use details and sections to complete the design work.

Other items such as elevations, site plans, and foundation plans are essential to any complete set of working drawings. Some of the skill

items listed by the responses of architects are lettering, line value, and dimensioning gained through practice. A great deal of emphasis is placed on workmanship by the architect.

TABLE II

ITEMS WHICH ENGINEERS INDICATE ARE ESSENTIAL

ITEM	NUMBER OF RESPONSES	PERCENTAGE OF RESPONSE
Blueprint Reading	42	78
Dimensioning	40	74
Details	40	74
Lettering	25	46.5
Sections	24	45
Single Line Diagram	19	43
Site Plan	19	35
Foundation Plan	19	35
Floor Plan	14	27
Electrical Code	12	25
Framing Plan	10	24

Table II shows the engineer's response to eleven items which they considered as essential. Out of the eleven items which engineers indicated were essential, nine were the identical choices that the architects had chosen. The two which were different were the electrical code and single line diagram. These are electrical items which are usually used by electrical engineers.

Site planning, foundation plans, and framing plans are items which structural engineers would indicate are essential to their field. A

structural engineer deals with site planning, soil investigation, drawing foundation plans according to the soil's structure, cutting sections, and making detailed drawings of footing and foundations.

The architects and engineers emphasized that the ability to read blueprints and lettering were essential to both fields. Blueprint reading and the ability to interpret symbols would be essential in any field of construction.

TABLE III

ITEMS WHICH ARCHITECTS INDICATE ARE IMPORTANT

ITEM	NUMBER OF RESPONSES	PERCENTAGE OF RESPONSE
Freehand Sketching	18	39
Trade Terminology	18	39
Paper Layout	14	33

Table III deals with items that architects indicate are important. Of the three items listed under this category, the first one, freehand sketching, is a convenient and rapid way of putting one's ideas into visual form. Sixty percent of all work that a draftsman receives to put into working drawings is from sketches. The second important item is trade terminology which deals with terms used in the drafting rooms and around construction areas. The last item is paper layout which deals not only with the size of the sheet but the arrangement of the sheets and the placement of items on the sheets.

TABLE IV

ITEMS WHICH ENGINEERS INDICATE ARE IMPORTANT

ITEM	NUMBER OF RESPONSES	PERCENTAGE OF RESPONSE
Line Value	25	46
Structural Details	22	45
Symbols	24	44
Trade Terminology	23	44
Paper Layout	18	33.5
Shop Drawings	15	33
Graph and Charts	16	30
Standard Beam Connections	12	27
Placing Drawings	11	26
Lighting Layouts	11	25

Table IV deals with items which engineers indicated were important. There are ten items under this category. Four of these items, structural detailing, standard beam connection, placing drawing, and shop drawings would be used mainly by a structural engineering firm. Structural detailing is involved with detailing the framing of a building, and it is closely related to standard beam connection. Standard beam connection shows how various beams should be tied together for construction. The placing drawings indicate where the steel bars would be located in a concrete construction. Shop drawings indicate the amount of steel and the placing of the steel which are usually prepared by structural engineers or a steel company. Other items which engineers indicated as important are line value, symbols, trade terminology, and paper layout. One item,

lighting layout which deals with the placement of light fixtures, received a high percentage of response from electrical engineers.

TABLE V

ITEMS WHICH ARCHITECTS INDICATE ARE DESIRABLE

ITEM	NUMBER OF RESPONSES	PERCENTAGE OF RESPONSE
Perspective	25	54
Lighting Layout	20	51
Renderings	21	50
Shop Drawings	18	48
Building Estimates	21	46
Surveying	21	46
Single Line Diagram	17	45
Specifications	20	44
Model Building	20	44
*Beam Design	16	41
*Structural Details	19	41
Electrical Code	13	39
*Detailing Reinforced Con	15	38
*Framing Plan	15	38
*Columns Design	14	37
*Standard Beam Connection	14	37
Oblique Drawing	16	36
Riser Diagrams	14	35
Plumbing Codes	14	35
Foot-Candle Standards	13	34
*Truss Design	13	34
*Reinforcing Bars	12	33
Building Code	14	31
Roughing in Measurements	11	29
Orthographic Projection	13	28

Table V deals with items which architects indicated were desirable. This table includes twenty-six miscellaneous items which would be beneficial but not essential. Some of the items listed by architects include a drafting technique such as projections. Items under projections are perspectives, rendering, isometric drawings, oblique drawings, and orthographic projections. These are things which can be used in presentation drawings for clients.

In Table V architects indicated eight desirable items (*) which would be considered in the structural category. Although some architects do their own structural work, most of it is subcontracted to structural engineers. However, many of the eight items would be beneficial to know in order to talk intelligently with a structural engineer. Beam design is calculating the load capacity of a particular beam. Structural detailing involves preparation of structural and shop drawings. Detailing reinforced concrete deals with placing and sizing the steel that goes into a concrete slab and footings. Architects also listed as desirable items pertaining to electricity and plumbing. Some miscellaneous items listed were surveying, building codes, and specifications.

TABLE VI

ITEMS WHICH ENGINEERS INDICATE ARE DESIRABLE

ITEM	NUMBER OF RESPONSES	PERCENTAGE OF RESPONSE
Perspective	24	44
Freehand Sketching	23	43
Isometric Drawing	21	39
Beam Design	17	38
Reinforcing Bars	17	38
Column Design	16	37
Truss Design	16	36
Plumbing Code	14	35
Foot-Candle Standards	14	33
Surveying	17	33
Specifications	17	33
Elevation	17	32
Detailing Reinforced Con	14	31
Building Estimates	14	27
Orthographic Projection	14	26
Building Codes	13	25
Roughing in Measurements	10	24
Contracts	12	23

Table VI deals with eighteen items which engineers indicated as desirable. From these eighteen items thirteen were identical to the ones chosen by architects.

The items in this area could be broken into four categories. The first category would be structural and contains such items as beam design, reinforcing bars, column design, truss design, and detailing reinforced concrete. In order to work as a structural draftsman, one should be familiar with these items.

The second category refers to plumbing and includes items such as plumbing code and roughing in measurements. These items are used by mechanical engineers who are often involved with electrical drawings and need to know foot-candle standards.

The third category contains isometric drawings, orthographic projection, and freehand sketching. These items deal with the ability of the engineering draftsman to express his views in graphic form.

Some other items which are listed are building codes, building estimates, plumbing codes, specifications, and contracts. They deal not so much with construction but with the reading and interpreting of various codes and contracts. These items would require knowledge rather than drawing skill. Both architects and engineers indicated that surveying would be a desirable knowledge to acquire.

TABLE VII

ITEMS WHICH ARCHITECTS INDICATE ARE OF LITTLE IMPORTANCE

ITEM	NUMBER OF RESPONSES	PERCENTAGE OF RESPONSE
Finance	20	45
Contracts	19	41
Graphs and Charts	18	39
Placing Drawing	13	33
Hot Water System	12	31

Table VII deals with items that architects indicate are of little importance in their field. Architects indicated that finance or monetary knowledge is not necessary for draftsmen. The second item deals with contracts. The architect and specification writers are often the only persons in a firm concerned with this item. The third item deals with placing drawings which are structural in nature and are usually used by structural engineers. Item number four is concerned with drawings of hot water systems which are usually furnished by plumbing or mechanical engineers. On some small jobs architects will do their own plumbing drawings, while on a large job it is usually subcontracted to engineers.

TABLE VIII

ITEMS WHICH ENGINEERS INDICATE ARE OF LITTLE IMPORTANCE

ITEM	NUMBER OF RESPONSES	PERCENTAGE OF RESPONSE
Oblique Drawings	22	42
Model Building	24	42
Renderings	22	39
Riser Diagrams	13	31
Hot Water System	12	29
Framing Plans	8	28

Table VIII is concerned with items which engineers indicated have little importance for draftsmen in their field. Of the six items listed, three items, oblique drawings, model building, and rendering deal with promoting jobs and presentations for clients. These do not pertain to the engineer. He gets his work through the architect who does the promoting and presentations.

Riser diagrams and hot water systems, also in Table VIII, deal with plumbing. They would have value for a plumbing engineer but little value for structural engineers.

TABLE IX

ITEMS WHICH ENGINEERS INDICATE ARE OF NO VALUE

ITEM	NUMBER OF RESPONSES	PERCENTAGE OF RESPONSE
Finance	18	35

Table IX has one item, finance, which engineers indicated has no value in their field. It is the firm's obligation, not the draftsman's, to take care of the finances.

CONCLUSIONS

Although architects and engineers failed to agree on the rating scale for some of the items, there were certain items which both agreed were essential for draftsmen in their field. These could be incorporated into the curriculum for vocational-technical drafting in secondary education. It was indicated that a draftsman should have a good background in detailing, blueprint reading, dimensioning, section, lettering, site plans, floor plans, foundation plans, and framing plans.

If one wished to specialize in one field or another, then other items should be considered. For architectural draftsmen there were certain items indicated by architects which should be in a concentrated study. The same would apply for draftsmen wishing to be employed by an engineering firm. The interest shown in the number of responses from Tennessee architects and engineers seems to indicate that they are interested in the education of future draftsmen.

In the questionnaire there was an area designed for any additional items which architects and engineers indicated were important in their field but had not been listed. These are shown in Table XII.

RECOMMENDATIONS

It is recommended from the responses by architects and engineers that certain items should be developed into a curriculum for architectural draftsmen and that proportionately more class time be applied towards items considered essential than those considered less important.

It is recommended that students become acquainted with the principles of dimensioning, lettering, and line values. It would be advisable for

the course to be developed with a well-rounded background of detailing, wall sectioning, developing floor plans, elevations, foundation plans, and framing plans.

Some of the objectives of the course might be:

1. To understand the architect's function in construction.
2. To learn the types of sketches and drawings required to carry through the design of a structure.
3. To learn the plans and schedules necessary for instruction.
4. To develop the ability to make freehand sketches.
5. To develop the ability to visualize details as related to construction.
6. To develop accuracy, neatness, and speed in drafting work.
7. To become familiar with trade terminology.
8. To become acquainted with the architectural symbols.

It is recommended that these objectives be met in the classroom through lectures, demonstrations, classroom discussion, outside resources, problem solving in the classroom, and visual aids.

A recommended curriculum for engineering draftsmen would include such essential fundamentals as lettering, dimensioning techniques, geometrical shapes, and line value. Many of the items considered essential by engineers are identical to those of the architects. Both groups expressed a strong desire for students to have a good background in sectioning and detailing.

The engineering draftsman should be acquainted with construction techniques. Items such as structural detailing, placement drawing, standard beam connection, foundation plans, and framing plans should be an intricate part in planning any structural drafting course. Since engineering deals with so many various aspects, items might appropriately be classified under different phases such as electrical, plumbing, structural, and mechanical.

BIBLIOGRAPHY

BIBLIOGRAPHY

Giachino, J. W. and Ralph Gallington. Course Construction in Industrial Arts, Vocational and Technical Education. Chicago: American Technical Society, 1967.

Hopke, William E. (ed.) Encyclopedia of Careers and Vocational Guidance. 1st ed., Vol. II. Chicago: Doubleday and Company Incorporated, 1967.

Office of Education. Architectural and Building Construction Technology A Suggested 2-Year Post High School Curriculum. Washington: Government Printing Office, 1969.

Robbins, Paul H. "Engineering," Encyclopedia of Careers and Vocational Guidance, 1967, I.

Squires, Carl E. "Current Practices Observed in Design and Drafting Occupations." Unpublished dissertation, Maricopa County Junior College District, Arizona, 1968.

APPENDICES

APPENDIX A

DRAFTING QUESTIONNAIRE

Please check your profession: Architect_____ Engineer_____

Directions: Check the appropriate column as to how much value should be placed on each item as it relates to training draftsmen in your field.

1. No value
2. Little importance
3. Desirable
4. Important
5. Essential

Drafting Practices

	1	2	3	4	5
1. Blueprint reading					
2. Freehand sketching					
3. Paper Layout					
4. Line value					
5. Orthographic projection					
6. Isometric drawing					
7. Oblique drawing					
8. Perspective					
9. Renderings					
10. Model building					
11. Graphs & charts					
12. Lettering					
13. Symbols					
14. Dimensioning					
15. Details					
16. Site plans					
17. Foundation plans					
18. Floor plans					
19. Framing plans					
20. Elevations					
21. Sections					

	1	2	3	4	5
22. Structural details					
23. Specifications					
24. Building estimates					
25. Building codes					
26. Trade terminology					
27. Contracts					
28. Finance					
29. Surveying					
30. Others					
31.					
32.					

Plumbing drawings

	1	2	3	4	5
1. Hot water system					
2. Roughing in measurements					
3. Riser diagrams					
4. Plumbing codes					
5. Others					
6.					
7.					
8.					
9.					

Electrical drawings

		1	2	3	4	5
1.	Single line diagram					
2.	Foot-candle standards					
3.	Lighting layouts					
4.	Electrical code					
5.	Others					
6.						
7.						
8.						

Structural drawings

1.	Placing drawings					
2.	Beam design					
3.	Truss design					
4.	Framing plan					
5.	Columns design					
6.	Detailing reinforcing concrete					
7.	Reinforcing bars					
8.	Shop drawings					
9.	Standard beam connections					
10.	Others					
11.						
12.						
13.						
14.						

THANK YOU VERY MUCH FOR YOUR COOPERATION.

( ) If you wish a summary of the survey indicate by X.

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APPENDIX B

TABLE X

Engineers' Responses to Individual Questionnaire Items

Items	Total No. of Responses	No Value		Little Importance		Desirable		Important		Essential	
		Resp.	%	Resp.	%	Resp.	%	Resp.	%	Resp.	%
Blueprint Reading	46	3	7	1	2	4	8	7	15	31	68
Freehand Sketching	46	0	0	1	2	18	39	18	39	9	20
Paper Layout	42	2	5	5	12	13	31	14	33	8	19
Line Value	46	1	2	1	2	6	13	18	39	20	44
Orthographic Projection	46	3	7	13	28	13	28	5	11	12	26
Isometric Drawing	46	2	4	13	28	20	44	8	17	3	7
Oblique Drawing	45	5	11	15	33	16	36	5	11	4	9
Perspective	46	0	0	5	11	25	54	11	24	5	11
Rendering	42	2	5	12	30	21	50	6	14	1	2
Model Building	46	4	89	13	28	20	44	7	15	2	4
Graphs & Charts	46	10	22	18	39	13	28	3	7	2	4
Lettering	46	1	2	2	4	2	4	15	33	26	57

TABLE X (cont.)

Items	Total No. of Responses	No Value		Little Importance		Desirable		Important		Essential	
		Resp.	%	Resp.	%	Resp.	%	Resp.	%	Resp.	%
Symbols	46	1	2	5	11	12	26	12	26	16	35
Dimensioning	46	2	4	0	0	1	2	10	22	33	72
Details	46	1	2	1	2	1	2	6	13	37	81
Site Plans	46	1	2	3	7	5	11	10	22	27	58
Foundation Plans	45	1	2	2	4.5	2	4.5	13	29	27	60
Floor Plans	46	1	2	1	2	2	4	9	20	33	72
Framing Plans	45	1	2	2	4.5	6	13	16	35.5	20	45
Elevations	46	1	2	1	2	2	4	11	24	31	68
Sections	44	1	2.3	1	2.3	1	2.3	8	18	33	75
Structural Details	46	1	2	3	7	19	41	10	22	13	28
Specifications	46	1	2	10	22	20	44	8	17	7	15
Building Estimates	46	6	13	10	22	21	46	5	11	4	8

TABLE X (cont.)

Items	Total No. of Responses	No Value		Little Importance		Desirable		Important		Essential	
		Resp.	%	Resp.	%	Resp.	%	Resp.	%	Resp.	%
Building Codes	46	1	2	8	17	14	31	10	22	13	28
Trade Terminology	46	1	2	4	8	14	31	18	39	9	20
Contracts	46	5	11	19	41	11	24	6	13	5	11
Finance	44	10	23	20	45	8	18	3	7	3	7
Surveying	46	4	8	13	28	21	46	5	11	3	7
Hot Water System	39	4	10	12	31	12	31	9	23	2	5
Roughing in Measurements	38	5	13	8	21	11	29	9	24	5	13
Riser Diagrams	40	2	5	9	22	14	35	13	33	2	5
Plumbing Codes	40	4	10	11	28	14	35	7	17	4	10
Single Line Diagram	38	2	5	9	24	17	45	6	16	4	10
Foot Candle Standard	38	5	13	12	32	13	34	6	16	2	5
Lighting Layouts	39	2	5	3	8	20	51	9	23	5	13

TABLE X (cont.)

Items	Total No. of Responses	No Value		Little Importance		Desirable		Important		Essential	
		Resp.	%	Resp.	%	Resp.	%	Resp.	%	Resp.	%
Electrical Codes	33	4	12	5	15.5	13	39	6	18	5	15.5
Placing Drawings	39	6	15.5	13	33	7	18	7	18	6	15.5
Beam Design	39	2	5	12	31	16	41	6	15	3	8
Truss Design	38	3	8	12	32	13	34	7	18	3	8
Framing Plan	39	3	8	8	20.5	15	38	5	13	8	20.5
Columns Design	38	3	8	12	31	14	37	6	16	3	8
Detailing Reinforcing Concrete	39	4	10	10	26	15	38	5	13	5	13
Reinforcing Bars	36	6	17	10	28	12	33	3	8	5	14
Shop Drawings	38	3	8	2	5	18	48	8	21	7	18
Standard Beam Connections	38	4	11	10	26	14	37	5	13	5	13

TABLE XI

Architects' Responses to Individual Questionnaire Items

Items	Total No. of Responses	No Value		Little Importance		Desirable		Important		Essential	
		Resp.	%	Resp.	%	Resp.	%	Resp.	%	Resp.	%
Blueprint Reading	54	2	4	0	0	5	9	5	9	42	78
Freehand Sketching	54	0	0	7	13	23	43	13	24	11	20
Paper Layout	54	0	0	6	11	12	22	18	33.5	18	33.5
Line Value	54	2	4	5	9	15	28	25	46	7	13
Orthographic Projection	53	7	13	12	23	14	26	10	19	10	19
Isometric Drawing	54	6	11	15	28	21	39	7	13	5	9
Oblique Drawing	52	8	15	22	42	15	29	4	8	3	6
Perspective	54	6	11	13	24	24	44	8	15	3	6
Renderings	54	12	22	21	39	13	24	3	6	5	9
Model Building	53	13	24	22	42	14	26	4	8	0	0
Graphs & Charts	53	0	0	12	23	12	23	16	30	13	24
Lettering	54	0	0	0	0	4	7	25	46.5	25	46.5

TABLE XI (cont.)

Items	Total No. of Responses	No Value		Little Importance		Desirable		Important		Essential	
		Resp.	%	Resp.	%	Resp.	%	Resp.	%	Resp.	%
Symbols	54	0	0	3	6	10	18	24	44	17	32
Dimensioning	54	0	0	0	0	5	9	9	17	40	74
Details	54	0	0	0	0	2	4	12	22	40	74
Site Plans	54	0	0	9	17	14	26	12	22	19	35
Foundation Plans	53	3	6	11	21	11	21	9	17	19	35
Floor Plans	51	3	6	8	16	12	24	14	27	14	27
Framing Plans	50	3	6	14	28	10	20	13	26	10	20
Elevations	53	0	0	3	6	17	32	19	36	14	26
Sections	53	0	0	1	2	10	19	18	34	24	45
Structural Details	49	2	4	9	18.5	6	12	22	45	10	20.5
Specifications	52	2	4	13	25	17	33	9	17	11	21
Building Estimates	51	10	20	14	27	14	27	6	12	7	14

TABLE XI (cont.)

Items	Total No. of Responses	No Value		Little Importance		Desirable		Important		Essential	
		Resp.	%	Resp.	%	Resp.	%	Resp.	%	Resp.	%
Building Codes	51	10	20	10	20	13	25	7	14	11	21
Trade Terminology	52	3	6	5	10	11	21	23	44	10	19
Contracts	51	13	26	15	29	12	23	6	12	5	10
Finance	52	18	35	7	13	16	31	6	11	5	10
Surveying	52	4	8	14	27	17	33	11	21	6	11
Hot Water System	41	6	15	12	29	9	22	7	17	7	17
Roughing in Measurements	41	7	17	8	20	10	24	9	22	7	17
Riser Diagrams	42	5	12	13	31	9	21.5	9	21.5	6	5
Plumbing Codes	40	4	10	11	27.5	14	35	7	17.5	4	10
Single Line Diagram	44	5	11	3	7	7	16	10	23	19	43
Foot-Candle Standard	43	8	18	6	14	14	33	12	28	3	7
Lighting Layouts	44	6	14	4	9	13	31	11	25	10	23

TABLE XI (cont.)

Items	Total No. of Responses	No Value		Little Importance		Desirable		Important		Essential	
		Resp.	%	Resp.	%	Resp.	%	Resp.	%	Resp.	%
Electrical Codes	49	6	13	10	20	10	20	11	22	12	25
Placing Drawings	42	7	17	6	15	9	21	11	26	9	21
Beam Design	45	7	15.5	12	27	17	38	7	15.5	2	4
Truss Design	44	7	16	13	29	16	36	6	14	2	5
Framing Plans	45	7	16	8	18	11	24	8	18	11	24
Columns Design	44	8	18	12	27	16	37	5	11	3	7
Details Reinforcing	45	6	13	3	7	14	31	8	18	14	31
Reinforcing Bars	45	6	13	4	9	17	38	11	24	7	16
Shop Drawings	45	4	9	9	20	10	22	15	33	7	16
Standard Beam Connections	44	7	16	11	25	10	23	12	27	4	9

APPENDIX C

TABLE XII

ADDITIONAL ITEMS ARCHITECTS AND ENGINEERS INDICATE ARE IMPORTANT BUT UNLISTED ON THE QUESTIONNAIRE

ITEM
ALL PIPING
POWER LAYOUTS
AUXILIARY
SCHEDULES (LIGHTING, PANEL, FIXTURES)
SITE EXPLORATION
CONTROL DIAGRAMS
POWER CONDUIT (PLANS & EVALUATION)
POWER CIRCUIT
ELECTRONIC & LOGIC SYMBOLS
DECOR BY LIGHTING
RELAY SCHEMATICS
LOGIC DIAGRAMS
COMMUNICATION SYMBOLS
REPRODUCTION PROCESSES
AMERICAN MACHINE TOOL STANDARD LEGEND
SCHEMATIC
MACHINE DESIGN
TAKING ON SITE MEASUREMENT
CONTOUR MAPS
HISTORY & THEORY OF ARCHITECTS
ARCHITECTURE DESIGN
STRUCTURAL THEORY
HOW TO TAKE FIELD MEASUREMENT
ARRANGEMENT OF SHEETS
ABILITY TO REASON
ROAD CROSS SECTION
DRAINAGE AREAS
PRINTING TECHNIQUES
MATERIAL OF CONSTRUCTION
DRAFTING MATERIALS
INQUISITIVE INTEREST
TIME RECORDS
UTILITY MAPPING
DRAINAGE
ROOF DESIGN
MECHANICAL SYSTEMS
KNOWLEDGE OF FIXTURES
GRAPHICS
CONSTRUCTION JOB EXPERIENCE
CONSTRUCTION SITES
STRUCTURAL HANDBOOK USAGE
FIXTURE REQUIREMENT
SPELLING
POWER WIRING
CO-ORDINATION WITH OTHER TRADES
METHOD USED IN FIELD

2199

APPENDIX D

Mr. Larry Sanders
Regional Research and
Development Coordinator
Park Century Building
1408 Highland Avenue
Jackson, TN 38301

Dear Mr. Sanders:

The enclosed document constitutes an indepth study of the drafting skills and related knowledge needed for employment in engineering and architectural firms in the State of Tennessee. I hope that this study meets with your approval.

Expenses totaling $282.61 were incurred while conducting the research.

If there are any questions regarding this matter, please let me know.

Sincerely,

Samuel G. Dlugach

Samuel G. Dlugach

2251

VT 017 842
RIEENDUR, HARLAN E.
DEVELOPMENT AND DISSEMINATION OF COURSES OF STUDY AND INSTRUCTIONAL MATERIALS FOR ENVIRONMENTAL SCIENCE AND PROTECTION PROGRAMS (JANUARY 1, 1971-JUNE 30, 1972).

OHIO STATE UNIV., COLUMBUS. OHIO AGRICULTURAL EDUCATION CURRICULUM MATERIALS SERVICE.
OHIO STATE DEPT. OF EDUCATION, COLUMBUS.
MF AVAILABLE IN VT-ERIC SET.
PUB DATE - 72 79P.
DESCRIPTORS - *VOCATIONAL EDUCATION; *RESEARCH PROJECTS; RESEARCH UTILIZATION; ENVIRONMENT; *ECOLOGY; *CAREER OPPORTUNITIES; ENTRY WORKERS; INFORMATION DISSEMINATION; *CURRICULUM DEVELOPMENT; MANPOWER NEEDS; TASK ANALYSIS
IDENTIFIERS - *OHIO; CAREER AWARENESS

ABSTRACT - THIS 18-MONTH PROJECT WAS DESIGNED TO DEVELOP AND DISSEMINATE ENVIRONMENTAL SCIENCE AND PROTECTION COURSES OF STUDY AND INSTRUCTIONAL MATERIALS FOR VOCATIONAL EDUCATION AT THE LEVEL OF PREPARATION FOR EMPLOYMENT. THE SPECIFIC OBJECTIVES WERE TO: (1) DEFINE ENVIRONMENTAL SCIENCE AND PROTECTION AS IT APPLIES TO VOCATIONAL EDUCATION, (2) IDENTIFY PRESENT AND EMERGING ENVIRONMENTAL PROTECTION OCCUPATIONS ALONG WITH BACKGROUND OF EXPERIENCE AND COMPETENCIES REQUIRED FOR JOB ENTRY, AND (3) DEVELOP CURRICULUM FOR COURSES OF STUDY LEADING TO ENTRY LEVEL EMPLOYMENT IN ENVIRONMENTAL PROTECTION OCCUPATIONS. RESEARCH WAS CONDUCTED TO DETERMINE THE PRESENT MANPOWER SITUATION AND EXPECTED NEEDS IN THE FIELD. TASK ANALYSIS STUDIES REVEALED THE DUTIES OF WORKERS IN ENVIRONMENTAL PROTECTION OCCUPATIONS. BASED UPON RESEARCH FINDINGS AND THE EXPERIENCE OF CONSULTANTS, COURSES OF STUDY WILL BE DEVELOPED AND DISTRIBUTED TO SCHOOLS. (AUTHOR/KH)

VT 017 842

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
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REPORT OF RESEARCH AND DEVELOPMENT
SUBMITTED TO RESEARCH, SURVEY, EVALUATION AND EXEMPLARY PROGRAMS
DIVISION OF VOCATIONAL EDUCATION, DEPARTMENT OF EDUCATION

Title: Development and Dissemination of Courses of Study and Instructional Materials for Environmental Science and Protection Programs

Initiator and Project Director:

Dr. Harlan E. Ridenour, Director
Ohio Agricultural Education Curriculum Materials Service, The Ohio State University, 2120 Fyffe Road, Columbus, Ohio 43210
(614) 422-6673

Transmitted By:

Mr. James E. Dougan, Director
Agriculture Education Service, Division of Vocational Education, Department of Education, 65 South Front Street, Columbus, Ohio 43215
(614) 469-3076

Duration of Activity: Eighteen Months. January 1, 1971 to June 30, 1972

Purpose of Grant: Categories I, II, and III

Use of Funds: Categories 1, 3, 4, 5, 6a, and 6e

Total State Funds Expended: $34,908.86

VT047842

ABSTRACT

Title of Project: Development and Dissemination of Courses of Study and Instructional Materials for Environmental Science and Protection Programs

Principal Investigator: Dr. Harlan E. Ridenour

Contracting Agency: Ohio Agricultural Education Curriculum Materials Service

State Funds Expended: $34,908.86

Beginning-Ending Dates: January 1, 1971 to June 30, 1972

Summary:

A. Purposes and Objectives

This eighteen month project was designed to develop and disseminate environmental science and protection courses of study and instructional materials for vocational education at the preparation for employment level.

The specific objectives were: to delimit the area of environmental science and protection as it pertains to vocational education; to identify present and emerging environmental protection occupations; to identify personnel now employed in environmental protection occupations and to determine their background of experience; to determine the competencies required for entry into each environmental protection occupation; to determine the performance characteristics of the workers; to develop curriculum and courses of study for courses leading to entry level employment for environmental protection occupations.

B. Expected Contribution to Education

The project resulted in the identification of environmental protection manpower requirements in governmental and industrial units. The duties performed by the workers was identified through a task analysis procedure. The end result will be the utilization of the above information in the development of courses of study and instructional materials. The information obtained will assist in the identification of those educational experiences required to assist students in becoming proficient in environmental protection occupation.

C. Procedures

Research was conducted to determine the present manpower situation and expected needs in the area of environmental science and protection. Task analysis studies were conducted to determine the duties of workers in environmental protection occupations. Based upon research findings and the experience of consultants, course of study will be developed and distributed to schools.

INTRODUCTION

The nation faces a crucial environmental crisis in two major areas -- water pollution and air pollution. The efforts to solve these environmental problems will create not only a great financial need but also a great manpower need. The United States Department of Interior estimated in 1967 that the United States would need 18,500 additional wastewater treatment operators by 1972. It was estimated that a total of 20,000 operators would be needed in 1972 at the local governmental level (municipalities). This was an increase of 10,000 over manpower needs in 1967. The Interior Department estimated also that industry needed a total of 12,000 wastewater treatment operators by 1972 -- an increase of 8,500 over the 1967 manpower levels.[1] The National Air Pollution Control Administration (NAPCA) of the United States Department of Health, Education, and Welfare has estimated that 50,900 persons will be needed in air pollution control occupations by 1974. This is an increase of slightly over 27,000 persons who were working in these occupations in 1969.[2]

The investigator believes that publicly supported secondary vocational education can play a key role in preparing workers entering the environmental management field and in providing supplementary instruction for those presently employed. To make the most significant contribution, vocational education should work with both major areas of water management and air management, since both are very closely interrelated.

The Problem

The purposes of the study were: (1) to describe current and emerging occupations in environmental management in Ohio; (2) to estimate the number of persons currently employed and to project employment opportunities in these occupations; and (3) to describe the tasks performed by persons employed in selected environmental management occupations. The occupations investigated were in water pollution control and air pollution control. The specific areas of water pollution control investigated were wastewater treatment and water treatment.

The study was designed to accomplish the following specific objectives:

1. To describe current and emerging occupations in water pollution control and air pollution control.

2. To determine the number of persons currently employed in water pollution control and air pollution control jobs and how many additional persons will be needed by 1974 to fill new positions in these jobs.

3. To describe the tasks performed by persons in water pollution control and air pollution control jobs, what is the relative amount of time

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[1] Manpower and Training Needs in Water Pollution Control, U.S. Department of the Interior, (Washington: U.S. Government Printing Office) 1967, p. 15.

[2] Manpower and Training Needs for Air Pollution Control, U.S. Department of Health, Education and Welfare (Washington: U.S. Government Printing Office) 1970, pp. 4-10.

spent by workers on the various tasks, and how do supervisors rate the relative importance of the tasks performed by workers in these jobs

Need for the Study

From conferences with professional environmentalists in both state and municipal agencies it became apparent that personnel must be qualified at an increasing rate to solve both today's and tomorrow's environmental problems. These environmentalists noted that at the present training for prospective employees is offered at few educational institutions. Many employees are either not fully qualified for their positions or must become qualified through on-job training. This procedure has been inadequate to meet employment demands.

> Well-trained operators (of sewage treatment facilities) are clearly among the priority needs. Recent surveys have shown that some of the newest sewage plants are operating at less than maximum efficiency due to the inadequate training of the plant operators.[3]

In an attempt to meet present and future employment demands in environmental management, the Division of Vocational Education of the Ohio Department of Education charged the Agricultural Education Section of the Division with the responsibility of developing training programs to fulfill this need. Typically, agricultural education has provided instructional programs that deal with the environment and its relationship to soils, plants, and animals. However, agricultural education has provided, in Ohio or elsewhere, only limited course offerings in the specific areas of water pollution and air pollution.

Available job descriptions give a basically complete description of the positions in environmental management which were considered in this study. It was clear, however, that no order or sequence of training for the various tasks was established by these descriptions. For the establishment of training programs and curriculum materials to be used in these programs it was desirable to know which tasks must be emphasized and at what phase of the instructional program to emphasize them. One of the major purposes of this study was to establish a hierarchy of importance for the tasks identified for each position to be studied.

The investigator believes the steps that should be taken for preparing properly trained personnel for the environmental management occupational area are as follows: (1) the need for additional personnel must be identified for each of the occupations, (2) the positions must be described by task analysis, (3) curriculums and instructional materials should be established based on the findings of the task analyses, and (4) personnel should be trained based on the curriculums and instructional materials established. This study was designed to accomplish the first two steps in the preparation of personnel for employment in environmental management occupations.

Procedure

Population and Sample. - The population for the study was the wastewater treatment facilities, water treatment facilities, and air pollution control facilities serving municipalities in the State of Ohio. The populations of wastewater treatment facilities and water treatment facilities were stratified into three strata: (1) facilities serving cities of 100,000 or more population which were personally visited, (2) facilities serving cities of less than 100,000 population which were personally visited, and

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[3] Applying Technology to Unmet Needs, Technology and the American Economy, The Report of the Commission, Appendix Volume V, February, 1966, p. v-156.

(3) facilities serving cities of less than 100,000 population which were surveyed by a mail questionnaire.

A purposive sample of eight facilities serving cities of 100,000 or more population was utilized because it was assumed that these facilities would have the greatest manpower needs of any facilities in Ohio. District Engineers in each of Ohio's four State Department of Health, Division of Engineering Districts were asked to help select facilities serving cities of less than 100,000 population by choosing two progressive wastewater treatment facilities and two water treatment facilities in their districts. It was requested that these facilities and their employees be as typical as possible of what the district engineers anticipated such facilities and employees to be like in future years.

The samples of wastewater and water treatment facilities serving cities of less than 100,000 population from which data were collected by mail questionnaire consisted of 200 facilities selected at random. Excluding the facilities that were visited, the population of wastewater treatment facilities in Ohio serving less than 100,000 people is 396.[4] The population of water treatment facilities in Ohio serving less than 100,000 people is 601.[5] (See Table 1)

There were a total of ten air pollution control areas in Ohio during 1971. The term "area" refers to a unit of air pollution control rather than facility because geographical areas such as counties are included in the unit. All ten of these air pollution control areas were included in the sample and were personally visited.

TABLE 1

NUMBER OF SAMPLING UNITS IN THE POPULATION AND SAMPLE BY TYPE OF FACILITY AND SIZE OF MUNICIPALITY

Size of Municipality and Type of Facility	Number Units in Population	Number Units in Sample
Cities over 100,000		
Wastewater treatment[a]	8	8
Water treatment[a]	8	8
Cities under 100,000		
Wastewater treatment[a]	8	8
Water treatment[a]	8	8
Cities under 100,000		
Wastewater treatment[b]	396	200
Water treatment[b]	601	200
Air Pollution Control		
Control areas[a]	10	10
State control unit[a]	1	1

[a] Data collected by interviews.
[b] Data collected by mail questionnaire.

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[4] Names and Addresses Public Water Supplies, State of Ohio, Department of Health, 1971, 55 pages.

[5] Municipal Sewage Treatment Work in Ohio, Ohio Department of Health, January, 1971, 12 pages.

Collection of Data. - A telephone call served as the first contact with the facility administrator during which arrangements were made for interviewing the facility administrator and employees who were asked to provide task analysis data. Administrators were asked to indicate the number of employees working in the various occupations in 1968 and 1971 and to estimate the number of employees needed in these occupations in 1974. The facility administrator, or the chief operator or foreman if so designated by the administrator, was asked to complete the importance section of the task analysis instrument. Designated persons working in the various occupations were then asked to indicate the frequency with which they performed tasks. The Environmental Task Analysis Form was used for collecting these data.

The Wastewater Treatment Manpower Need Form and the Water Treatment Manpower Need Form were mailed to the 200 randomly selected samples of facilities. Each questionnaire was accompanied by a cover letter explaining the basic purposes of the survey which was co-signed by J. E. Richards, Acting Chief of the Ohio Department of Health, Division of Engineering, and Harlan F. Ridenour, Director of the Ohio Agricultural Education Curriculum Materials Service and the Environmental Studies Research Project. The questionnaires were mailed on November 15, 1971. On December 6, 1971 all facilities not responding to the first mail questionnaire were sent a second questionnaire and a copy of the original cover letter. Of the 200 mail questionnaires mailed to wastewater treatment facilities, 156 (78 percent) were returned; 166 (83 percent) of the 200 questionnaires mailed to water treatment facilities were returned. After comparing the responses of early respondents and late respondents, it was decided to consider the data provided by respondents as a representative sample. Estimates calculated from the sample data are based on that assumption.

A similar procedure was established for the collection of manpower needs data from industry in Ohio. The population of the study was 984 industries in Ohio that had obtained a permit from the State Department of Health to discharge effluent into state waters. This excludes plants that discharge effluents into their own holding pools or municipal sewers and plants that have no discharge effluent. A randomly selected sample of 246 industries was selected for study.

Data were secured from 65 percent of the accessible industries in the ransomly selected sample. The number of accessible industries in the sample was 230 since 16 of the 246 firms selected in the sample had "gone out of business" or "moved out of state" when data were collected. Questionnaires were sent to each of the 246 industries with a reminder card sent one week later. In this report respondents to these requests are referred to as "early respondents." One month after the first questionnaire was sent, the same questionnaire was sent again to the nonrespondents. In this report respondents to the second mailing of the questionnaire are referred to as "late respondents."

Because the manpower needs reported by early respondents and late respondents were similar in some occupations and different in other occupations, two methods of estimating manpower needs were used. Method I took these differences into account and considered the nonrespondents and late respondents as different from the early respondents in calculating estimates. Method II considered the early respondents and late respondents to be similar and assumed the nonrespondents would respond likewise.[2] Estimates were made for full time workers and for part-time workers. The number of part-time workers were converted to full time equivalent status.

Bibliography

The following is a partial bibliography of the literature reviewed in relationship to the environmental protection project.

Books

Larson, Milton E. and Blake, Duane I. Institute on Occupational Analysis as a Basis for Curriculum Development, Final Report. Fort Collins: Colorado State University, 1969.

Lewis, Wiley B. Review and Analysis of Curricula for Occupations in Environmental Control. Columbus: The Ohio State University ERIC Clearinghouse on Vocational and Technical Education, 1970

Mager, Robert F. and Beach, Kenneth M. Developing Vocational Instruction. Palo Alto: Fearon Publishers, 1967.

Marsh, Joseph E., Madden, Joseph M., and Christal, Raymond E. Job Analysis in the United States Air Force. Lackland Air Force Base Texas: Personnel Laboratory, Wright Air Development Division, Air Research and Development Division, Air Research and Development Command, 1961.

Articles and Periodicals

Dethier, B. E. "Our Deteriorating Atmospheric Resources." New York's Food and Life Science Quarterly. III (April - June, 1970), 26.

"Engineering Societies to Study Conversion of Skills to New Fields." Environment Reporter 2 (August 20, 1971) p. 415.

"Garage Mechanics, Auto Emissions Control Training Program, HEW." Environment Reporter 2 (July 16, 1971) p. 681.

Keys, James M. "The Missing Link-Wastewater Treatment Plant Operators," Water Resources Bulletin, 7 (February, 1971), 133.

"Nixon Signs Emergency Employment Act Generating 150,000 Public Service Jobs." Environment Reporter 2 (July 16, 1971), 308-309.

Ryan, Charles W. "Let's Put Environmental Concern in the School Curriculum," American Vocational Journal 46 (December, 1971) pp. 45, 48.

Reports

Environmental Protection Agency. Preliminary Report of A State Local Air Pollution Control Agency Manpower and Training Survey. Washington: U.S. Government Printing Office, 1971.

Environmental Protection Agency. Titles and Definitions for Air Pollution Control Personnel (Occupational Categories). Washington: U.S. Government Printing Office, 1971.

Technology and the American Economy. Report of the Commission. Applying Technology to Unmet Needs, 1966.

U.S. Department of Health, Education, and Welfare. Manpower and Training Needs for Air Pollution Control. Washington: U.S. Government Printing Office, 1970.

U.S. Department of the Interior. Federal Water Pollution Control Administration. The Economics of Clean Water. Washington: U.S. Government Printing Office, 1970.

U.S. Department of the Interior. Manpower and Training Needs in Water Pollution Control. Washington: U.S. Government Printing Office, 1967.

U.S. Department of Labor. Dictionary of Occupational Titles. Washington: U.S. Government Printing Office, 1965.

Other Sources

Municipal Sewage Treatment Work in Ohio (Columbus: State of Ohio, Department of Health) 1971.

Notices and Addresses, Public Water Supplies (Columbus: State of Ohio, Department of Health) 1971.

Public Law 90-576, 90th Congress, H.R. 18366, October 16, 1968.

Public Law 91-604, 91st Congress, H.R. 17255, December 31, 1970.

Evaluation of Objectives

An advisory group composed of persons engaged in occupations related directly or indirectly to environmental protection functions was used throughout the conduct of the study. The group was composed of representatives of state, area, municipal, and local governmental units, industry, and education.

The advisory group and other selected individuals provided guidance in the identification of occupations, the selection of location of conducting the study, and in the identification of tasks to be analyzed. The group members reviewed the work in their areas of speciality. The findings were also checked with Ohio and federal laws and regulations. The data collected was subjected to statistical analysis with a computer being utilized.

Contribution to Education

The findings indicated that facility and agency administrators anticipate an increase in the number of full time personnel needed for virtually all positions when they projected manpower needs to 1974. Administrators of wastewater treatment facilities and air pollution control agencies anticipated increased personnel needs for all positions. Administrators of water treatment facilities anticipated increased personnel needs for all positions except the non-certified operator. The anticipated manpower needs are summarized in Table 2.

TABLE 2

ANTICIPATED CHANGE IN FULL TIME MANPOWER NEEDS FOR 1971-1974

Position	Number of Persons employed in 1971	Manpower change 1971-1974
Wastewater Treatment		
Non-certified Operator	782	- 49
Operator I	367	+250
Operator II	197	+154
Operator III	178	+ 53
Operator IV	17	+ 83
Laboratory Technician	52	+ 44
Water Treatment		
Non-certified Operator	663	-177
Operator I	494	+145
Operator II	189	+ 93
Operator III	111	+ 33
Operator IV	15	+ 13
Laboratory Technician	72	+ 79
Air Pollution Control		
Inspector	71	+ 81
Engineer	23	+ 57
Chemist	17	+ 12
Technician	25	+ 11
Meteorologist	0	+ 1

Table 3 indicates the estimated number of full time workers in environmental management occupations in Ohio and the projected increase in workers from 1971 to 1974.

TABLE 3

ESTIMATES OF THE NUMBER OF FULL TIME WORKERS IN ENVIRONMENTAL MANAGEMENT OCCUPATIONS IN INDUSTRIAL FIRMS IN OHIO: METHOD I

Job	Estimated Number of Workers			Change in Number of Workers	
	Employed in 1968	Employed in 1971	Needed in 1974	From 1968 to 1971	From 1971 to 1974
Water Treatment					
Operator	277	350	376	+ 73	+ 26
Laboratory Technician	90	111	124	+ 21	+ 13
Wastewater Treatment					
Operator	265	385	401	+120	+ 16
Laboratory Technician	72	81	145	+ 9	+ 64
Air Management					
Inspector	42	64	90	+ 22	+ 26
Laboratory Technician	35	42	90	+ 4	+ 48
Operator	766	702	821	- 64	+119

The task analyses showed a wide variety of tasks being carried out by persons employed in the selected positions. The analyses also indicated a high degree of relationship between employees' ratings of percentage of time spent on a task and their supervisors' ratings of the importance for that task. The results also showed a slight variation in the tasks completed by people with the same position in facilities serving cities of various sizes. Generally, employees in facilities serving less than 100,000 people carried out more tasks than their counterparts in facilities serving more than 100,000 people.

The major responsibilities as determined by task analysis of the occupations about which manpower needs were determined are defined as follows:

a. Water treatment operator -- operates and maintains equipment and performs some tests.

b. Water treatment laboratory technician -- performs tests and analyzes results.

c. Wastewater treatment operator -- collects samples, performs some tests, and general plant operation.

d. Wastewater treatment laboratory technician -- performs tests and analyzes results.

e. Air management inspector -- checks plant operations and makes recommendations to operators and technicians.

1. Air management laboratory technician -- collects samples, performs tests, and analyzes results.

2. Air management plant operator -- controls and maintains equipment (example: boilers).

The increased personnel needs identified in this study justify the development of training programs in environmental management occupations. As indicated by members of the advisory council for the Environmental Studies Research Project and by facility administrators, many of the occupations analyzed can be filled by high school graduates. Specifically, these positions are: Non-certified Wastewater Treatment Operator and Wastewater Treatment Operator I, Non-certified Water Treatment Operator and Water Treatment Operator I, and Air Pollution Control Inspector. Vocational education programs should be offered in comprehensive high schools and joint vocational schools for the purpose of preparing personnel for environmental management occupations.

Programs are being implemented as a two-year course consisting of a one-semester introductory course and three semesters of occupationally specialized instruction. Facility administrators indicated a need for workers to have desirable attitudes concerning work habits, knowledge of the overall environmental field, and for an appreciation of their particular job. In addition, the students must make decisions concerning specialty areas to pursue. These areas are explained in the introductory course.

The specialized course is crucial for the development of useable occupational skills. This tri-semester course, which would follow the introductory course, will be used to develop the necessary skills for job entry in any or all of the areas of wastewater treatment, water treatment, and air pollution control. The number of skills developed will be limited by the students' ability, inclination, and interest. A cooperative placement program is considered crucial for the specialty course.

PERSONNEL

Project Director: Dr. Harlan E. Ridenour, Director of the Ohio Agricultural Education Curriculum Materials Service, provided primary leadership to the environmental science and protection research and development project.

Supportive Staff: Dr. J. Robert Warmbrod, Professor, Department of Agricultural Education, The Ohio State University, directed the research for the project in cooperation with the Agricultural Education Curriculum Materials Service.

Mr. Welch Barnett, Supervisor, Agricultural Education Service, State Department of Education, assisted and advised the project director in conducting the project. Mr. Barnett is providing state staff leadership in the environmental science and protection program area.

Mr. John Hillison, Associate, Agricultural Education Curriculum Materials Service, was responsible for conducting the research and in the development of course of study. In addition to his research and development work, Mr. Hillison coordinated the activities of the assistant and of the consultants engaged to supply technical information.

Mr. David Howell and Mr. William Farrington served as associates with the Agricultural Education Curriculum Materials Service in conducting the activities of the project.

Technical Consultants: The assistance of one or more technical consultants from each occupational area was used to provide accurate up-to-date information and to assist in gaining entry into places of work.

Technical Assistance was provided by one secretary, and the part-time services of the Agricultural Education Curriculum Materials Service Business Manager and Illustrator.

Facilities: The facilities and equipment of the Agricultural Education Curriculum Materials Service were utilized. Photographs were provided by the Curriculum Materials Service. Printing was done by the Ohio State University Printing Facilities.

Project Expenditures

Title of Project: Development and Dissemination of Courses of Study and Instructional Materials for Environmental Science and Protection Programs

Project Organization: Ohio Agricultural Education Curriculum Materials Service

Project Beginning and Ending Dates: January 1, 1971 to June 30, 1972

Category of Expenditures	Jan. 1, 1971- June 30, 1972	
	STATE FUNDS	LOCAL FUNDS
1. Personnel (position titles; percent of time on project and yearly salary; for consultants, number of days and rate)	$29,047.58	
2. Employee Benefits (itemize benefits such as social security, retirement, group insurance, etc.)	273.97	
3. Travel (in and out-of-state for regular and consultant personnel; fares and/or mileage at allowable rate; number of days per diem and rate)	2,155.60	
4. Supplies and Materials (describe)	100.00	
5. Communications (itemize postage, telephone, etc.)	734.79	
6. Services: a. Duplication and Reproduction b. Statistical c. Testing d. Other	2,202.15	
7. Final Report-(twenty 11 copies)	300.00	
8. Equipment (rental; small, essential items may be purchased if less expensive)	21.60	
9. Other	73.17	
10. Total	$34,908.86	

2210

APPENDIX A

Data Gathering Instruments

ENVIRONMENTAL MANPOWER NEED FORM (A)

LOCATION _____

INDIVIDUAL _____

POSITION _____

	Year				Year				Year				Year			
	TOTAL NO.	FULL TIME	PART TIME DEFINE ____	VACANCIES	TOTAL NO.	FULL TIME	PART TIME DEFINE ____	VACANCIES	TOTAL NO.	FULL TIME	PART TIME DEFINE ____	VACANCIES	TOTAL NO.	FULL TIME	PART TIME DEFINE ____	VACANCIES
Air Pollution Control Officer I																
Air Pollution Control Officer II																
OTHER																

COMMENTS _____

ENVIRONMENTAL MANPOWER NEED FORM (W)

LOCATION _____

INDIVIDUAL _____

POSITION _____

	Year				Year				Year				Year			
	TOTAL NO.	FULL TIME	PART TIME DEFINE ____	VACANCIES	TOTAL NO.	FULL TIME	PART TIME DEFINE ____	VACANCIES	TOTAL NO.	FULL TIME	PART TIME DEFINE ____	VACANCIES	TOTAL NO.	FULL TIME	PART TIME DEFINE ____	VACANCIES
Water Treatment Operator I																
Water Treatment Operator II																
Water Treatment Operator III																
Water Treatment Operator IV																
OTHER																
_____																
_____																
_____																
_____																
_____																

COMMENTS _____

ENVIRONMENTAL MANPOWER NEED FORM (WW)

LOCATION _____

INDIVIDUAL _____

POSITION _____

	Year				Year				Year				Year			
	TOTAL NO.	FULL TIME	PART TIME DEFINE ___	VACANCIES	TOTAL NO.	FULL TIME	PART TIME DEFINE ___	VACANCIES	TOTAL NO.	FULL TIME	PART TIME DEFINE ___	VACANCIES	TOTAL NO.	FULL TIME	PART TIME DEFINE ___	VACANCIES
Sewage Treatment Operator I																
Sewage Treatment Operator II																
Sewage Treatment Operator III																
Sewage Treatment Operator IV																
OTHER																
_____																
_____																
_____																
_____																
_____																

COMMENTS _____

Plant capacity

2221

The Ohio State University

Wastewater Treatment Manpower Need Form

Your Name _____ Position _____

City _____

PART A -- PLANT BACKGROUND

1. Which of the following best describes your wastewater treatment facility?

_____ Municipally owned

_____ Privately owned

_____ Other

2. Is a Civil Service Examination required for employment?

_____ YES _____ NO

3. Does the wastewater treatment facility have a union shop?

_____ YES _____ NO

4. What is the plant capacity as measured by each of the following?

Works Capacity _____ MGD

Estimated Population Served _____

PART B -- MANPOWER NEEDS

Complete this part by writing the number of operators needed for each year indicated. The operator I, II, III, and IV positions are ones filled by people with state certificates in those positions. A non-certified person is one who has not passed a state of Ohio Operator I Examination. The lab technician works primarily in the laboratory, but does not have the college degree required of a chemist.

	How many wastewater treatment operators and lab technicians are now employed? (See note about part-time employees)		How many wastewater treatment operators and lab technicians were employed in 1968?		How many wastewater treatment operators and lab technicians do you anticipate needing by 1974?	
	1971		1968		1974	
	Full Time	Part Time*	Full Time	Part Time*	Full Time	Part Time*
Non-Certified (state)						
Wastewater Treatment Operator I						
Wastewater Treatment Operator II						

1. Which of the following best describes your wastewater treatment facility.

_____ Municipally owned

_____ Privately owned

_____ Other

2. Is a Civil Service Examination required for employment?

_____ YES _____ NO

3. Does the wastewater treatment facility have a union shop?

_____ YES _____ NO

4. What is the plant capacity as measured by each of the following?

Works Capacity _____ MGD

Estimated Population Served _____

PART B -- MANPOWER NEEDS

Complete this part by writing the number of operators needed for each year indicated. The operator I, II, III, and IV positions are ones filled by people with state certificates in those positions. A non-certified person is one who has not passed a state of Ohio Operator I Examination. The lab technician works primarily in the laboratory, but does not have the college degree required of a chemist.

	How many wastewater treatment operators and lab technicians are now employed? (See note about part-time employees)		How many wastewater treatment operators and lab technicians were employed in 1968?		How many wastewater treatment operators and lab technicians do you anticipate needing by 1974?	
	1971		1968		1974	
	Full Time	Part Time*	Full Time	Part Time*	Full Time	Part Time*
Non-Certified (state)						
Wastewater Treatment Operator I						
Wastewater Treatment Operator II						
Wastewater Treatment Operator III						
Wastewater Treatment Operator IV						
Lab Technician						

*Explain part-time work by describing the number of hours worked per week or identifying the work as seasonal and naming the season worked.

_____

_____

2221 A

ENVIRONMENTAL TASK ANALYSIS FORM

AIR POLLUTION CONTROL OFFICER I

LOCATION _____

INDIVIDUAL & POSITION (F) _____

INDIVIDUAL & POSITION (I) _____

TASKS	NA	FREQUENCY*	IMPORTANCE**
1. Inspecting boilers for conformance to code requirements	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
2. Checking safety devices on boilers	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
3. Sampling flue gas	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
4. Inspecting incinerators for conformance to code requirements	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
5. Investigating air pollution complaints	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
6. Advising a supervisor of findings	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
7. Taking photographs and movies of air pollution caused by trucks, power plants, etc.	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
8. Operating spot machine, optical density machine, Genco field air analysis machine, etc.	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
9. Making air quality surveys for specific pollutants (NO_2, SO_2, CO)	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
10. Meeting with suspected violators of the air standards code	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
11. Enforcing laws involving trash fires	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
12. Assisting in obtaining evidence to substantiate legal action	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
13. Giving evidence in court	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
OTHER			
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9

NA = Not Applicable

*FREQUENCY (1 = very little time, 9 = a great deal of time)

**IMPORTANCE (1 = of little importance, 9 = of extreme importance)

ENVIRONMENTAL TASK ANALYSIS FORM

AIR POLLUTION CONTROL OFFICER II

LOCATION _____

INDIVIDUAL & POSITION (F) _____

INDIVIDUAL & POSITION (I) _____

TASKS	NA	FREQUENCY*	IMPORTANCE**
1. Supervising other personnel	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
2. Reviewing completed inspections	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
3. Advising violators on ways and means of correcting violations	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
4. Investigating air pollution complaints	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
5. Advising a supervisor of findings	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
6. Taking photographs and movies of air pollution caused by trucks, power plants, etc.	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
7. Writing analyses of code violations	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
8. Planning and laying out field test stations	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
9. Interpreting blueprints of applicants for installation permits	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
10. Inspecting and testing new installations in the field	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
11. Explaining code requirements to engineers and architects	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
12. Explaining code requirements to the general public	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
13. Notifying code violators of their violations	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
OTHER			
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9

NA = Not Applicable

*FREQUENCY (1 = very little time, 9 = a great deal of time)

**IMPORTANCE (1 = of little importance, 9 = of extreme importance)

ENVIRONMENTAL TASK ANALYSIS FORM

_____

LOCATION _____

INDIVIDUAL & POSITION (F) _____

INDIVIDUAL & POSITION (I) _____

	TASKS	NA	FREQUENCY*	IMPORTANCE**
1.	_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
2.	_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
3.	_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
4.	_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
5.	_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
6.	_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
7.	_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
8.	_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
9.	_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
10.	_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
11.	_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
12.	_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
13.	_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
14.	_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
15.	_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
16.	_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
17.	_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
18.	_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
19.	_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
20.	_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9

NA = Not Applicable

*FREQUENCY (1 = very little time, 9 = a great deal of time)

**IMPORTANCE (1 = of little importance, 9 = of extreme importance)

ENVIRONMENTAL TASK ANALYSIS FORM

SEWAGE TREATMENT OPERATOR I

LOCATION _____

INDIVIDUAL & POSITION (F) _____

INDIVIDUAL & POSITION (I) _____

TASKS	NA	FREQUENCY*	IMPORTANCE**
1. Inspection of the entire plant	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
2. Making decisions on plant operations	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
A. Chemical dosages	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
Chlorine	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
Other _____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
B. Checking supplies	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
C. Ordering supplies	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
D. General appearance	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
E. Other _____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
3. Inspection of machinery and equipment	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
4. Repairing machinery and equipment	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9

TASKS	NA	FREQUENCY*	IMPORTANCE**
5. Operating machinery and equipment	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
6. Consultation with other Operator I's and supervising personnel	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
7. Supervision of other staff members	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
8. Establishing work orders for the next shift	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
9. Obtaining samples for laboratory testing	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
10. Making laboratory tests	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
A. The BOD test	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
B. The COD test	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
C. The pH test	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
D. The DO test	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
E. Other tests _____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
11. Assisting other employees with their work responsibilities	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
12. Recording information on log sheets	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
13. Analyzing log sheets	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
14. Completing monthly state reports	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
15. Working with public relations	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
OTHER			
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9

NA = Not Applicable
*FREQUENCY (1=very little time, 9=a great deal of time)
**IMPORTANCE (1=of little importance, 9=of extreme importance)

ENVIRONMENTAL TASK ANALYSIS FORM

WATER TREATMENT OPERATOR I

LOCATION _____

INDIVIDUAL & POSITION (S) _____

INDIVIDUAL & POSITION (I) _____

TASKS	NA	FREQUENCY*	IMPORTANCE**
1. Operation of aeration equipment	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
2. Inspection of aeration equipment	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
3. Operation of flocculation basin	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
4. Inspection of flocculation basin	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
5. Operation of sedimentation tank	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
6. Inspection of sedimentation tank	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
7. Performance of coagulation tests in the laboratory	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
8. Testing for the presence of harmful concentrations of poisonous chemical substances	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
Specific tests:			
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
9. Testing for the causative microorganisms and viruses of disease	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
Specific tests:			
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
10. Performance of the Orthotolidine-arsenite laboratory test for the measurement of combined & free chlorine	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
11. Calculation & addition of lime or lime & soda ash for the softening of water	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9

TASKS	NA	FREQUENCY*	IMPORTANCE**
12. Operation of recarbonation equipment	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
13. Inspection of recarbonation equipment	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
14. Operation of the filtration system	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
15. Inspection of the filtration system	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
16. Washing of filters	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
17. Operation of chlorination equipment	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
18. Inspection of chlorination equipment	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
19. Operation of fluoridation equipment	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
20. Inspection & calibration of fluoridation equipment	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
21. Repairing machinery and equipment	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
_____	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
22. Consultation with other Operator I's and supervising personnel	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
23. Assisting other employees with their work responsibilities	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
24. Recording information on log sheets	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
25. Analyzing log sheets	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
26. Completing monthly state reports	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
27. Working with public relations	___	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9

NA = Not Applicable
*FREQUENCY (1 = very little time, 9 = a great deal of time)
**IMPORTANCE (1 = of little importance, 9 = of extreme importance)

INTERVIEW MANUAL

ENVIRONMENTAL STUDIES RESEARCH PROJECT

Agricultural Education Service
Ohio Department of Education

Department of Agricultural Education
The Ohio State University

July, 1971

ENVIRONMENTAL MANPOWER NEED FORM

This form is intended for use in obtaining the present and emerging occupations in water pollution control, air pollution control, and soil depletion control. The form will also be used to indicate manpower need trends in these same areas.

There are four versions of this form. The letter or letters in parentheses following the title Environmental Manpower Need Form indicates which version is being used. The code for the letter or letters is:

WW = Wastewater Treatment
W = Water Treatment
A = Air Pollution Control
S = Soil Depletion Control

LOCATION - Enter the name of the municipality (Cleveland), the county unit (Muskingum County), or the appropriate district (Northwest District - Bowling Green, Ohio) where the information is being gathered.

INDIVIDUAL - Enter the name of the individual from whom the information is being gathered.

POSITION - Enter the description title of the individual being interviewed, i.e., district conservationist, district engineer, etc. Whenever possible use a state of Ohio recognized certification title, i.e., Water Treatment Operator III.

Appropriate State of Ohio position titles are listed for each environmental area. Spaces are available for adding additional non-state recognized positions. If the interviewee indicates the existence of additional positions, list the position title for each one under the category labeled OTHER. Complete the rest of the form with appropriate entries for each additional title. Each additional title used must be

defined as clearly as possible by listing its responsibilities in the COMMENTS section of the form. Use only positions that are related to environmental work and require knowledge of the environment. Also, identify an individual by the state classification he is using for his job. For example, if an individual holds an operator III certificate, but his employer only recognizes him as an operator II, classify him as an operator II.

The next major portion of the form is used to find manpower needs and trends for each of the positions identified.

Starting with the current year (1971) find the following information for each location: (A) The total number of employees for each position, (B) The number of full time employees for each position, (C) The number of part time employees for each position, (D) The definition of a part time employee, i.e., the number of hours worked per week, and (E) The number of vacancies that exist for each position. Find the same information for the years 1968, 1969, 1970, and 1974. To predict ahead to 1974 will require an estimate on the part of the interviewee. Request that two estimates be made on the basis of a minimum number for 1974 and a desirable number for 1974.

The year for which the information is being obtained should be written at the top of its appropriate column. The column containing the minimum number of employees needed for 1974 should be labeled as 1974 (minimum) while the column containing the desirable number of employees needed for 1974 should be labeled as 1974 (maximum).

The COMMENTS section is to be utilized for recording additional information pertaining to employees. Examples of entries in the COMMENTS

section will include additional information concerning job titles, employee activities such as the existence of a union, feasibility of placing high school students on-the-job in that location, etc.

ENVIRONMENTAL TASK ANALYSIS FORM

This form is intended for use in obtaining a list of the tasks completed by workers in the areas of water pollution control, air pollution control, and soil depletion control. The list of tasks will be further supplemented by an indication of the relative amount of time spent on each task (frequency) and the relative significance for an employee to be able to do that task as a part of his job (importance).

Each form must have an identified position title to be analyzed, i.e., district conservationist, sewage treatment operator I, etc. On some forms it will be necessary to write in the position title, while on other forms it will be named.

LOCATION - Enter the name of the facility where the information is being gathered, i.e., Southerly Waste Water Treatment Plant - Columbus, Morse Road Water Treatment Plant - Columbus, etc.

INDIVIDUAL & POSITION (F) - Enter the name and the position of the individual being interviewed for the FREQUENCY section of the form. It is desirable to interview an individual who is presently employed in the identified position.

INDIVIDUAL & POSITION (I) - Enter the name and the position of the individual being interviewed for the IMPORTANCE section of the form. It is desirable to interview an individual who is a supervisor of people working in the identified position. If possible identify the position as a state recognized one, i.e., Water Treatment Operator III. If the supervisor does not hold a state recognized position, use the title which is appropriate for him.

TASKS - This section of the form has possible tasks listed for people working in the identified position. Additional tasks may be added in the column labeled OTHER.

NA - This column should be checked when it is indicated that the task listed is not appropriate for the position being analyzed.

FREQUENCY - Record here the relative amount of time that an individual in the identified position spends on each task listed. The frequency scale goes from 1 to 9 with 1 being very little time and 9 being a great deal of time. Be certain the interviewee understands the scale before he rates the first task. It is advisable to state your question similar to the following example. "On a relative scale of from 1 to 9 with 1 being very little time and 9 being a great deal of time, what number would best describe the amount of time that you (as a SCS Conservation Technician) spend using a planimeter?"

IMPORTANCE - Record here the relative significance for an individual in the identified position to be able to do the task listed. The importance scale goes from 1 to 9 with 1 being of little importance and 9 being of extreme importance. Be certain the interviewee understands the scale before he rates the first task. It is advisable to state your question similar to the following example. "On a relative scale of from 1 to 9 with 1 being of little importance and 9 being of great importance, what number would best describe the relative importance of a SCS Conservation Technician being able to use a planimeter?"

APPENDIX B

Summary of Studies

RESEARCH SERIES IN AGRICULTURAL EDUCATION

A Research Report

of a

Graduate Study

MANPOWER NEEDS IN ENVIRONMENTAL MANAGEMENT

By

John H. Hillison and J. Robert Warmbrod

Issued by

The Department of Agricultural Education
College of Agriculture and Home Economics
The Ohio State University
Columbus, Ohio

and

Ohio Agricultural Education Curriculum Materials Service
Agricultural Education Service
Ohio Department of Education

July 1972

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FOREWORD

Two essential steps in designing occupational education programs are (1) assessment of current and future manpower needs in the occupational area and (2) analyses of the tasks performed in the various jobs which serve as a basis for the development of courses of study and instructional materials. This report is a summary of a study which was designed to accomplish these two purposes as they relate to environmental management occupations in the State of Ohio. The occupational categories investigated were in wastewater treatment, water treatment, and air pollution control.

The salient findings of the study are presented in this publication. For more complete details of the findings and the procedures employed, the complete report of the study should be consulted (John H. Hillison, Manpower Needs in Environmental Management, Ph.D. Dissertation, Department of Agricultural Education, The Ohio State University, June 1972). The research summarized in this publication is one phase of the Project "Development and Dissemination of Courses of Study and Instructional Materials for Environmental Science and Protection."

Special recognition and appreciation is due Dr. Harlan E. Ridenour, Director of the Ohio Agricultural Education Curriculum Materials Service and Director of the Project, for his assistance and support in the conduct of the study.

J. Robert Warmbrod

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INTRODUCTION

The nation faces a crucial environmental crisis in two major areas -- water pollution and air pollution. The efforts to solve these environmental problems will create not only a great financial need but also a great manpower need. The U.S. Department of Interior estimated in 1967 that the United States would need 18,500 additional wastewater treatment operators by 1972. It was estimated that a total of 30,000 operators would be needed in 1972 at the local governmental level (municipalities). This was an increase of 10,000 over manpower needs in 1967. The Interior Department estimated also that industry needed a total of 12,000 wastewater treatment operators by 1972 -- an increase of 8,500 over the 1967 manpower levels.[1] The National Air Pollution Control Administration (NAPCA) of the United States Department of Health, Education, and Welfare has estimated that 50,900 persons will be needed in air pollution control occupations by 1974. This is an increase of slightly over 27,000 persons who were working in these occupations in 1969.[2]

The investigator believes that publicly supported secondary vocational education can play a key role in preparing workers entering the environmental management field and in providing supplementary instruction for those presently employed. To make the most significant contribution, vocational education should work with both major areas of water management and air management, since both are very closely interrelated.

The Problem

The purposes of the study were: (1) to describe current and emerging occupations in environmental management in Ohio: (2) to estimate the number of persons currently employed and to project employment opportunities in these occupations; and (3) to describe the tasks performed by persons employed in selected environmental management occupations. The occupations investigated were in water pollution control and air pollution control. The specific areas of water pollution control investigated were wastewater treatment and water treatment.

Answers to the following specific questions were sought:

1. What are the current and emerging occupations in water pollution control and air pollution control?

2. How many persons are currently employed in water pollution control and air pollution control jobs and how many additional persons will be needed by 1974 to fill new positions in these jobs?

3. What are the tasks performed by persons in water pollution control and air pollution control jobs, what is the relative amount of time spent by

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[1]Manpower and Training Needs in Water Pollution Control, U.S. Department of the Interior, (Washington: U.S. Government Printing Office) 1967, p. 15.

[2]Manpower and Training Needs for Air Pollution Control, U.S. Department of Health, Education and Welfare (Washington: U.S. Government Printing Office) 1970, pp. 4-10.

workers on the various tasks, and how do supervisors rate the relative importance of the tasks performed by workers in these jobs?

Need for the Study

From conferences with professional environmentalists in both state and municipal agencies it became apparent that personnel must be qualified at an increasing rate to solve both today's and tomorrow's environmental problems. These environmentalists noted that at the present training for prospective employees is offered at few educational institutions. Many employees are either not fully qualified for their positions or must become qualified through on-job training. This procedure has been inadequate to meet employment demands.

> Well-trained operators (of sewage treatment facilities) are clearly among the priority needs. Recent surveys have shown that some of the newest sewage plants are operating at less than maximum efficiency due to the inadequate training of the plant operators.[3]

In an attempt to meet present and future employment demands in environmental management, the Division of Vocational Education of the Ohio Department of Education charged the Agricultural Education Section of the Division with the responsibility of developing training programs to fulfill this need. Typically, agricultural education has provided instructional programs that deal with the environment and its relationship to soils, plants, and animals. However, agricultural education has provided, in Ohio or elsewhere, only limited course offerings in the specific areas of water pollution and air pollution.

Available job descriptions give a basically complete description of the positions in environmental management which were considered in this study. It was clear, however, that no order or sequence of training for the various tasks was established by these descriptions. For the establishment of training programs and curriculum materials to be used in these programs it was desirable to know which tasks must be emphasized and at what phase of the instructional program to emphasize them. One of the major purposes of this study was to establish a hierarchy of importance for the tasks identified for each position to be studied.

The investigator believes the steps that should be taken for preparing properly trained personnel for the environmental management occupational area are as follows: (1) the need for additional personnel must be identified for each of the occupations, (2) the positions must be described by task analysis, (3) curriculums and instructional materials should be established based on the findings of the task analyses, and (4) personnel should be trained based on the curriculums and instructional materials established. This study was designed to accomplish the first two steps in the preparation of personnel for employment in environmental management occupations.

Procedure

Population and Sample. - The population for the study was the wastewater treatment facilities, water treatment facilities, and air pollution control facilities serving municipalities in the State of Ohio. The populations of wastewater treatment facilities and water treatment facilities were stratified into three strata: (1) facilities serving cities of 100,000 or more population which were personally visited, (2) facilities serving cities of less than 100,000 population which were personally visited, and

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[3] Applying Technology to Unmet Needs, Technology and the American Economy, The Report of the Commission, Appendix Volume V, February, 1966, p. v-156.

(3) facilities serving cities of less than 100,000 population which were surveyed by a mail questionnaire.

A purposive sample of eight facilities serving cities of 100,000 or more population was utilized because it was assumed that these facilities would have the greatest manpower needs of any facilities in Ohio. District Engineers in each of Ohio's four State Department of Health, Division of Engineering Districts were asked to help select facilities serving cities of less than 100,000 population by choosing two progressive wastewater treatment facilities and two water treatment facilities in their districts. It was requested that these facilities and their employees be as typical as possible of what the district engineers anticipated such facilities and employees to be like in future years.

The samples of wastewater and water treatment facilities serving cities of less than 100,000 population from which data were collected by mail questionnaire consisted of 200 facilities selected at random. Excluding the facilities that were visited, the population of wastewater treatment facilities in Ohio serving less than 100,000 people is 396.[4] The population of water treatment facilities in Ohio serving less than 100,000 people is 601.[5] (See Table 1)

There were a total of ten air pollution control areas in Ohio during 1971. The term "area" refers to a unit of air pollution control rather than facility because geographical areas such as counties are included in the unit. All ten of these air pollution control areas were included in the sample and were personally visited.

TABLE 1

NUMBER OF SAMPLING UNITS IN THE POPULATION AND SAMPLE BY TYPE OF FACILITY AND SIZE OF MUNICIPALITY

Size of Municipality and Type of Facility	Number Units in Population	Number Units in Sample
Cities over 100,000		
Wastewater treatment[a]	8	8
Water treatment[a]	8	8
Cities under 100,000		
Wastewater treatment[a]	8	8
Water treatment[a]	8	8
Cities under 100,000		
Wastewater treatment[b]	396	200
Water treatment[b]	601	200
Air Pollution Control		
Control areas[a]	10	10
State control unit[a]	1	1

[a] Data collected by interviews.
[b] Data collected by mail questionnaire.

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[4] Names and Addresses Public Water Supplies, State of Ohio, Department of Health, 1971, 55 pages.

[5] Municipal Sewage Treatment Work in Ohio, Ohio Department of Health, January, 1971, 12 pages.

Collection of Data. - A telephone call served as the first contact with the facility administrator during which arrangements were made for interviewing the facility administrator and employees who were asked to provide task analysis data. Administrators were asked to indicate the number of employees working in the various occupations in 1968 and 1971 and to estimate the number of employees needed in these occupations in 1974. The facility administrator, or the chief operator or foreman if so designated by the administrator, was asked to complete the importance section of the task analysis instrument. Designated persons working in the various occupations were then asked to indicate the frequency with which they performed tasks. The Environmental Task Analysis Form was used for collecting these data.

The Wastewater Treatment Manpower Need Form and the Water Treatment Manpower Need Form were mailed to the 200 randomly selected samples of facilities. Each questionnaire was accompanied by a cover letter explaining the basic purposes of the survey which was co-signed by J.E. Richards, Acting Chief of the Ohio Department of Health, Division of Engineering, and Harlan E. Ridenour, Director of the Ohio Agricultural Education Curriculum Materials Service and the Environmental Studies Research Project. The questionnaires were mailed on November 15, 1971. On December 6, 1971 all facilities not responding to the first mail questionnaire were sent a second questionnaire and a copy of the original cover letter. Of the 200 mail questionnaires mailed to wastewater treatment facilities, 156 (78 percent) were returned; 166 (83 percent) of the 200 questionnaires mailed to water treatment facilities were returned. After comparing the responses of early respondents and late respondents, it was decided to consider the data provided by respondents as a representative sample. Estimates calculated from the sample data are based on that assumption.

MANPOWER NEEDS IN ENVIRONMENTAL MANAGEMENT OCCUPATIONS

Manpower needs in wastewater treatment positions and water treatment positions are subdivided into two major parts -- manpower needs for full time operators working 40 hours or more per week and manpower needs for part-time operators working less than 40 hours per week. In this study it was found that the typical part-time operator worked about 20 hours per week all year or worked full time during one season only, usually the summer. The positions investigated in both wastewater treatment facilities and water treatment facilities were Non-certified Operator, Operator I, Operator II, Operator III, Operator IV, and Laboratory Technician.

Wastewater Treatment Positions

Manpower needs for full time personnel in wastewater treatment facilities serving 100,000 or more people are displayed by position in Table 2. The data illustrate that administrators of wastewater treatment facilities serving Ohio's cities of over 100,000 population anticipated increases in the number of personnel needed from 1971 to 1974 for all positions except non-certified operators. The most dramatic increase in the number of workers needed in 1974 is indicated for the Operator I position. A growth of 81 persons in the Operator I position is noted for the 1971 to 1974 period. This change represents an increase of 145 percent. When comparing the number of persons needed in 1974 with the number employed in 1971, a more modest growth of 19 persons in the Operator II position (a 49 percent increase), 11 persons in the Operator III position (42 percent increase), one Operator IV (a 25 percent increase), and four persons in the laboratory technicians position (a 67 percent increase) are indicated. When comparing the total number of persons employed

in all positions it should be noted there were only six more persons employed in 1971 than in 1968 (a 1.7 percent increase); however, the administrators reported an anticipated increase of 109 persons (a 31 percent increase) in all positions from 1971 to 1974.

TABLE 2

MANPOWER NEEDS FOR FULL TIME WASTEWATER TREATMENT POSITIONS IN FACILITIES SERVING CITIES OF OVER 100,000 POPULATION: INTERVIEWS[a] (n = 8 facilities)

Position	Number of Persons employed		Number of Persons needed
	1968	1971	1974
Non-certified operator	218	219	212
Operator I	53	56	137
Operator II	36	39	58
Operator III	27	26	37
Operator IV	5	4	5
Laboratory technician	5	6	10
Total	344	350	459

[a]Data were collected by interviews with facility administrators.

Two factors help account for these increases in manpower needs. Ed Rosendahl,[6] Engineer in Charge, General Engineering Unit of the Ohio Department of Health, named two major factors which influence manpower requirements in wastewater treatment facilities. These factors were (1) a requirement for all facilities to utilize at least secondary treatment procedures and (2) a requirement for all facilities to have a licensed operator (Operator I or higher) on duty during all shifts. Two of the eight facilities did not have secondary wastewater treatment in 1971. Administrators in both of these cities anticipated expansion to secondary treatment by 1974. Secondary wastewater treatment involves complex biological procedures which require personnel with training of the type typically required for the Operator I position.

All positions displayed in Table 3 reflect an anticipated increase in manpower needs for the period 1971 to 1974. The position showing the greatest growth is Operator I with a need for 169 additional people (a 54 percent increase). This compares to a growth of 49 people (a 19 percent increase) for 1968-1971. The position

[6]Ed Rosendahl, private interview held in the Ohio Department of Health Building, Columbus, Ohio, March 1972.

showing the second largest manpower increase for 1971-1974 is Operator II. This position has an anticipated growth of 135 people which represents an 85 percent increase. The Operator II position had an actual increase of 15 people for 1968-1971 which represented a 10 percent increase.

The manpower increase for all positions represents a growth of 523 persons (a 43 percent increase) for 1971-1974. The actual manpower increase for 1968-1971 was 231 which was a 23 percent increase.

TABLE 3

ESTIMATES OF MANPOWER NEEDS FOR FULL TIME WASTEWATER TREATMENT POSITIONS IN FACILITIES SERVING CITIES OF UNDER 100,000 POPULATION[a]

Position	Number of Persons employed		Number of Persons needed
	1968	1971	1974
Non-certified operator	480	563	619
Operator I	263	311	480
Operator II	143	158	293
Operator III	88	152	194
Operator IV	16	13	94
Laboratory technician	23	46	86
Total	1,012	1,243	1,766

[a]Estimates reported in this table were derived from the sample data reported from the 156 mail questionnaires plus the data collected by interviews with administrators at eight progressive facilities identified by the Ohio Department of Health.

The data reported in Table 4 summarizes manpower needs for all public wastewater facilities in the State of Ohio. For all positions, increases in manpower needs are reflected from 1971 to 1974. The highest anticipated number of additional full time personnel (250 persons) needed from 1971 to 1974 is at the Operator I position. This is a 68 percent increase in personnel during the three-year period. This change compares with a 1968 to 1971 numerical increase of fifty (a 21 percent increase) for the number of Operator I personnel employed.

The estimates for the total number of full time persons in wastewater treatment positions in the 412 facilities indicate a growth in manpower needs. Estimates of the number of persons actually employed in all positions in 1968 and 1971 indicate an additional 237 persons (a 17 percent increase) were working in these positions at the end of the three-year period. Comparable estimates for the 1971-1974 period indicate an additional 632 persons (a 40 percent increase) will be needed during the next three years.

TABLE 4

ESTIMATES OF MANPOWER NEEDS FOR FULL TIME WASTEWATER TREATMENT POSITIONS IN 412 FACILITIES[a]

Position	Number of Persons employed		Number of Persons needed
	1968	1971	1974
Non-certified operator	698	782	831
Operator I	315	367	617
Operator II	179	197	351
Operator III	115	178	231
Operator IV	21	17	99
Laboratory technician	28	52	96
Total	1,356	1,593	2,225

[a]Summary of data reported in Tables 2 and 3.

The employment pattern exhibited by part-time wastewater treatment personnel was quite different from the one displayed by full time personnel. Facility administrators indicated many of the part-time personnel have a second job which is typically away from the wastewater treatment facility. Often part-time personnel in wastewater treatment facilities work also as part-time water treatment operators, or water treatment laboratory technicians, or as workers on the distribution line in water treatment facilities. By far the greatest number of part-time wastewater treatment operators are working in the non-certified operator position. Facility administrators indicated a diminishing need for part-time personnel for each position when needs in 1974 are compared to 1971 employment. One major factor contributing to this diminishing need is an anticipated conversion of part-time personnel to full time personnel. This trend appeared to exist in both large and small facilities.

Estimates of the total part-time manpower needs for wastewater treatment facilities are shown in Table 5. Overall, the data reflect a decreasing need for part-time operators in the 412 wastewater treatment facilities in Ohio. Facilities of all sizes will need fewer part-time wastewater treatment operators in 1974 than were actually employed in 1971. The total number of personnel in part-time positions displayed a change from 239 in 1968 to 356 in 1974, a numerical increase of 117 (a 49 percent increase). The anticipated total part-time manpower need for 1974 is 281 a decrease of seventy-five positions from the number estimated to be employed in 1971 (a 21 percent decrease). The largest single numerical decrease from 1971 to 1974 occurred for non-certified operators.

TABLE 5

ESTIMATES OF MANPOWER NEEDS FOR PART-TIME WASTEWATER TREATMENT POSITIONS IN 412 FACILITIES[a]

Position	Number of Persons employed		Number of Persons needed
	1968	1971	1974
Non-certified operator	151	237	202
Operator I	30	33	30
Operator II	20	30	18
Operator III	15	20	13
Operator IV	5	8	5
Laboratory technician	18	28	13
Total	239	356	281

[a]Estimates reported in this table were derived from the sample data reported from the 156 mail questionnaires plus the data collected by interviews with administrators in the 16 facilities that were visited.

TABLE 6

MANPOWER NEEDS FOR FULL TIME WATER TREATMENT POSITIONS IN FACILITIES SERVING CITIES OF OVER 100,000 POPULATION: INTERVIEWS[a] (n = 8 facilities)

Position	Number of People employed		Number of People needed
	1968	1971	1974
Non-certified operator	54	92	50
Operator I	51	52	82
Operator II	27	29	59
Operator III	15	19	26
Operator IV	7	7	13
Laboratory technician	12	13	14
Total	166	212	244

[a]Data were collected by interviews with facility administrators.

Water Treatment Positions

Table 6 reports the number of full time personnel needed for positions in facilities serving over 100,000 people. Administrators of the facilities who were interviewed indicated two fundamental trends. The first is a decreasing need for non-certified operators. Table 6 indicates a need for 42 fewer persons in 1974 (a 46 percent decrease) for the non-certified position than the number employed in that position in 1971. Facility administrators reported plans to encourage non-certified operators to upgrade themselves to a licensed operator's position. The Ohio Department of Health is in the process of requiring water treatment facilities to have a licensed operator on duty for each shift. This requirement tends to minimize the number of non-certified operators needed.

TABLE 7

ESTIMATES OF MANPOWER NEEDS FOR FULL TIME WATER TREATMENT POSITIONS IN FACILITIES SERVING CITIES OF UNDER 100,000 POPULATION[a]

Position	Number of People employed		Number of People needed
	1968	1971	1974
Non-certified operator	455	571	436
Operator I	347	442	557
Operator II	102	160	223
Operator III	55	92	118
Operator IV	4	8	15
Laboratory technician	50	59	137
Total	1,013	1,332	1,486

[a]Estimates reported in this table were derived from the sample data reported from the 166 mail questionnaires plus the data collected by interviews held with administrators at eight progressive facilities identified by the Ohio Department of Health.

The position in facilities serving less than 100,000 population (Table 7) which displayed the greatest manpower growth for 1971-1974 is Operator I. This position showed a growth of 115 persons (a 26 percent increase) which compares to a growth of 95 persons (a 27 percent increase) for the three-year period 1968-1971. The position with the second greatest growth for 1971-1974 is Laboratory Technician. This position has a growth of 78 people (a 132 percent increase) which compares to an increase of nine people for 1968-1971 (an 18 percent increase). The only position not showing an increase for 1968-1971 is non-certified operator which decreased 135 persons for a 24 percent decrease. For total manpower needs, an overall increase is shown. The 1971-1974 total shows an increase of 156 persons (a 12 percent increase) which compares to an increase of 319 persons (a 31 percent increase) for 1968-1971.

The data reported in Table 8 summarize manpower needs for full time personnel for all water treatment facilities in the State of Ohio. For all positions except non-certified operators an increase in manpower needs is anticipated for the years 1971 to 1974. The largest manpower increase was reported for the Operator I position. This increase was for 145 additional persons (a 29 percent increase). The 1968 to 1971 personnel increase at the Operator I level was ninety-six (a 24 percent increase).

TABLE 8

MANPOWER NEEDS FOR FULL TIME WATER TREATMENT POSITIONS IN 617 FACILITIES[a]

Position	Number of People employed		Number of People needed
	1968	1971	1974
Non-certified operator	509	663	486
Operator I	398	494	639
Operator II	129	189	282
Operator III	70	111	144
Operator IV	11	15	28
Laboratory technician	62	72	151
Total	1,179	1,544	1,730

[a]Summary of data reported in Tables 6 and 7.

The estimates for the total number of full time water treatment positions in the 617 facilities indicate a sizeable growth in manpower needs. Estimates of the number of persons actually employed in all positions in 1968 and 1971 indicate an additional 365 persons (a 31 percent increase) were working in these positions at the end of the three-year period. Comparable estimates for the 1971-1974 period indicate an additional 186 persons (a 12 percent increase) will be needed during these three years. The manpower growth in water treatment personnel has started to develop at a slower rate for the years 1971-1974 as compared to the years 1968-1971. This can be accounted for by the fact that satisfactorily treated water has been supplied to the majority of the populace in cities for many years. While wastewater treatment standards are being increased, water treatment standards have been rather stringent for some time. Facility administrators indicated that the principal need for additional personnel in water treatment positions will be as a result of increased population and a consequent increase in facilities and the capacity of the facilities.

Table 9 indicates the decreasing need for part-time personnel in water treatment positions. Administrative personnel of water treatment facilities have indicated they anticipate converting many part-time personnel activities to full-time activities.

They prefer having persons who do not have to be shared with the distribution repair crew, the wastewater treatment facility, or some other responsibility.

TABLE 9

MANPOWER NEEDS FOR PART-TIME WATER TREATMENT POSITIONS IN 617 FACILITIES[a]

Position	Number of People employed		Number of People needed
	1968	1971	1974
Non-certified operator	224	252	213
Operator I	50	76	65
Operator II	7	14	18
Operator III	12	14	11
Operator V	5	4	0
Laboratory technician	18	29	18
Total	316	389	325

[a]Estimates reported in this table were derived from the sample data reported from the 166 mail questionnaires plus the data collected by interviews with administrators in the 16 facilities that were visited.

Air Pollution Control Positions

The air pollution control manpower needs are reported for both the ten city or multi-county regional offices and for the State of Ohio Air Pollution Control Unit located in Columbus, Ohio. The city offices were located in major cities, while multi-county regional offices include a number of contigious counties with a main office located in a major city. The State of Ohio Air Pollution Control Unit is an agency with State financing and administration. All agencies investigated were publicly financed agencies. Manpower needs for these agencies were investigated for the positions of Inspector, Engineer, Chemist, Technician, and Meteorologist.

Table 10 reports total manpower needs for air pollution control positions for all agencies. Total manpower needs are changing quite rapidly with an anticipated increase of 162 persons in all positions for the years 1971-1974, which represents a 119 percent increase. This increase is compared to a change of sixty-six persons for the years 1968-1971, which represents a 94 percent increase.

TABLE 10

MANPOWER NEEDS FOR FULL TIME AIR POLLUTION CONTROL POSITIONS FOR ALL AGENCIES[a]

Position	Number of People employed		Number of People needed
	1968	1971	1974
Air Pollution			
Control Inspector	44	71	152
Control Engineer	6	23	80
Control Chemist	10	17	29
Control Technician	10	25	36
Control Meteorologist	0	0	1
Total	70	136	298

[a]Summary of manpower needs in city and regional offices and the State of Ohio Air Pollution Control Unit.

The position which showed the greatest manpower growth is Air Pollution Control Inspector. This position had an anticipated increase of eighty-one persons for the 1971-1974 period (a 141 percent increase). The inspector's position had an actual increase of twenty-seven persons for the 1968-1971 three year period (a 61 percent increase).

Air pollution is a relatively new environmental service, especially when compared to wastewater and water treatment. Therefore, it is understandable that air pollution control positions should show very rapid manpower increases. It should also be pointed out that many cities have only recently passed air pollution standards which require additional manpower. It should also be mentioned that new federal standards for air pollution control are to be implemented by 1975. These standards will require many additional people, especially inspectors, for monitoring and enforcement procedures.

The part-time employees needed for air pollution control positions were minimal. Only one city had any part-time employees. That city had no such employees in 1968; it had seven part-time air pollution control technicians in 1971 and anticipated having eight technicians in 1974. The State of Ohio had no part-time air pollution control employees, nor did its administrators anticipate needing any by 1974.

TASK ANALYSES FOR ENVIRONMENTAL MANAGEMENT OCCUPATIONS

This chapter presents findings relevant to the third purpose of the study which was to describe the tasks performed in environmental management occupations. Full time positions analyzed were Non-certified Operator, Operator I, and Operator II for wastewater and water facilities serving cities both above and below 100,000 people. In addition, the position of full time Air Pollution Control Inspector was also analyzed. The Advisory Council for the Environmental Studies Research Project recommended primary emphasis be placed on the positions of Wastewater Operator I, and Water Treatment Operator I, and Air Pollution Control Inspector. The positions which ranked above and below Operator I (Non-certified and Operator II) were used to help define it. The position of Air Pollution Control Inspector is the beginning position in its field and the only one which permits an individual with a high school education to enter. The task analyses provided information used in developing the following job descriptions.

Non-certified Wastewater Treatment Operator -- Facilities Serving More Than 100,000 Population

Operates and inspects machinery and equipment in the facility including sludge pumps, vacuum filters, incinerators, sludge digestors, and bar racks; records on log sheets information concerning total facility flow, equipment condition, and chemical needs; makes decisions on the general appearance of the facility with reference to cleanliness and work that needs to be performed; consults with other operators and supervisors concerning facility operation; obtains samples for laboratory analysis; helps establish work orders for the next shift by describing what he believes to be the first tasks that should be completed; assists other operators with their work responsibilities; analyzes log sheets written by others on the previous work shift and by peers on his shift; checks available supplies for the facility and determines what should be re-stocked; repairs facility machinery and equipment; makes determinations on the quantity of chlorine that should be added to the wastewater; makes the dissolved oxygen and the settleable solids laboratory tests.

Non-certified Wastewater Treatment Operator -- Facilities Serving Less Than 100,000 Population

Operates and inspects facility machinery and equipment including electric motors, bar racks, grit chambers, sludge pumps, and aeration blowers; records information on log sheets about facility operations such as flow, equipment condition, and chemical needs; inspects the entire facility to check operations; makes decisions on the quantity of chlorine that must be added to wastewater; obtains wastewater samples for laboratory analysis; consults with other operators and supervisors on facility operations; makes decisions on the general appearance of the facility with reference to cleanliness and work to be performed; assists other operators with their work; analyzes log sheets established by operators on previous work shifts and by peers on his shift; repairs facility machinery and equipment; makes decisions on needed operating supplies; works with the public in giving facility tours; orders needed operating supplies; makes the settleable solids, pH, and biochemical oxygen demand laboratory tests; supervises other operators and staff members; completes monthly state reports for the Department of Health; assists in establishing work orders for the next shift.

Wastewater Treatment Operator I -- Facilities
Serving More Than 100,000 Population

Inspects and operates facility equipment including sludge pumps, vacuum filters, incinerators, aeration blowers, and bar racks; consults with other operators and supervisors on facility operations; inspects the entire facility to check on operations; records information on log sheets about total flow, equipment condition, and manpower status; makes decisions on the general appearance of the facility particularly with reference to cleanliness and work to be done; obtains wastewater samples for laboratory testing; supervises other operators and staff; assists operators with their work responsibilities; repairs facility machinery and equipment; makes decisions on the amount of chlorine to be added to the wastewater; establishes work orders for the next shift with reference to their work priorities; checks facility supplies by conducting an inventory; works with public relations by giving plant tours; analyzes log sheets established by operators on the previous work shift and by peers on his shift; records data on monthly reports for the State Department of Health; performs such laboratory tests as settleable solids dissolved oxygen, pH, and biochemical oxygen demand.

Wastewater Treatment Operator I -- Facilities
Serving Less Than 100,000 Population

Operates and inspects facility machinery and equipment including sludge pumps, chlorine feeders, bar racks, and anaerobic sludge digestors; obtains samples of wastewater for laboratory analysis; inspects the entire facility to check on operations; records information on log sheets concerning facility flow, equipment condition, and manpower needs; makes decisions on general appearance of the facility with reference to cleanliness and work needs; makes decisions on chemical dosages including zeolites, lime, and chlorine; works with public relations in giving plant tours; consults with other operators and staff members on facility operations; checks the supply inventory; analyzes log sheets written by operators on previous work shifts and peers on his work shift; performs such laboratory tests as pH, biochemical oxygen demand, chemical oxygen demand, settleable solids, and dissolved oxygen; supervises other operators; establishes work orders for operators on succeeding work shifts; operates the lift pumps in the pumping station.

Wastewater Treatment Operator II -- Facilities
Serving More Than 100,000 Population

Inspects facility machinery and equipment including sludge pumps, vacuum filters, and incinerators; consults with other operators and staff members concerning facility operations; supervises operators in their activities; operates facility machinery and equipment; analyzes log sheets written by operators on previous work shifts and by peers on his shift; assists other employees with their work responsibilities; records information concerning facility flow, equipment condition, and manpower needs on log sheets; inspects the entire plant; checks facility supplies on inventory; establishes work orders for the next shift and establishes its work priorities; orders supplies to replace those consumed; repairs facility machinery and equipment; obtains samples of wastewater for use in laboratory testing; works with public relations by giving plant tours and writing news releases; makes decisions on operation of the sludge digestor; completes monthly reports for the Ohio Department of Health; makes decisions on the quantity of chlorine which should be added to the wastewater; performs the laboratory tests for settleable solids and pH.

Wastewater Treatment Operator II -- Facilities Serving Less Than 100,000 Population

Operates facility machinery and equipment such as the clarifier, sludge pumps, bar racks, and the chlorination equipment; obtains samples of wastewater for laboratory testing; records information on log sheets concerning facility flow, equipment condition, and manpower needs; inspects facility machinery and equipment; inspects the entire plant; consults with other operators and staff personnel on facility operations; works with public relations by giving plant tours and writing news releases; makes decisions on the general appearance of the facility with reference to cleanliness and work to be done; assists other employees with their work responsibility; makes decisions on the amount of chlorine that should be added to the wastewater during the treatment process; works with equipment in the pumping station; repairs facility machinery and equipment; performs the settleable solids, dissolved oxygen, pH, and biochemical oxygen demand laboratory tests; analyzes log sheets written by operators on previous work shifts and by peers on his shift; checks facility supplies for inventory purposes; supervises other facility employees; establishes work orders and priorities for the next shift.

Non-certified Water Treatment Operator -- Facilities Serving More Than 100,000 Population

Backwashes, operates, and inspects filter beds; records information such as loss of head in the filters and facility total flow on log sheets; consults with other operators and supervisors on facility operations; operates and inspects chlorination equipment; assists other operators with their work responsibility; analyzes log sheets established by operators on previous shifts and peers on his work shift; inspects and operates the flocculation basin; repairs facility machinery and equipment such as well pumps, chlorinators, air compressors, and laboratory equipment; operates and inspects the sedimentation tank; performs the orthotolidine test for residual chlorine; operates and inspects fluoridation equipment; operates and inspects facility recarbonation equipment; operates water softening equipment which adds lime, soda, soda ash, and zeolites; works with the public in activities such as plant tours; performs laboratory coagulation tests to determine the needed flocculation material; operates and inspects aeration equipment.

Non-certified Water Treatment Operator -- Facilities Serving Less Than 100,000 Population

Operates and inspects chlorination equipment; performs the orthotolidine residual chlorine laboratory test; records information on log sheets for gauge readings on filter head loss and facility total flow; analyzes and interprets log sheets established by operators on previous work shifts and peers on his work shift; works with the public in such activities as plant tours; repairs facility machinery and equipment, especially water softeners, filter beds, pumps, and polymer agitators; backwashes, operates and inspects the filtration system; consults with other operators and supervising personnel concerning facility operators; assists fellow operators with work that is primarily their responsibility; operates and inspects the flocculation basin; operates and inspects the sedimentation tank; performs coagulation tests to determine the necessary flocculation material needed; operates and inspects recarbonation equipment; determines and adds the amount of lime needed for pH control; operates and inspects aeration equipment.

Water Treatment Operator I -- Facilities
Serving More Than 100,000 Population

Records information on facility log sheets such as water flow, equipment condition, and manpower needs; operates, inspects, and backwashes the filter beds in the filtration system; operates and inspects chlorination equipment; consults with other operators and staff members on facility activities; assists other operators and staff members on facility activities; assists other operators with their work responsibility; repairs facility machinery and equipment such as electric motors and hydraulic pumps; inspects and operates the flocculation basin; works with public relations by giving plant tours; runs the laboratory test for the causative micro-organism coliform; analyzes log sheets written by operators on previous work shifts and by peers on his shift; operates and inspects the facility's sedimentation tank; performs the orthotolidine laboratory test for residual chlorine; calculates and adds the lime and soda ash needed for water softening; operates, inspects, and calibrates fluoridation equipment; inspects and operates facility recarbonation equipment; performs the coagulation test needed for determination of needed alum and ferrous sulfate for flocculation.

Water Treatment Operator I -- Facilities
Serving Less Than 100,000 Population

Records information on log sheets concerning such facility activities as water flow, equipment condition, and manpower needs; works with public relations by giving plant tours; backwashes filter beds; inspects and operates the flocculation basin; performs the orthotodiline laboratory test for residual chlorine; repairs facility machinery and equipment such as electrical controls, water softners, and electrical pumps; consults with other operators and supervisors concerning facility operations; analyzes log sheets written by operators on previous work shifts and peers on his shift; operates and inspects chlorination equipment; inspects and operates the sedimentation tanks; calculates and adds the quantity of lime and soda ash needed in the water softening process; operates and inspects the facility's filtration system; conducts the laboratory test for the causative micro-organism coliform; performs the laboratory test for coagulation in determining needed alum and ferric chloride; operates, inspects, and calibrates fluoridation equipment; operates and inspects the facility recarbonation equipment; operates and inspects the aeration machinery.

Water Treatment Operator II -- Facilities
Serving More Than 100,000 Population

Operates facility chlorination equipment; records information on log sheets concerning facility water flow, equipment condition, and manpower needs; inspects and operates the filtration system; consults with other operators and staff personnel concerning facility operation; works with the public by giving plant tours and writing publicity releases; inspects chlorination equipment; repairs facility machinery and equipment such as the carbon, alum and lime distributors, and electric pumps; assists other employees with their work responsibilities; backwashes filter beds in the filtration system; performs the laboratory test for the causative micro-organism coliform; analyzes log sheets written by operators on previous work shifts and by peers on his shift; operates and inspects the sedimentation tank; operates and inspects the flocculation tank; calculates and adds needed lime and soda ash for water softening; operates and inspects the recarbonation unit; supervises facility personnel; completes monthly reports for the State Department of Health; performs the laboratory test for coagulation in determining needed flocculation material; operates and inspects facility aeration equipment; operates, inspects, and calibrates fluoridation equipment.

Water Treatment Operator II -- Facilities Serving Less Than 100,000 Population

Records information on log sheets concerning facility water flow, equipment condition, and manpower needs; works with public relations by giving plant tours and news releases; assists other employees with their work responsibility; runs the laboratory test for the causative micro-organism coliform; performs the orthotolidine test for residual chlorine; repairs such facility machinery and equipment as electrical pumps and controls and water softners; consults with other operators and staff members concerning facility operations; inspects and operates the flocculation tank; analyzes log sheets written by operators on previous work shifts and by peers on his shift; inspects and operates the filtration system; calculates and adds needed lime and soda ash for water softening; inspects and operates the facility's chlorination equipment; backwashes the filter beds in the filtration system; inspects and operates sedimentation tanks; inspects and operates aeration equipment; performs the laboratory test for determination of needed flocculation material.

Air Pollution Inspector

Advises supervisor of investigation findings; investigates air pollution complaints reported to his office; obtains evidence to help substantiate proceedings used in courts; enforces air pollution control laws involving trash fires; inspects incinerators to insure their conformance to air pollution code requirements; gives evidence in legal proceedings; meets with suspected violators and explains alleged violations; takes photographs and movies of air pollution caused by trucks and power plants; checks safety devices on boilers; makes air quality surveys for the specific pollutants of sulfur dioxide, nitrogen dioxide, and carbon monoxide; inspects boilers for their conformance to air pollution code requirements; operates the spot machine, optical density machine, field air analysis machine, and the Ringleman Chart for particulate air pollutants; takes both flue gas samples and non-flue gas samples.

SUMMARY AND CONCLUSIONS

Current and emerging environmental management occupations were identified by State Department of Health personnel, by advisory council members of the Environmental Studies Research Project, and by certain administrators of environmental management facilities. These identified occupations were used as the basis for obtaining manpower needs.

Summary of Findings

The findings indicated that facility and agency administrators anticipate an increase in the number of full time personnel needed for virtually all positions when they projected manpower needs to 1974. Administrators of wastewater treatment facilities and air pollution control agencies anticipated increased personnel needs for all positions. Administrators of water treatment facilities anticipated increased personnel needs for all positions except the non-certified operator.

Facility and agency administrators anticipated a decrease in the number of part-time personnel needed for most positions when they projected manpower needs to 1974. Administrators of wastewater treatment facilities anticipated a decrease in personnel needed for all positions except Operator II. Except for the position of technician, there were no part-time air pollution control employees. These anticipated manpower needs are summarized in Tables 11 and 12.

TABLE 11

ANTICIPATED CHANGE IN FULL TIME MANPOWER NEEDS FOR 1971-1974

Position	Number of Persons employed in 1971	Manpower change 1971-1974
Wastewater Treatment		
Non-certified Operator	782	+ 49
Operator I	367	+250
Operator II	197	+154
Operator III	178	+ 53
Operator IV	17	+ 83
Laboratory Technician	52	+ 44
Water Treatment		
Non-certified Operator	663	-177
Operator I	494	+145
Operator II	189	+ 93
Operator III	111	+ 33
Operator IV	15	+ 13
Laboratory Technician	72	+ 79
Air Pollution Control		
Inspector	71	+ 81
Engineer	23	+ 57
Chemist	17	+ 12
Technician	25	+ 11
Meteorologist	0	+ 1

TABLE 12

ANTICIPATED CHANGE IN PART-TIME MANPOWER NEEDS FOR 1971-1974

Position	Number of Persons employed in 1971	Manpower change 1971-1974
Wastewater Treatment		
Non-certified Operator	237	-35
Operator I	33	- 3
Operator II	30	-12
Operator III	20	- 7
Operator IV	8	- 3
Laboratory Technician	28	-15
Water Treatment		
Non-certified Operator	252	-39
Operator I	76	-11
Operator II	14	+ 4
Operator III	14	- 3
Operator IV	4	- 4
Laboratory Technician	29	-11
Air Pollution Control		
Inspector	0	0
Engineer	0	0
Chemist	0	0
Technician	7	+ 1
Meteorologist	0	0

The task analyses showed a wide variety of tasks being carried out by persons employed in the selected positions. The analyses also indicated a high degree of relationship between employees' ratings of percentage of time spent on a task and their supervisors' ratings of the importance for that task. The results also showed a slight variation in the tasks completed by people with the same position in facilities serving cities of various sizes. Generally, employees in facilities serving less than 100,000 people carried out more tasks than their counterparts in facilities serving more than 100,000 people.

Conclusions and Recommendations

The increased personnel needs identified in this study justify the development of training programs in environmental management occupations. As indicated by members of the advisory council for the Environmental Studies Research Project and by facility administrators, many of the occupations analyzed can be filled by high school graduates. Specifically, these positions are: Non-certified Wastewater Treatment Operator and Wastewater Treatment Operator I, Non-certified Water Treatment Operator and Water Treatment Operator I, and Air Pollution Control Inspector. Vocational education programs should be offered in comprehensive high schools and joint vocational schools for the purpose of preparing personnel for environmental management occupations.

It is recommended that these programs be implemented as a two-year course consisting of a one-semester introductory course and three semesters of occupationally specialized instruction. Facility administrators indicated a need for workers to have desirable attitudes concerning work habits, knowledge of the overall environmental field, and for an appreciation of their particular job. In addition, the students must make decisions concerning specialty areas to pursue. These areas should be explained in the introductory course.

The specialized course is crucial for the development of useable occupational skills. This tri-semester course, which would follow the introductory course, could be used to develop the necessary skills for job entry in any or all of the areas of wastewater treatment, water treatment, and air pollution control. The number of skills developed would be limited by the students' ability, inclination, and interest. A cooperative placement program is considered crucial for the specialty course. A proposed curriculum for the specialized course is as follows:

Unit I. Wastewater Treatment Operation

A. Objectives: The student should be able to:

1. Inspect machinery and equipment such as pumps, filters, incinerators, aeration blowers, and bar racks to determine their satisfactory or unsatisfactory operation.

2. Operate machinery and equipment such as pumps, filters, incinerators, aeration blowers, and bar racks according to manufacturers' and facility specifications.

3. Complete and analyze log sheets according to facility standards.

4. Inspect the preliminary, sludge handling, primary, and secondary areas of the facility determining satisfactory and unsatisfactory operations and general appearance.

5. Demonstrate the ability to obtain correctly samples for laboratory analysis.

6. Make and carry out decisions on facility and operators' priorities and functions.

7. Demonstrate the communication skills used in consultation situations with other operators.

8. Perform laboratory tests such as biochemical oxygen demand, pH, settleable solids, chemical oxygen demand, and dissolved oxygen according to State Department of Health standards.

B. Content: Instruction should be provided in:

1. Wastewater and its composition

a. Introduction and sources
b. Solid composition
(1) Organic
(2) Inorganic

c. Liquid composition
   (1) Water
   (2) Chemicals
   (3) Grease

d. Gases present in wastewater
   (1) Oxygen
   (2) Hydrogen sulfide
   (3) Carbon dioxide
   (4) Methane

e. Disease causing organisms
   (1) Virus
   (2) Bacteria

2. Septic tanks and Imhoff tanks

   a. Septic tanks
      (1) Functions
      (2) Structure
      (3) Chemical processes
         (a) Aerobic decomposition
         (b) Anaerobic decomposition
      (4) Maintenance
      (5) Safety

   b. Imhoff Tanks
      (1) Comparison of septic and Imhoff tanks
      (2) Function
      (3) Structure
      (4) Chemical processes
         (a) Aerobic decomposition
         (b) Anaerobic decomposition
      (5) Maintenance
      (6) Safety

3. Preliminary treatment

   a. Purposes
   b. Racks and bar screen
      (1) Functions
      (2) Types
      (3) Maintenance
      (4) Safety

   c. Communitor
      (1) Functions
      (2) Types
      (3) Maintenance
      (4) Safety

   d. Grit chamber and detritus tank
      (1) Functions
      (2) Sizes and capacities
      (3) Maintenance
      (4) Safety

e. Pre-aeration tank
   (1) Function
   (2) Sizes and capacities
   (3) Maintenance
   (4) Safety

f. Preliminary tests
   (1) Sampling
      (a) Equipment
      (b) Procedure
      (c) Safety
   (2) Testing
      (a) Equipment and chemicals
      (b) Procedure
      (c) Safety

g. Chemical treatment
   (1) pH measurement
   (2) Lime addition
   (3) Chlorination

h. Records and record keeping
   (1) Plant records
   (2) State records

4. Primary treatment

a. Purposes
b. Sedimentation tank (clarifier)
   (1) Function
   (2) Types
   (3) Sizes and capacities
      (a) Detention time
      (b) Velocity of flow
      (c) Temperature
   (4) Maintenance
   (5) Safety

c. Primary tests
   (1) Sampling
      (a) Equipment
      (b) Procedure
      (c) Safety
   (2) Testing
      (a) Equipment and chemicals
      (b) Procedure
      (c) Safety

d. Records and record keeping
   (1) Plant records
   (2) State records

5. Secondary treatment

a. Purposes

b. Types
   (1) Activated sludge
      (a) Principles
      (b) Facilities
      (c) Aeration
      (d) Trouble-shooting
      (e) Maintenance
      (f) Safety
   (2) Trickling filter
      (a) Principles
      (b) Facilities
      (c) Trouble-shooting
      (d) Maintenance
      (3) Safety

c. Settling tanks
   (1) Capacity
   (2) Supernatant

d. Chlorination
   (1) Equipment
   (2) Determining amount

e. Secondary tests
   (1) Sampling
      (a) Equipment
      (b) Procedure
      (c) Safety
   (2) Testing
      (a) Equipment
      (b) Procedure
      (c) Safety

f. Records and record keeping
   (1) Plant records
   (2) State records

6. Sludge treatment
   a. Composition
   b. Purposes
   c. Methods
      (1) Thickening
      (2) Digestion with or without heat
      (3) Vacuum filtration
      (4) Incineration
      (5) Wet oxidation
      (6) Chemical conditioning
      (7) Heat drying
      (8) Elutriation
      (9) Sand beds
      (10) Maintenance
      (11) Safety
      (12) Chemicals

   d. Sludge disposal

e. Gases produced
   (1) Carbon dioxide
   (2) Methane
   (3) Hydrogen
   (4) Hydrogen sulfide
   (5) Nitrogen
   (6) Oxygen

f. Utilization of sludge gases
g. Sludge tests
   (1) Sampling
      (a) Equipment
      (b) Procedure
      (c) Safety
   (2) Testing
      (a) Equipment and chemicals
      (b) Procedure
      (c) Safety

h. Records and record keeping
   (1) Plant records
   (2) State records

7. Human relations
   Should be integrated into appropriate areas of the curriculum

Unit II. Water Treatment Operation

A. Objectives: The student should be able to:

1. Complete and analyze log sheets according to facility standards.

2. Operate machinery and equipment such as filters, chlorinators, the flocculation basin, the sedimentation basin, recarbonation machine, fluoridation machine, and the aeration blowers according to manufacturer's and facility specifications.

3. Inspect machinery and equipment such as filters, chlorinators, the flocculation basin, the sedimentation basin, recarbonation machine, fluoridation machine, and the aeration blowers to determine their satisfactory or unsatisfactory operation.

4. Demonstrate the communication skills used in consultation situations with other operators.

5. Perform laboratory tests such as orthotolidine test, coliform test, and the coagulation test according to State Department of Health standards.

6. Make and carry out decisions on facility and operators' priorities and functions.

7. Inspect the chlorination area, aerators, flocculation and sedimentation area, filtration area, and the clear wells determining satisfactory and and unsatisfactory operations and general appearance.

B. Content: Instruction should be provided in:

1. Water sources and its uses

   a. Ground water supplies including measurement of water flow
   b. Surface water supplies
   c. Uses of water
      (1) Domestic uses
      (2) Public uses
      (3) Industrial uses

2. Water quality

   a. Reasons for water treatment
   b. Quality control tests
      (1) Sampling technique
      (2) Source and control of taste and odor

   c. Drinking water standards
   d. Composition of water from various sources
   e. Self-purification and storage
   f. Methods of water treatment

3. Aeration

   a. Purpose
   b. Types of aerators
   c. Operation and maintenance
   d. Laboratory tests

4. Coagulation and flocculation

   a. Purpose
   b. Process of coagulation and flocculation
   c. Coagulants used
   d. Chemical handling, storage, and safety
   e. Flocculation equipment
   f. Laboratory tests

5. Sedimentation

   a. Purpose
   b. Process of sedimentation
   c. Operation
   d. Laboratory tests

6. Filtration

   a. Filter media and types of filters
   b. Operation procedures and facilities
   c. Records

7. Softening of water

   a. Purpose
   b. Procedures

c. Laboratory tests
d. Records

8. Protection of water supply sources

a. Bacterial control
b. Control of water-borne diseases
c. Chlorination safety

9. Human relations
Should be integrated into appropriate areas of the curriculum

Unit III. Air Pollution Inspection

A. Objectives: The student should be able to:

1. Advise a supervisor of investigation findings in both verbal and written form.

2. Investigate air pollution complaints by operating a spot machine, optical density machine, field analysis machine and a Ringleman Chart.

3. Obtain legal evidence by taking photographs and movies.

4. Inspect boilers by testing for sulfur dioxide, nitrogen dioxide, carbon monoxide and checking safety devices for conformance to both manufacturer's and city code standards.

5. Meet with suspected violators of the air pollution code and accurately explain violations.

6. Give accurate testimony in court during legal proceedings.

B. Instruction should be provided in:

1. The Air Pollution Problem

a. Types of pollutants
(1) Particulates
(a) Smoke
(b) Fog
(c) Haze
(d) Dust
(2) Gases and vapors
(a) Sulfur dioxide
(b) Nitrogen oxides
(c) Carbon oxides
(d) PAN
(3) Radioactive fallout

b. Effects of pollutants
(1) Atmospheric effect
(a) Visibility
(b) Climate

(2) Vegetation effect
(3) Material effects
(4) Animal effects
(5) Human effects

c. Sources of air pollution
(1) Transportation sources
(2) Stationary sources
(3) Incineration of solid wastes
(4) Miscellaneous sources

2. Ambient sampling

a. Reasons for ambient sampling
b. Determination of sample size
c. Determination of sampling rate
d. Determination of sampling time
e. Approaches to sampling
(1) Visual methods
(2) Settling devices
(3) Filtration devices
(4) Gaseous pollutants
(a) Static samplers
(b) Automatic samplers
(c) Vegetation analysis
(d) Grab sampling

3. Air quality criteria and standards

a. Air quality criteria
(1) Biological effects
(2) Physical effects

b. Air quality standards
(1) Air quality criteria
(2) Another community's standards
(3) Earlier levels

c. Emission standards
(1) Typical emission standards
(2) Setting emission standards

4. Air pollution control programs

a. Objectives
(1) Preserve the health and welfare of man
(2) Protect plant animal life
(3) Prevent damage to physical property
(4) Ensure an esthetically attractive and enjoyable environment

b. Typical air pollution control programs
(1) Local government
(2) State government
(3) Interstate government
(4) Federal government

c. Activities of a typical program
   (1) Defining air pollution problems
      (a) Emission inventories
      (b) Air quality measurements
      (c) Monitoring air pollution effects
      (d) Handling complaints
      (e) Visual detection
      (f) Source sampling
   (2) Correcting problems
      (a) Preparation of air quality standards
      (b) Preparation of emission control regulations
      (c) Enforcement of laws and regulations
      (d) Testimony in the courts

5. Human relations
   Should be integrated into appropriate areas of the curriculum.

BIBLIOGRAPHY

Books

Larson, Milton E. and Blake, Duane I. Institute on Occupational Analysis as a Basis for Curriculum Development, Final Report. Fort Collins: Colorado State University, 1969.

Lewis, Wiley B. Review and Analysis of Curricula for Occupations in Environmental Control. Columbus: The Ohio State University ERIC Clearinghouse on Vocational and Technical Education, 1970

Mager, Robert F. and Beach, Kenneth M. Developing Vocational Instruction. Palo Alto: Fearon Publishers, 1967.

Marsh, Joseph E., Madden, Joseph M., and Christal, Raymond E. Job Analysis in the United States Air Force. Lackland Air Force Base Texas: Personnel Laboratory, Wright Air Development Division, Air Research and Development Division, Air Research and Development Command, 1961.

Articles and Periodicals

Dethier, B. E. "Our Deteriorating Atmospheric Resources." New York's Food and Life Science Quarterly, III (April - June, 1970), 26.

"Engineering Societies to Study Conversion of Skills to New Fields," Environment Reporter 2 (August 20, 1971) p. 415.

"Garage Mechanics, Auto Emissions Control Training Program, HEW," Environment Reporter 2 (July 16, 1971) p. 681.

Keys, James M. "The Missing Link-Wastewater Treatment Plant Operators," Water Resources Bulletin, 7 (February, 1971), 133.

"Nixon Signs Emergency Employment Act Generating 150,000 Public Service Jobs," Environment Reporter 2 (July 16, 1971), 308-309.

Ryan, Charles W. "Let's Put Environmental Concern in the School Curriculum," American Vocational Journal 46 (December, 1971) pp. 45, 48.

"1970 Sales totaled $123 million for Air Pollution Control Equipment," Environment Reporter 2 (August 16, 1971), 327.

"Smog Drain Might Provide Clean Air," Ohio State Lantern, L. A. Times/ Washington Post Service, January 12, 1971.

Steakly, Darrell L., and Webb, Earl S. "Opportunities and Requirements for Farm Machinery Dealers." The Agricultural Education Magazine, 43 (February, 1971), 204.

Reports

Environmental Protection Agency. Preliminary Report of A State Local Air Pollution Control Agency Manpower and Training Survey. Washington: U.S. Government Printing Office, 1971.

Environmental Protection Agency. Titles and Definitions for Air Pollution Control Personnel (Occupational Categories). Washington: U.S. Government Printing Office, 1971.

Technology and the American Economy. Report of the Commission. Applying Technology to Unmet Needs, 1966.

U.S. Department of Health, Education, and Welfare. Manpower and Training Needs for Air Pollution Control. Washington: U.S. Government Printing Office, 1970.

U.S. Department of the Interior. Federal Water Pollution Control Administration. The Economics of Clean Water. Washington: U.S. Government Printing Office, 1970.

U.S. Department of the Interior. Manpower and Training Needs in Water Pollution Control. Washington: U.S Government Printing Office, 1967.

U.S. Department of Labor. Dictionary of Occupational Titles. Washington: U.S. Government Printing Office, 1965.

Unpublished Material

News From Congressman Barry Goldwater, Jr. "Environmental Training Proposed for Unemployed Aerospace Workers," September 23, 1971.

NPAR Nonparametric Statistical Program-Computer Institute for Social Science Research at Michigan State University (East Lansing: Michigan State University) 1970.

P-STAT Princeton Statistics Manual (Princeton, New Jersey: Princeton University) 1971.

Terry, Howard Robert. "Composite Profiles of Agricultural Machinery Service Occupations as Derived from Comparative Analyses Across Incumbents." Unpublished Ph.D. Dissertation, The Ohio State University, 1969.

Warmbrod, J. Robert and Welton, Richard. Ohio Census of Employment in the Ohio Farmers.

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Other Sources

Municipal Sewage Treatment Work in Ohio (Columbus: State of Ohio, Department of Health) 1971.

Names and Addresses, Public Water Supplies (Columbus: State of Ohio, Department of Health) 1971.

Public Law 90-576, 90th. Congress, H.R. 18366, October 16, 1968.

Public Law 91-604, 91st. Congress, H.R. 17255, December 31, 1970.

MANPOWER NEEDS IN ENVIRONMENTAL MANAGEMENT OCCUPATIONS IN INDUSTRIAL FIRMS IN OHIO

Summary of a Research Report

Development and Dissemination of Courses of Study
and Instructional Materials for Environmental
Science and Protection

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Agricultural Education Service
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FOREWORD

This report includes that portion of an Environmental Science and Protection research project which identified the manpower needs in environmental management occupations in industrial firms in Ohio. The study was conducted by William S. Farrington, Curriculum Materials Specialist, working with the Ohio Agricultural Education Curriculum Materials Service, and Dr. J. Robert Warmbrod, Professor of the Department of Agricultural Education, The Ohio State University.

This report is a portion of an eighteen month project designed to develop and disseminate environmental science and protection courses of study and instructional materials for vocational education. This report and a companion report, "Manpower Needs in Environmental Management," show the present and projected manpower needs for environmental protection occupations. A task analysis was conducted for each of the occupations included in the study. This work served as a basis for the development of courses of study and instructional materials.

Harlan E. Ridenour, Director
Ohio Agricultural Education
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MANPOWER NEEDS IN ENVIRONMENTAL MANAGEMENT OCCUPATIONS IN INDUSTRIAL FIRMS IN OHIO

Research aimed at determining the manpower needs in environmental management in Ohio's municipal operations (water treatment, wastewater treatment, and air pollution management) was completed by Hillison in 1972.[1] This report is of a similar study which was designed to determine the manpower needs in comparable environmental management occupations in industrial firms in Ohio.

Purpose and Objectives

The primary purpose of this study was to determine the manpower needs in environmental management in certain Ohio industries in the occupations related to water treatment, wastewater treatment, and air management. The specific objectives of this study were to:

(1) Determine the manpower needs of industry for water treatment operators, water treatment laboratory technicians, wastewater treatment operators, wastewater treatment laboratory technicians, air management inspectors, air management laboratory technicians, and air management operators; and

(2) Determine the prevalence of union bidding for these occupations.

Procedure

The population of the study was 984 industries in Ohio that had obtained a permit from the State Department of Health to discharge effluent into state waters. This excludes plants that discharge effluents into their own holding pools or municipal sewers and plants that have no discharge effluent. A randomly selected sample of 246 industries was selected for study.

Data were secured from 65 percent of the accessible industries in the ransomly selected sample. The number of accessible industries in the sample was 230 since 16 of the 246 firms selected in the sample had "gone out of business" or "moved out of state" when data were collected. Questionnaires were sent to each of the 246 industries with a reminder card sent one week later. In this report respondents to these requests are referred to as "early respondents." One month after the first questionnaire was sent, the same questionnaire was sent again to the nonrespondents. In this report respondents to the second mailing of the questionnaire are referred to as "late respondents."

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[1] John H. Hillison and J. Robert Warmbrod. Manpower Needs In Environmental Management, Agricultural Education Department, The Ohio State University, 1972.

The major responsibilities of the occupations about which manpower needs were determined are defined as follows:

a. Water treatment operator -- operates and maintains equipment and performs some tests.

b. Water treatment laboratory technician -- performs tests and analyzes results.

c. Wastewater treatment operator -- collects samples, performs some tests, and general plant operation.

d. Wastewater treatment laboratory technician -- performs tests and analyzes results.

e. Air management inspector -- checks plant operations and makes recommendations to operators and technicians.

f. Air management laboratory technician -- collects samples, performs tests, and analyzes results.

g. Air management operator -- controls and maintains equipment (example: boiler).

Because the manpower needs reported by early respondents and late respondents were similar in some occupations and different in other occupations, two methods of estimating manpower needs were used. Method I took these differences into account and considered the nonrespondents and late respondents as different from the early respondents in calculating estimates. Method II considered the early respondents and late respondents to be similar and assumed the nonrespondents would respond likewise.[2] Estimates were made for full time workers and for part-time workers. The number of part-time workers were converted to full time equivalent status.

Findings

The data reported by firms from which questionnaires were received are indicated in Tables B-1 and B-2 in Appendix B. These data were used in calculating the estimates of manpower needs that are reported in Tables 1, 2, and 3 in this section of the report. Table 4 indicates how firms responded to the question pertaining to the prevalence of union bidding for the jobs studied.

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[2] See Appendix A for a description of the procedures used in calculating estimates of manpower needs.

TABLE 1

ESTIMATES OF THE NUMBER OF FULL TIME WORKERS IN ENVIRONMENTAL MANAGEMENT OCCUPATIONS IN INDUSTRIAL FIRMS IN OHIO: METHOD I [a]

Job	Estimated Number of Workers[b]			Change in Number of Workers	
	Employed in 1968	Employed in 1971	Needed in 1974	From 1968 to 1971	From 1971 to 1974
Water Treatment					
Operator	277	350	376	+ 73	+ 26
Laboratory Technician	90	111	124	+ 21	+ 13
Wastewater Treatment					
Operator	265	385	401	+120	+ 16
Laboratory Technician	72	81	145	+ 9	+ 64
Air Management					
Inspector	42	64	90	+ 22	+ 26
Laboratory Technician	38	42	90	+ 4	+ 48
Operator	766	702	821	- 64	+119

TABLE 2

ESTIMATES OF THE NUMBER OF FULL TIME WORKERS IN ENVIRONMENTAL MANAGEMENT OCCUPATIONS IN INDUSTRIAL FIRMS IN OHIO: METHOD II [b]

Job	Estimated Number of Workers[b]			Change in Number of Workers	
	Employed in 1968	Employed in 1971	Needed in 1974	From 1968 to 1971	From 1971 to 1974
Water Treatment					
Operator	344	416	456	+ 72	+ 40
Laboratory Technician	110	143	162	+ 33	+ 19
Wastewater Treatment					
Operator	326	430	495	+104	+ 65
Laboratory Technician	71	85	115	+ 14	+ 30
Air Management					
Inspector	51	71	162	+ 20	+ 91
Laboratory Technician	32	38	71	+ 6	+ 33
Operator	769	801	814	+ 32	+ 13

[a] See Appendix A for procedures used in calculating estimates.

[b] Estimates rounded to nearest whole number.

TABLE 3

ESTIMATES OF THE NUMBER OF PART-TIME WORKERS (FULL TIME EQUIVALENT) IN ENVIRONMENTAL MANAGEMENT OCCUPATIONS IN INDUSTRIAL FIRMS IN OHIO: METHOD II[a]

Job	Estimated Number of Workers[b]			Change in Number of Workers	
	Employed in 1968	Employed in 1971	Needed in 1974	From 1968 to 1971	From 1971 to 1974
Water Treatment					
Operator	173	125	127	- 48	+ 2
Laboratory Technician	52	57	61	+ 5	+ 4
Wastewater Treatment					
Operator	84	113	130	+ 29	+ 17
Laboratory Technician	64	91	92	+ 27	+ 1
Air Management					
Inspector	38	55	78	+ 17	+ 23
Laboratory Technician	26	47	71	+ 21	+ 24
Operator	113	22	86	- 91	+ 64

[a] See Appendix A for procedures used in calculating estimates.
[b] Part-time workers have been equated to full time equivalent status. Estimates rounded to nearest whole number.

TABLE 4

THE PREVALENCE OF UNION BIDDING FOR ENVIRONMENTAL MANAGEMENT OCCUPATIONS

Job	Number of Firms Responding		
	Yes	No	No Response[a]
Water Treatment			
Operator	39	31	81
Laboratory Technician	12	54	85
Wastewater Treatment			
Operator	44	32	75
Laboratory Technician	14	55	92
Air Management			
Inspector	4	55	92
Laboratory Technician	5	53	93
Operator	38	31	82

[a] Indicates that some firms were no longer in business or had no employees in the job.

APPENDIX A

METHODS OF ESTIMATING MANPOWER NEEDS

Method I

In using Method I for estimating manpower needs it was assumed that manpower needs in industrial firms from which no response to the questionnaire was received (nonrespondents) were similar to the manpower needs of firms that responded last to the questionnaire (late respondents). Therefore, for each occupation the mean number of workers per firm for late respondent firms was assumed to be an estimate of the mean number of workers per firm for nonrespondent firms. The following formulas were used in calculating manpower estimates.

$\overline{X}_1$ = mean number of workers per firm in "early respondent" firms.

$$\overline{X}_1 = \frac{\sum X}{n_1}, \quad \text{where}$$

$\sum X$ = total number of workers in the occupation in early respondent firms

n_1 = number of early respondent firms ($n_1 = 112$)

$\overline{X}_2$ = mean number of workers per firm in "late respondent" firms.

$$\overline{X}_2 = \frac{\sum X}{n_2}, \quad \text{where}$$

$\sum X$ = total number of workers in the occupation in late respondent firms

n_2 = number of late respondent firms ($n_2 = 39$)

$\overline{X}_3$ = estimated mean number of workers per firm in the sample (early respondents + late respondents + nonrespondents)

$$\overline{X}_3 = \frac{\overline{X}_1 n_1 + \overline{X}_2 n_2 + \overline{X}_3 n_3}{n}, \quad \text{where}$$

n_3 = number of nonrespondent firms ($n_3 = 79$)

n = total sample size ($n_1 + n_2 + n_3 = n = 230$)

$N\overline{X}_3$ = estimated total number of workers in the population of industries ($N = 984$)

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Summary

Major findings were reported for two methods of estimating manpower needs because of differences in needs reported by early and late respondents. In three occupations, the late respondents reported somewhat different manpower needs than early respondents. These differences in manpower needs were most apparent in estimates of manpower needs in 1974 for wastewater treatment operators, air management inspectors and air management operators.

The estimated number of workers presently employed were very similar for both methods of projecting to the target population with the exception of air management operators. The survey indicated that a minimum increase of 26 water treatment operators would be needed during the period 1971 to 1974. The survey also indicated an increase of at least 13 water treatment laboratory technicians from 1971 to 1974. A minimum of 16 additional wastewater treatment operators will be needed during the period 1971 to 1974. Wastewater treatment laboratory technicians show an increase of at least 30 during the 1971 to 1947 period. The survey shows a minimum increase of at least 26 additional air management inspectors and at least 33 additional air management laboratory technicians will be needed to fill manpower requirement for 1974. The projections also indicate at least 13 additional air management operators will be needed by 1974.

Of the industries responding to the question regarding the requirement of union bidding for the occupations, less than half of the industries required union bidding for most of the occupations studied.

Method II

In using Method II for estimating manpower needs it was assumed that the manpower needs in the industrial firms responding to the questionnaire were representative of all firms in the population. No distinction was made between early respondents, late respondents, and nonrespondents. The following formula was used in calculating estimates for each occupation under the assumption accompanying Method II.

$\overline{X}$ = estimated mean number of workers per industrial firm

$$\overline{X} = \frac{\sum X}{n_o}, \quad \text{where}$$

$\sum X$ = total number of workers in the occupation in the "respondent" firms

n_o = number of firms responding to the questionnaire ($n_o = 151$)

$N\overline{X}$ = estimated total number of workers in the population of industries ($N = 984$)

APPENDIX B

TABLE B - 1

NUMBER OF FULL TIME WORKERS REPORTED BY FIRMS RESPONDING TO THE QUESTIONNAIRE

Job	Number of Workers		
	Employed in 1968	Employed in 1971	Needed in 1974
Water Treatment			
Operator	53	64	70
Laboratory Technician	17	22	25
Wastewater Treatment			
Operator	50	66	76
Laboratory Technician	11	13	24
Air Management			
Inspector	8	11	25
Laboratory Technician	5	6	11
Operator	118	123	125

TABLE B - 2

NUMBER OF PART-TIME WORKERS[a] REPORTED BY FIRMS RESPONDING TO THE QUESTIONNAIRE

Job	Number of Workers[a]		
	Employed in 1968	Employed in 1971	Needed in 1974
Water Treatment			
Operator	26	19	29
Laboratory Technician	8	9	9
Wastewater Treatment			
Operator	13	17	20
Laboratory Technician	10	14	14
Air Management			
Inspector	6	9	12
Laboratory Technician	4	7	11
Operator	17	18	13

[a]Part-time workers have been equated to full time equivalent status.

VT 017 861
SHORELINE CAREER EDUCATION SURVEY. FINAL REPORT.

PROJECT LEARN, MADISON, CONN.
CONNECTICUT STATE DEPT. OF EDUCATION, HARTFORD. DIV. OF VOCATIONAL EDUCATION.

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DESCRIPTORS - *VOCATIONAL EDUCATION; *EDUCATIONAL NEEDS; *SCHOOL SURVEYS; COMMUNITY SURVEYS; *PROGRAM IMPROVEMENT; PUBLIC OPINION; QUESTIONNAIRES; *CURRICULUM PLANNING
IDENTIFIERS - *CONNECTICUT; EDUCATIONAL AWARENESS; PROJECT LEARN

ABSTRACT - THIS SURVEY OF GRADES 9, 10, AND 12 IN SIX AREA HIGH SCHOOLS WAS CONDUCTED TO DETERMINE NEEDS AND INTERESTS IN THE AREA'S VOCATIONAL PROGRAM. ONE OF THE MOST SIGNIFICANT RESULTS OF THE SURVEY SHOWED THAT 11 PERCENT OF THE STUDENTS SURVEYED ARE CURRENTLY TAKING VOCATIONAL COURSES. HOWEVER, ANOTHER 28 PERCENT OF THE STUDENTS WOULD TAKE VOCATIONAL COURSES IF THEY WERE OFFERED AS PART OF THEIR HIGH SCHOOL CURRICULUM. AN ADDITIONAL PHASE OF THE SURVEY, SOLICITING WRITTEN COMMENTS ON THE AREA VOCATIONAL PROGRAMS FROM FACULTY, PARENT, AND COMMUNITY MEMBERS, INDICATED GENERAL AGREEMENT ON THE IMPORTANCE OF IMPROVEMENTS IN THIS SEGMENT OF THE COMPREHENSIVE HIGH SCHOOL CURRICULUM. THE SURVEY REVEALED A MORE THAN ADEQUATE NUMBER OF STUDENTS INTERESTED IN VOCATIONAL PROGRAMS TO JUSTIFY ONE OR MORE OF THE FOLLOWING: (1) A STATE REGIONAL VOCATIONAL-TECHNICAL SCHOOL, (2) ONE OR MORE INTERMEDIATE REGIONAL TRAINING FACILITIES, OR (3) ENLARGED AND IMPROVED OCCUPATIONAL FACILITIES FOR INDIVIDUAL OR SCHOOL USE BY ALL OF THE EXISTING HIGH SCHOOLS. (AUTHOR/KM)

VT 017 861

SHORELINE CAREER EDUCATION SURVEY

FINAL REPORT

Project LEARN
20 Island Avenue
Madison, Connecticut

May 26, 1972

VT017861

2283

CONNECTICUT STATE DEPARTMENT
OF EDUCATION

DIV. OF VOCATIONAL EDUCATION
RESEARCH AND PLANNING UNIT

HARTFORD, CONNECTICUT

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FINAL REPORT

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CONNECTICUT STATE DEPARTMENT OF EDUCATION
DIVISION OF VOCATIONAL EDUCATION
RESEARCH AND PLANNING UNIT
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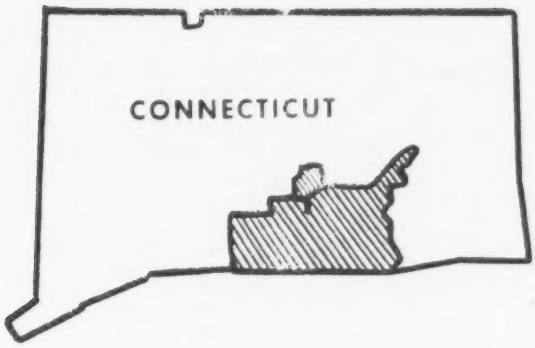
PREFACE

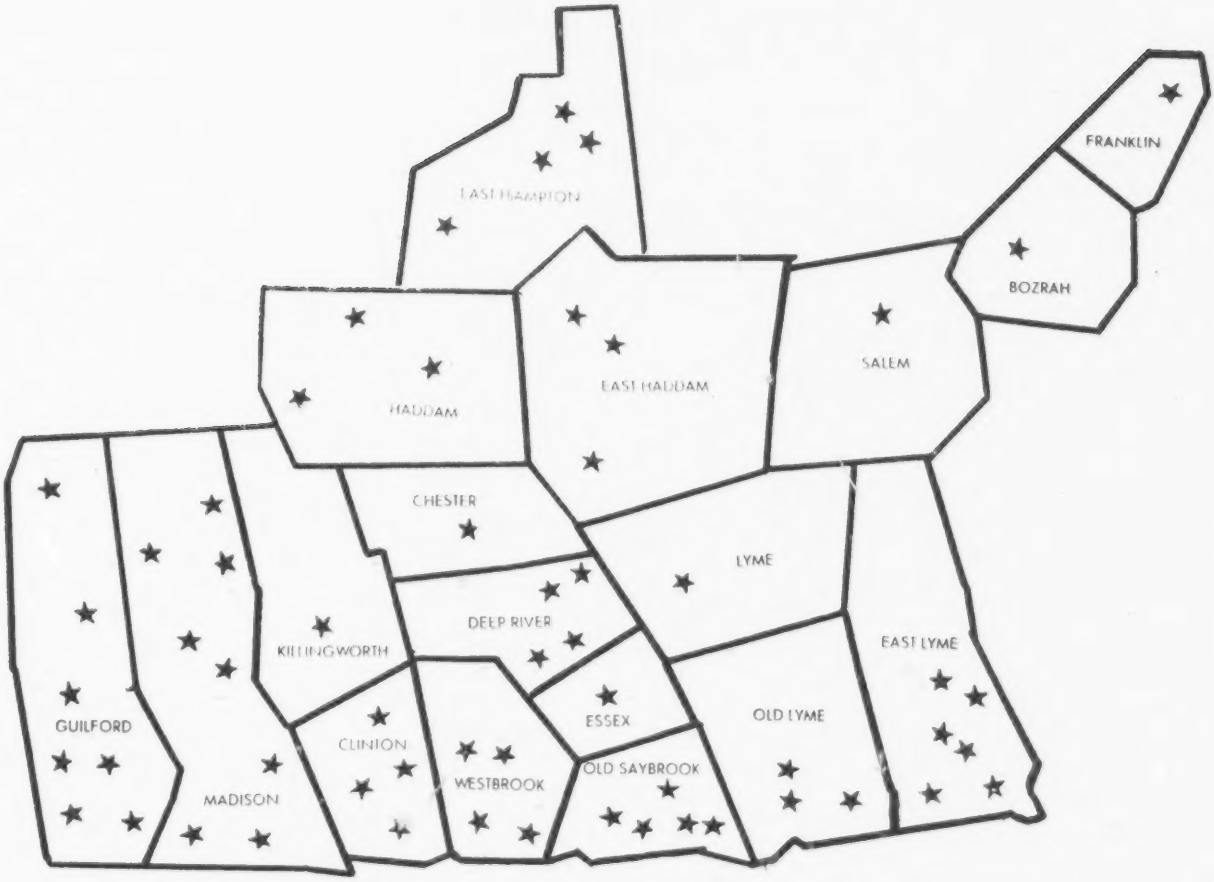
This report is respectfully submitted to the Boards of Education of the towns of Clinton, East Lyme, Guilford, Madison, Old Saybrook and Westbrook.

The survey was co-ordinated and this report was compiled under the direction of Project Learn with the assistance of a research grant from the State of Connecticut, Department of Vocational Education.

Project Learn gratefully acknowledges the support and cooperation of the students, parents, faculty and community members whose generous assistance and participation made this report possible.

Although this survey was confined to six shoreline high schools, the information reflected in the occupational/vocational report will be shared with all of the schools and Boards of Education within Project Learn.





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SUMMARY

SHORELINE CAREER EDUCATION SURVEY

This survey, conducted in six shoreline high schools, provides a basis for studying and contrasting area career interests, needs and attitudes. Students in grades nine, ten and twelve in the six participating high schools were surveyed.

This report provides important data valuable in their own right, as well as being extremely useful as a comprehensive follow-up to a previous occupational needs and interests survey conducted in the Shoreline area in 1966 by Dr. John W. Karnes, Jr. of the University of Connecticut.

In brief, objectives of the Shoreline Career Education Survey are:

A. To obtain from students, teachers and parents their attitudes, interests, expectations and opinions concerning occupational/vocational education.

B. To discern any significant changes in interest and attitudes concerning occupational/vocational programs that may have developed between 1966 and 1972.

C. To obtain data that would indicate realistic approaches to Shoreline occupational/vocational training opportunities and facilities.

One of the most significant results showed that eleven percent of the students in grades nine, ten and twelve are currently taking occupational/vocational courses. However, another fifty-eight percent of the students surveyed would take one or more occupational/vocational courses if they were offered as part of their high school curriculum.

The survey also displayed a remarkable harmony and agreement among parents, teachers, students and community members as to the importance of and need for improvements in this segment of the comprehensive high school curriculum. There is total agreement as to the urgency and the immediacy of the need.

It revealed a more than adequate number of students interested in occupational/vocational programs to justify one or more of the following:

1. A State Regional Vocational-Technical school.

2. One or more intermediate regional training facilities.

3. Enlarged and improved career/occupational facilities for individual or school use by all of the existing high schools.

BACKGROUND

High Schools Surveyed

This report includes six shoreline high schools and provides a body of information that is extremely useful and significant when assessing occupational/vocational needs, interests and attitudes. The six towns participating in this survey are Clinton, East Lyme, Guilford, Madison, Old Saybrook and Westbrook. East Lyme is the only town that was not included in the earlier 1966 survey.

Total Town Population

Clinton	10,267
East Lyme	11,399
Guilford	13,200
Madison	9,768
Old Saybrook	8,468
Westbrook	3,820

High School Enrollment

Town	Grades 9	10	11	12	Total
Clinton	261	192	183	155	791
East Lyme	286	235	217	164	902
Guilford	258	260	228	210	956
Madison	233	226	204	193	856
Old Saybrook	178	152	155	142	627
Westbrook	83	53	58	46	240
			GRAND TOTAL		4,372

Support for Survey

The superintendents of these towns have evidenced their enthusiastic support of this survey as they and many other local officials recognize the importance of periodic and systematic collections of current, comprehensive data.

In addition to providing information to assist in determining current regional occupational/vocational needs and aspirations, the survey provides important cooperative data as a comprehensive follow up to an occupational needs and interest study conducted in these towns in 1966 by Dr. John W. Karnes, Jr.

This survey shall assist Shoreline educational leaders in the complex task of identifying and analyzing shifting and/or emerging attitudinal and occupational interests on the part of students, parents, teachers and the community at large.

Objectives

1. To obtain from high school students their attitudes, concerns interests, and expectations regarding high school, their own futures, and their occupational interests.
2. To obtain from parents the extent of agreement with the occupational choices of their sons and daughters, their viewpoints on the kinds of assistance high schools should give those students who go to work directly upon leaving high school, and their opinions regarding factors affecting duration of employment as well as some opinions deemed important to the position each holds.
3. To obtain from teachers their attitudes and opinions toward occupational career training programs.
4. To obtain from the Shoreline "industrial-business community" its attitudes, opinions, and willingness to participate in expanded work study programs.
5. To measure and analyze any significant changes in interests and attitudes concerning occupation-career training programs that may have occurred between 1966 and 1972.
6. To obtain data that would indicate the more realistic approach to shoreline occupation-career training programs, i.e., local facilities or regional facilities.
7. To determine the need for and feasibility of an extended school day and/or extended school year.
8. To coordinate the survey activities of a number of existing towns and citizen study groups.

METHODS

Preparation for this survey was begun by visits to the University of Connecticut to confer with Dr. Karnes and Dr. Winfield.

The second step was the appointment of research assistants. The superintendents of each participating high school appointed a research assistant to help develop the research questionnaires as well as to facilitate the survey mechanics and procedures.

Research Assistants for the survey were:

Clinton	Michael Hidek
East Lyme	Arthur Thompson
Guilford	Raymond Schreck
Madison	Douglas Ramsdell
Old Saybrook	David Leader
Westbrook	Denis Langhans

The six research assistants in concert with Mssrs. Robinson and DeMatteo of Project Learn held a number of meetings to develop the survey questionnaires and research techniques. Subsequent meetings were held to introduce, in a similar manner, the major concepts of the survey and to coordinate schedules and procedures within each high school.

In any type of study it is difficult to rely upon percentages to fully convey the impact of feelings, attitudes, and interests. However, as one of the major goals of this survey is to compare and contrast current attitudes and interests with the earlier survey of 1966 it was necessary to use the percentage mode as a means of comparison.

In the 1966 survey and in this survey all ninth, tenth and twelfth grade students completed the questionnaire during the school day. The numerical and percentage comparisons of the 1966 Karnes survey to this survey are presented in detail on pages 1 - 7 on colored paper. This format allows for the comparison between grades and schools which would be most difficult, if not impossible, in a narrative report.

Pages nine and ten, again on colored paper, should be of considerable interest to teachers, administrators and boards of education for they reflect student choices for occupational/vocational courses that could or should be included in their high school curricula. These totals represent the views of students who are currently taking or would take one or more of the courses as listed and is a compilation of data not included in the earlier Karnes survey.

In addition to the standard survey questionnaire approach an additional page was provided for faculty, parents and community members to respond with their ideas and attitudes in an essay format. Indicative samples of these responses are incorporated in this report on succeeding pages.

TOWN: CLINTON

NUMBER OF STUDENTS EXPECTING TO GRADUATE
FROM HIGH SCHOOL

Do you expect to graduate from high school?	Grades 9-10		Grades 12		Grades 9-10		Grades 12	
TOTALS FOR ALL HIGH SCHOOLS SURVEYED	1966				1972			
	#	%	#	%	#	%	#	%
Yes, I expect to graduate with my class	897	90	342	92	1897	92	542	97
Yes, I expect to graduate but later than my class	19	2	4	1	16	1	1	0
No, I expect to leave school and not graduate	5	1	*		21	1	2	0
I do not know at this time	77	7	17	5	131	6	17	3
Omit	2	0	7	2	8	0	2	0

Do you expect to graduate from high school?	Grades 9-10		Grades 12	
TOTALS FOR MORGAN HIGH	1972			
	#	%	#	%
Yes, I expect to graduate with my class	365	89	122	97
Yes, I expect to graduate, but later than my class	5	1	0	0
No, I expect to leave school and not graduate	3	1	1	1
I do not know at this time	36	9	3	2
Omit	1	0	0	0

*Item not included on 12th grade questionnaire - 1966

TOWN: CLINTON
THOUGHTS OF STUDENTS CONCERNING THEIR
FUTURE AFTER LEAVING HIGH SCHOOL

What are your present thoughts concerning your future after you leave high school?	Grades 9-10		Grades 12		Grades 9-10		Grades 12	
	1966				1972			
TOTALS FOR ALL HIGH SCHOOLS SURVEYED	#	%	#	%	#	%	#	%
I have a rather specific plan for the college and/or work I would like	369	37	247	67	602	29	421	64
I have a plan, but I am not sure of it	285	28	81	22	578	28	136	20
I have thought about it, but I do not know what I want to do	196	20	31	8	536	26	68	10
I have not given it much thought	40	4	6	2	130	6	8	1
I am concerned about it; I could use some assistance to help me decide	111	11	*		208	10	24	4
Omit	0	0	5	1	19	1	7	1

What are your present thoughts concerning your future after you leave high school?	Grades 9-10		Grades 12	
	1972			
TOTALS FOR MORGAN HIGH	#	%	#	%
I have a rather specific plan for the college and/or work I would like	130	32	79	63
I have a plan, but I am not sure of it	103	25	21	16
I have thought about it, but I do not know what I want to do	98	24	13	10
I have not given it much thought	27	6	4	3
I am concerned about it; I could use some assistance to help me decide	49	12	7	6
Omit	3	1	2	2

*Item not inculded on 12th grade questionnaire - 1966

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TOWN: CLINTON
POST-HIGH SCHOOL PLANS
WHAT STUDENTS THINK WILL ACTUALLY HAPPEN UPON
LEAVING HIGH SCHOOL (GRADUATION OR OTHER

What do you think actually will happen when you leave high school?	Grades 9-10		Grades 12		Grades 9-10		Grades 12	
TOTALS FOR ALL HIGH SCHOOLS SURVEYED	1966				1972			
	#	%	#	%	#	%	#	%
Work full-time	120	8	60	12	178	8	78	12
Work and education part-time	108	8	43	10	143	7	56	8
Enter apprenticeship program	27	2	9	2	41	2	13	2
Attend 4-yr. college or univ.	495	35	164	34	872	43	308	46
Attend 2-yr. college	168	12	60	12	148	7	64	10
Take vocational course work	50	4	20	4	21	1	13	2
Attend technical institute	56	4	25	5	49	2	18	3
Take business school courses	56	4	5	1	18	1	8	1
Get married and keep house	33	2	15	3	17	1	2	0
Get married and continue work	62	4	29	6	45	2	22	3
Enter Armed Forces	160	11	42	9	103	5	27	4
At this time I do not know	93	6	10	2	424	20	51	8
Omit	0	0	0	0	14	1	4	1

What do you think actually will happen when you leave high school?	Grades 9-10		Grades 12	
	1972			
TOTALS FOR MORGAN HIGH	#	%	#	%
Work full-time	53	13	24	19
Work and education part-time	37	9	17	13
Enter apprenticeship program	12	3	2	2
Attend 4-yr. college or univ.	146	36	39	31
Attend 2-yr. college	27	7	14	11
Take vocational course work	1	0	3	2
Attend technical institute	13	3	2	2
Take business school courses	6	1	2	2
Get married and keep house	3	1	0	0
Get married and continue work	10	2	4	3
Enter Armed Forces	26	6	4	3
At this time I do not know	76	19	15	12
Omit	0	0	0	0

OCCUPATIONAL PLANS OF STUDENTS

TOTALS FOR ALL HIGH SCHOOLS SURVEYED - 1972

CATEGORY	Grade 9-10 Choice 1st	2nd	3rd	Grade 12 Choice 1st	2nd	3rd
Agriculture, Forestry, Fishing	169	121	138	42	36	55
Amusement - Entertainment	210	177	190	49	42	60
Building Construction	119	127	87	22	33	31
Business-Office Occupations	152	166	174	53	52	42
Distributive Occupations	55	68	65	16	20	30
Equipment Services	63	66	54	15	18	18
Food Services	43	83	102	6	20	27
Government	89	104	118	29	31	37
Health Services	97	136	83	48	36	32
Manufacturing - General	9	26	23	4	6	8
Manufacturing - Textiles & garments	36	56	53	13	17	17
Personal Services	74	75	104	20	23	25
Printing and Graphic Arts	46	67	67	16	22	11
Professional	749	556	431	283	205	152
Public Utilities	2	5	14	2	6	8
Technician	26	44	64	14	31	16
Transportation & heavy Equipment	104	101	154	19	27	28
Omitted	50	95	152	13	39	67
Totals	2073	2073	2073	664	664	664

TOWN: CLINTON

OCCUPATIONAL PLANS OF STUDENTS - 1972

CATEGORY	Grade 9-10 Choice 1st	2nd	3rd	Grade 12 Choice 1st	2nd	3rd
Agriculture, Forestry, Fishing	33	25	30	9	7	10
Amusement - Entertainment	30	29	43	5	7	11
Building Construction	34	29	16	3	4	6
Business-Office Occupations	40	44	38	10	16	13
Distributive Occupations	9	11	14	4	4	9
Equipment Services	16	19	8	5	1	2
Food Services	9	19	21	2	4	4
Government	13	18	21	3	5	11
Health Services	22	32	19	13	6	5
Manufacturing - General	2	3	5	1	0	3
Manufacturing - Textiles & Garments	10	13	7	5	3	2
Personal Services	11	16	24	5	5	5
Printing and Graphic Arts	8	14	10	3	6	0
Professional	144	100	76	47	34	22
Public Utilities	0	0	3	0	3	2
Technician	4	10	10	2	6	2
Transportation & Heavy Equipment	19	14	30	6	8	6
Omitted	6	14	35	3	7	13
Totals	410	410	410	126	126	126

OCCUPATIONAL PLANS OF STUDENTS

TOTALS OF ALL 9th & 10th GRADERS SURVEYED

CATEGORY	1966 Frequency	%	1972 Frequency	%
Agriculture, Forestry, Fishing	95	3	408	5
Amusement - Entertainment	219	7	577	9
Building Construction	105	4	333	5
Business-Office Occupations	315	11	492	8
Distributive Occupations	99	3	188	3
Equipment Services	71	2	183	3
Food Services	80	3	228	4
Government	252	8	311	5
Health Services	155	5	316	6
Manufacturing - General	45	1	58	1
Manufacturing - Textiles & Garments	62	2	145	2
Personal Services	174	6	253	5
Printing and Graphic Arts	87	3	180	3
Professional	954	32	1736	28
Public Utilities	12	0	21	0
Technician	144	5	134	2
Transportation & Heavy Equipment	153	5	359	6
Omitted	0	0	297	5
TOTALS	3022	100	6219	100

OCCUPATIONAL PLANS OF STUDENTS

TOTALS FOR ALL SENIORS SURVEYED

CATEGORY	1966 Frequency	1966 %	1972 Frequency	1972 %
Agriculture, Forestry, Fishing	51	5	133	7
Amusement - Entertainment	72	7	151	8
Building Construction	24	2	86	4
Business-Office Occupations	134	12	147	7
Distributive Occupations	50	5	66	3
Equipment Services	30	3	51	3
Food Services	32	3	53	3
Government	81	7	97	5
Health Services	45	4	116	6
Manufacturing - General	15	1	18	1
Manufacturing - Textiles & Garments	30	3	47	2
Personal Services	45	4	68	3
Printing and Graphic Arts	39	3	49	2
Professional	339	31	640	32
Public Utilities	6	1	16	1
Technician	54	5	61	3
Transportation & Heavy Equipment	44	4	74	4
Omitted	0	0	119	6
Totals	1091	100	1992	100

TOWN: CLINTON

STUDENTS INTEREST IN OCCUPATIONAL/VOCATIONAL PROGRAMS

If occupational/vocational programs were offered as part of your high school curriculum, would you take one or several of them?

TOTALS FOR ALL HIGH SCHOOLS SURVEYED

	#	%
I am already taking one	296	11
Yes, I would take one	1595	58
No, I would not take one	606	22
Omit	240	9

If occupational/vocational programs were offered as part of your high school curriculum, would you take one or several of them?

TOTALS FOR MORGAN HIGH

	#	%
I am already taking one	113	21
Yes, I would take one	299	56
No, I would not take one	88	16
Omit	36	7

STUDENTS CHOICES FOR OCCUPATIONAL/VOCATIONAL COURSES THAT COULD OR SHOULD BE INCLUDED IN THEIR HIGH SCHOOL CURRICULUM

Note* Represents views of students that are currently taking or would take one or more of the following courses.

TOTALS FOR ALL HIGH SCHOOLS SURVEYED	Grade 9-10		Grade 12	
	1st choice	2nd choice	1st choice	2nd choice
Appliance Repair	5	3	2	1
Auto Body Repair	52	62	13	26
Bookkeeping	16	39	11	6
Building Trades	50	25	12	10
Commercial Art	109	52	36	16
Cosmetology	50	28	7	17
Data Processing	24	19	16	14
Dental Asst., etc.	106	63	49	28
Distributive Ed	13	16	11	8
Drafting	57	34	22	16
Electronics	82	56	29	13
Food Services	31	44	17	18
Gen. Agriculture	45	50	7	20
Home Economics	33	46	4	9
Horticulture, etc.	113	74	55	32
Machine Shop	8	23	4	8
Mechanics	90	67	29	31
Office Practices	22	28	8	14
Plastics	5	16	2	3
Practical Nursing	133	67	44	24
Printing	12	12	3	6
Secretarial	96	64	20	15
Sheet Metal, etc.	13	19	2	6
Tailoring	29	38	18	16
Undecided	215	461	61	125
Omitted	664	664	182	182
Totals	2073	2073	664	664

STUDENTS CHOICES FOR OCCUPATIONAL/VOCATIONAL COURSES THAT COULD OR SHOULD BE INCLUDED IN THEIR HIGH SCHOOL CURRICULUM

Note* Represents views of students that are currently taking or who would take one or more of the following courses.

TOWN: CLINTON	Grade 9-10		Grade	
	1st choice	2nd choice	1st choice	2nd choice
Appliance Repair	2	1	1	0
Auto Body Repair	10	12	3	7
Bookkeeping	2	7	2	2
Building Trades	12	5	3	0
Commercial Art	19	12	7	3
Cosmetology	9	8	1	2
Data Processing	8	2	2	4
Dental Asst., etc.	23	16	6	10
Distributive Ed	2	5	4	2
Drafting	10	9	3	2
Electronics	22	16	5	3
Food Services	10	6	3	1
Gen. Agriculture	9	17	1	3
Home Economics	12	18	2	2
Horticulture, etc.	30	18	10	7
Machine Shop	2	3	1	3
Mechanics	19	12	4	3
Office Practices	3	8	4	4
Plastics	1	3	0	0
Practical Nursing	40	19	11	4
Printing	3	1	2	2
Secretarial	23	19	4	4
Sheet Metal, etc.	3	8	0	0
Tailoring	10	7	4	1
Undecided	36	88	9	23
Omitted	90	90	34	34
Totals	410	410	126	126

TOWN: EAST LYME

NUMBER OF STUDENTS EXPECTING TO GRADUATE
FROM HIGH SCHOOL

Do you expect to graduate from high school?	Grades 9-10		Grades 12		Grades 9-10		Grades 12	
TOTALS FOR ALL HIGH SCHOOLS SURVEYED	1966				1972			
	#	%	#	%	#	%	#	%
Yes, I expect to graduate with my class	897	90	342	92	1897	92	642	97
Yes, I expect to graduate but later than my class	19	2	4	1	16	1	1	0
No, I expect to leave school and not graduate	5	1	*		21	1	2	0
I do not know at this time	77	7	17	5	131	6	17	3
Omit	2	0	7	2	8	0	2	0

Do you expect to graduate from high school?	Grades 9-10		Grades 12	
	1972			
TOTALS FOR EAST LYME SR. HIGH	#	%	#	%
Yes, I expect to graduate with my class	414	89	134	95
Yes, I expect to graduate but later than my class	3	1	1	½
No, I expect to leave school and not graduate	1	0	0	0
I do not know at this time	45	10	5	4
Omit	1	0	1	½

* Item not included on 12th grade questionnaire - 1966

TOWN: EAST LYME
THOUGHTS OF STUDENTS CONCERNING THEIR
FUTURE AFTER LEAVING HIGH SCHOOL

What are your present thoughts concerning your future after you leave high school?	Grades 9-10		Grades 12		Grades 9-10		Grades 12	
	1966				1972			
TOTALS FOR ALL HIGH SCHOOLS SURVEYED	#	%	#	%	#	%	#	%
I have a rather specific plan for the college and/or work I would like	369	37	247	67	602	29	421	64
I have a plan, but I am not sure of it	285	28	81	22	578	28	136	20
I have thought about it, but I do not know what I want to do	196	20	31	8	536	26	68	10
I have not given it much thought	40	4	6	2	130	6	8	1
I am concerned about it; I could use some assistance to help me decide	111	11	*		208	10	24	4
Omit	0	0	5	1	19	1	7	1

What are your present thoughts concerning your future after you leave high school?	Grades 9-10		Grades 12	
	1972			
TOTALS FOR EAST LYME SENIOR HIGH	#	%	#	%
I have a rather specific plan for the college and/or work I would like	111	24	94	68
I have a plan, but I am not sure of it	147	32	24	16
I have thought about it, but I do not know what I want to do	117	25	13	9
I have not given it much thought	33	7	3	2
I am concerned about it; I could use some assistance to help me decide	51	11	6	4
Omit	5	1	1	1

*Item not included on 12th grade questionnaire - 1966

TOWN: EAST LYME
POST-HIGH SCHOOL PLANS
WHAT STUDENTS THINK WILL ACTUALLY HAPPEN UPON
LEAVING HIGH SCHOOL (GRADUATION OR OTHER)

What do you think actually will happen when you leave high school?	Grades 9-10		Grades 12		Grades 9-10		Grades 12	
	1966				1972			
TOTALS FOR ALL HIGH SCHOOLS SURVEYED	#	%	#	%	#	%	#	%
Work full-time	120	8	60	12	178	8	78	12
Work and education part-time	108	8	43	10	143	7	56	8
Enter apprenticeship program	27	2	9	2	41	2	13	2
Attend 4-yr. college or univ.	495	35	164	34	872	43	308	46
Attend 2-yr. college	168	12	60	12	148	7	64	10
Take vocational course work	50	4	20	4	21	1	13	2
Attend technical institute	56	4	25	5	49	2	18	3
Take business school courses	56	4	5	1	18	1	8	1
Get married and keep house	33	2	15	3	17	1	2	0
Get married and continue work	62	4	29	6	45	2	22	3
Enter Armed Forces	160	11	42	9	103	5	27	4
At this time I do not know	93	6	10	2	424	20	51	8
Omit	0	0	0	0	14	1	4	1

What do you think actually will happen when you leave high school?	Grades 9-10		Grades 12	
	1972			
TOTALS FOR EAST LYME SENIOR HIGH	#	%	#	%
Work full-time	28	6	12	9
Work and education part-time	33	7	14	9
Enter apprenticeship program	8	2	6	4
Attend 4-yr. college or univ	171	37	61	43
Attend 2-yr. college	30	6	20	14
Take vocational course work	9	2	0	0
Attend technical institute	6	1	1	1
Take business school courses	2	0	1	1
Get married and keep house	6	1	1	1
Get married and continue work	12	3	6	4
Enter Armed Forces	38	8	7	5
At this time I do not know	114	25	11	8
Omit	7	2	1	1

OCCUPATIONAL PLANS OF STUDENTS

TOTALS FOR ALL HIGH SCHOOLS SURVEYED - 1972

CATEGORY	Grade 9-10 Choice 1st	2nd	3rd	Grade 12 Choice 1st	2nd	3rd
Agriculture, Forestry, Fishing	149	121	138	42	36	55
Amusement - Entertainment	210	177	190	49	42	60
Building Construction	119	127	87	22	33	31
Business-Office Occupations	152	166	174	53	52	42
Distributive Occupations	55	68	65	16	20	30
Equipment Services	63	66	54	15	18	18
Food Services	43	83	102	6	20	27
Government	89	104	118	29	31	37
Health Services	97	136	83	48	36	32
Manufacturing - General	9	26	23	4	6	8
Manufacturing - Textiles & Garments	36	56	53	13	17	17
Personal Services	74	75	104	20	23	25
Printing and Graphic Arts	46	67	67	16	22	11
Professional	749	556	431	283	205	152
Public Utilities	2	5	14	2	6	8
Technician	26	44	64	14	31	16
Transportation & heavy Equipment	104	101	154	19	27	28
Omitted	50	95	152	13	39	67
Totals	2073	2073	2073	664	664	664

TOWN: EAST LYME

OCCUPATIONAL PLANS OF STUDENTS - 1972

CATEGORY	Grade 9-10 Choice 1st	2nd	3rd	Grade 12 Choice 1st	2nd	3rd
Agriculture, Forestry, Fishing	35	24	27	5	6	11
Amusement - Entertainment	52	46	39	9	9	23
Building Construction	18	32	21	6	10	7
Business-Office Occupations	27	39	36	10	5	6
Distributive Occupations	13	16	16	2	6	4
Equipment Services	13	15	11	6	4	5
Food Services	12	19	23	1	3	5
Government	28	35	35	10	11	10
Health Services	19	28	14	12	11	6
Manufacturing - General	2	3	3	0	2	1
Manufacturing - Textiles & Garments	5	10	12	5	6	6
Personal Services	25	16	21	3	3	7
Printing and Graphic Arts	12	18	17	4	4	3
Professional	148	111	95	59	39	25
Public Utilities	0	1	3	1	1	2
Technician	8	6	13	5	6	2
Transportation & Heavy Equipment	32	21	36	3	10	7
Omitted	15	24	42	0	5	11
Totals	464	464	464	141	141	141

OCCUPATIONAL PLANS OF STUDENTS

TOTALS OF ALL 9th & 10th GRADERS SURVEYED

CATEGORY	1966 Frequency	%	1972 Frequency	%
Agriculture, Forestry, Fishing	95	3	408	5
Amusement - Entertainment	219	7	577	9
Building Construction	105	4	333	5
Business-Office Occupations	315	11	492	8
Distributive Occupations	99	3	188	3
Equipment Services	71	2	183	3
Food Services	80	3	228	4
Government	252	8	311	5
Health Services	155	5	316	6
Manufacturing - General	45	1	58	1
Manufacturing - Textiles & Garments	62	2	145	2
Personal Services	174	6	253	5
Printing and Graphic Arts	87	3	180	3
Professional	954	32	1736	28
Public Utilities	12	0	21	0
Technician	144	5	134	2
Transportation & Heavy Equipment	153	5	359	6
Omitted	0	0	297	5
TOTALS	3022	100	6219	100

OCCUPATIONAL PLANS OF STUDENTS

TOTALS FOR ALL SENIORS SURVEYED

CATEGORY	1966		1972	
	Frequency	%	Frequency	%
Agriculture, Forestry, Fishing	51	5	133	7
Amusement - Entertainment	72	7	151	8
Building Construction	24	2	86	4
Business-Office Occupations	134	12	147	7
Distributive Occupations	50	5	66	3
Equipment Services	30	3	51	3
Food Services	32	3	53	3
Government	81	7	97	5
Health Services	45	4	116	6
Manufacturing-General	15	1	18	1
Manufacturing-Textiles & Garments	30	3	47	2
Personal Services	45	4	68	3
Printing and Graphic Arts	39	3	49	2
Professional	339	31	640	32
Public Utilities	6	1	16	1
Technician	54	5	61	3
Transportation & Heavy Equipment	44	4	74	4
Omitted	0	0	119	6
Totals	1091	100	1992	100

TOWN: EAST LYME

STUDENTS INTEREST IN OCCUPATIONAL/VOCATIONAL PROGRAMS

If occupational/vocational programs were offered as part of your high school curriculum, would you take one or several of them?

TOTALS FOR ALL HIGH SCHOOLS SURVEYED

	#	%
I am already taking one	296	11
Yes, I would take one	1595	58
No, I would not take one	606	22
Omit	240	9

If occupational/vocational programs were offered as part of your high school curriculum, would you take one or several of them?

TOTALS FOR EAST LYME SENIOR HIGH

	#	%
I am already taking one	60	10
Yes, I would take one	401	66
No, I would not take one	116	19
Omit	28	5

STUDENTS CHOICES FOR OCCUPATIONAL/VOCATIONAL COURSES THAT COULD OR SHOULD BE INCLUDED IN THEIR HIGH SCHOOL CURRICULUM

*Note: Represents views of students that are currently taking or would take one or more of the following courses.

TOTALS FOR ALL HIGH SCHOOLS SURVEYED	Grade 9-10 1st choice	Grade 9-10 2nd choice	Grade 12 1st choice	Grade 12 2nd choice
Appliance Repair	5	3	2	1
Auto Body Repair	52	62	13	26
Bookeeping	16	39	11	6
Building Trades	50	25	12	10
Commercial Art	109	52	36	16
Cosmetology	50	28	7	17
Data Processing	24	19	16	14
Dental Asst., etc.	106	66	49	28
Distributive Ed.	13	16	11	8
Drafting	57	34	22	16
Electronics	82	56	29	13
Food Services	31	44	17	18
Gen. Agriculture	45	50	7	20
Home Economics	33	46	4	9
Horticulture, etc.	113	74	55	32
Machine Shop	8	23	4	8
Mechanics	90	67	29	31
Office Practices	22	28	8	14
Plastics	5	16	2	3
Practical Nursing	133	67	44	24
Printing	12	12	3	6
Secretarial	96	64	20	15
Sheet Metal, etc.	13	19	2	6
Tailoring	29	38	18	16
Undecided	215	461	61	125
Omitted	664	664	182	182
Totals	2073	2073	664	664

STUDENTS CHOICES FOR OCCUPATIONAL/VOCATIONAL COURSES THAT COULD OR SHOULD BE INCLUDED IN THEIR HIGH SCHOOL CURRICULUM

*Note: Represents views of students that are currently taking or who would take one or more of the following courses.

TOWN: EAST LYME	Grade 9-10		Grade 12	
	1st choice	2nd choice	1st choice	2nd choice
Appliance Repair	2	2	1	1
Auto Body Repair	14	13	4	6
Bookkeeping	5	9	4	2
Building Trades	10	8	2	5
Commercial Art	26	17	7	4
Cosmetology	24	8	1	6
Data Processing	5	5	2	2
Dental Asst., etc.	28	13	14	6
Distributive Ed	1	4	2	2
Drafting	15	12	4	5
Electronics	24	17	7	3
Food Services	11	11	5	5
Gen. Agriculture	11	8	2	5
Home Economics	9	17	1	2
Horticulture, etc.	26	19	14	5
Machine Shop	0	2	1	1
Mechanics	24	21	9	10
Office Practices	5	5	1	0
Plastics	2	4	0	1
Practical Nursing	28	21	10	7
Printing	4	6	1	1
Secretarial	15	16	2	4
Sheet Metal, etc.	3	4	0	0
Tailoring	8	6	6	6
Undecided	52	104	9	20
Omitted	112	112	32	32
Totals	464	464	141	141

TOWN: GUILFORD

NUMBER OF STUDENTS EXPECTING TO GRADUATE
FROM HIGH SCHOOL

Do you expect to graduate from high school?	Grades 9-10		Grades 12		Grades 9-10		Grades 12	
TOTALS FOR ALL HIGH SCHOOLS SURVEYED	1966				1972			
	#	%	#	%	#	%	#	%
Yes, I expect to graduate with my class	897	90	342	92	1897	92	642	97
Yes, I expect to graduate but later than my class	19	2	4	1	16	1	1	0
No, I expect to leave school and not graduate	5	1	*		21	1	2	0
I do not know at this time	77	7	17	5	131	6	17	3
Omit	2	0	7	2	8	0	2	0

Do you expect to graduate from high school?	Grades 9-10		Grades 12	
TOTALS FOR GUILFORD SENIOR HIGH	1972			
	#	%	#	%
Yes, I expect to graduate with my class	379	95	127	98
Yes, I expect to graduate, but later than my class	2	1	0	0
No, I expect to leave school and not graduate	14	3	0	0
I do not know at this time	5	1	3	2
Omit	1	0	0	0

*Item not included on 12th grade questionnaire - 1966

TOWN: GUILFORD
THOUGHTS OF STUDENTS CONCERNING THEIR
FUTURE AFTER LEAVING HIGH SCHOOL

What are your present thoughts concerning your future after you leave high school?	Grades 9-10		Grades 12		Grades 9-10		Grades 12	
	1966				1972			
TOTALS FOR ALL HIGH SCHOOLS SURVEYED	#	%	#	%	#	%	#	%
I have a rather specific plan for the college and/or work I would like	369	37	247	67	602	29	421	64
I have a plan, but I am not sure of it	285	28	81	22	578	28	136	20
I have thought about it, but I do not know what I want to do	196	20	31	8	536	26	68	10
I have not given it much thought	40	4	6	2	130	6	8	1
I am concerned about it; I could use some assistance to help me decide	111	11	*		208	10	24	4
Omit	0	0	5	1	19	1	7	1

What are your present thoughts concerning your future after you leave high school?	Grades 9-10		Grades 12	
	1972			
TOTALS FOR GUILFORD SENIOR HIGH	#	%	#	%
I have a rather specific plan for the college and/or work I would like	130	33	89	68
I have a plan, but I am not sure of it	105	26	23	18
I have thought about it, but I do not know what I want to do	105	26	14	11
I have not given it much thought	24	6	0	0
I am concerned about it; I could use some assistance to help me decide	34	8	3	2
Omit	3	1	1	1

*Item not included on 12th grade questionnaire - 1966

TOWN: GUILFORD
POST-HIGH SCHOOL PLANS
WHAT STUDENTS THINK WILL ACTUALLY HAPPEN UPON
LEAVING HIGH SCHOOL (GRADUATION OR OTHER)

What do you think actually will happen when you leave high school?	Grades 9-10		Grades 12		Grades 9-10		Grades 12	
TOTALS FOR ALL HIGH SCHOOLS SURVEYED	1966				1972			
	#	%	#	%	#	%	#	%
Work full-time	120	8	60	12	178	8	78	12
Work and education part-time	108	8	43	10	143	7	56	8
Enter apprenticeship program	27	2	9	2	41	2	13	2
Attend 4-yr. college or univ.	495	35	164	34	872	43	308	46
Attend 2yr. college	168	12	60	12	148	7	64	10
Take vocational course work	50	4	20	4	21	1	13	2
Attend technical institute	56	4	25	5	49	2	18	3
Take business school courses	56	4	5	1	18	1	8	1
Get married and keep house	33	2	15	3	17	1	2	0
Get married and continue work	62	4	29	6	45	2	22	3
Enter Armed Forces	160	11	42	9	103	5	27	4
At this time I do not know	93	6	10	2	424	20	51	8
Omit	0	0	0	0	14	1	4	1

What do you think actually will happen when you leave high school?	Grades 9-10		Grades 12	
TOTALS FOR GUILFORD SENIOR HIGH	1972			
	#	%	#	%
Work full-time	34	9	12	9
Work and educationa part-time	25	6	11	9
Enter apprenticeship program	10	2	2	2
Attend 4-yr. college or univ.	174	43	74	57
Attend 2-yr. college	28	7	10	8
Take vocational course work	3	1	3	2
Attend technical institute	10	2	7	5
Take business school courses	4	1	1	1
Get married and keep house	1	0	0	0
Get married and continue work	7	2	3	2
Enter Armed Forces	15	4	3	2
At this time I do not know	88	22	4	3
Omit	2	1	0	0

OCCUPATIONAL PLANS OF STUDENTS

TOTALS FOR ALL HIGH SCHOOLS SURVEYED - 1972

CATEGORY	Grade 9-10 Choice			Grade 12 Choice		
	1st	2nd	3rd	1st	2nd	3rd
Agriculture, Forestry, Fishing	149	121	138	42	36	55
Amusement - Entertainment	210	177	190	49	42	60
Building Construction	119	127	87	22	33	31
Business-Office Occupations	152	166	174	53	52	42
Distributive Occupations	55	68	65	16	20	30
Equipment Services	63	66	54	15	18	18
Food Services	43	83	102	6	20	27
Government	89	104	118	29	31	37
Health Services	97	136	83	48	36	32
Manufacturing - General	9	26	23	4	6	8
Manufacturing - Textiles & Garments	36	56	53	13	17	17
Personal Services	74	75	104	20	23	25
Printing and Graphic Arts	46	67	67	16	22	11
Professional	749	556	431	283	205	152
Public Utilities	2	5	14	2	6	8
Technician	26	44	64	14	31	16
Transportation & Heavy Equipment	104	101	154	19	27	28
Omitted	50	95	152	13	39	67
Totals	2073	2073	2073	664	664	664

TOWN: GUILFORD

OCCUPATIONAL PLANS OF STUDENTS - 1972

CATEGORY	Grade 9-10 Choice			Grade 12 Choice		
	1st	2nd	3rd	1st	2nd	3rd
Agriculture, Forestry, Fishing	33	33	30	9	6	10
Amusement - Entertainment	46	35	34	8	9	8
Building Construction	28	22	19	4	11	6
Business-Office Occupations	36	31	47	12	6	4
Distributive Occupations	12	19	7	3	3	5
Equipment Services	15	13	16	1	6	4
Food Services	4	15	27	0	3	5
Government	16	16	23	5	6	5
Health Services	16	25	18	6	3	7
Manufacturing - General	3	7	7	2	2	4
Manufacturing - Textiles & Garments	6	7	9	0	2	3
Personal Services	6	7	13	3	4	1
Printing and Graphic Arts	7	14	8	2	3	3
Professional	139	99	67	62	39	35
Public Utilities	1	2	3	0	0	0
Technician	6	11	13	4	9	3
Transportation & Heavy Equipment	15	21	29	5	4	6
Omitted	12	24	31	4	14	21
Totals	401	401	401	130	130	130

OCCUPATIONAL PLANS OF STUDENTS

TOTALS OF ALL 9th & 10th GRADERS SURVEYED

CATEGORY	1966 Frequency	%	1972 Frequency	%
Agriculture, Forestry, Fishing	95	3	408	5
Amusement - Entertainment	219	7	577	9
Building Construction	105	4	333	5
Business-Office Occupations	315	11	492	8
Distributive Occupations	99	3	188	3
Equipment Services	71	2	183	3
Food Services	80	3	228	4
Government	252	8	311	5
Health Services	155	5	316	6
Manufacturing - General	45	1	58	1
Manufacturing - Textiles & Garments	62	2	145	2
Personal Services	174	6	253	5
Printing and Graphic Arts	87	3	180	3
Professional	954	32	1736	28
Public Utilities	12	0	21	0
Technician	144	5	134	2
Transportation & Heavy Equipment	153	5	359	6
Omitted	0	0	297	5
Totals	3022	100	6219	100

OCCUPATIONAL PLANS OF STUDENTS

TOTALS FOR ALL SENIORS SURVEYED

CATEGORY	1966		1972	
	Frequency	%	Frequency	%
Agriculture, Forestry, Fishing	51	5	133	7
Amusement - Entertainment	72	7	151	8
Building Construction	24	2	86	4
Business-Office Occupations	134	12	147	7
Distributive Occupations	50	5	66	3
Equipment Services	30	3	51	3
Food Services	32	3	53	3
Government	81	7	97	5
Health Services	45	4	116	6
Manufacturing - General	15	1	18	1
Manufacturing - Textiles & Garments	30	3	47	2
Personal Services	45	4	68	3
Printing and Graphic Arts	39	3	49	2
Professional	339	31	640	32
Public Utilities	6	1	16	1
Technician	54	5	61	3
Transportation & Heavy Equipment	44	4	74	4
Omitted	0	0	119	6
Totals	1091	100	1992	100

TOWN: GUILFORD

STUDENTS INTEREST IN OCCUPATIONAL/VOCATIONAL PROGRAMS

If occupational/vocational programs were offered as part of your high school curriculum, would you take one or several of them?

TOTALS FOR ALL HIGH SCHOOLS SURVEYED

	#	%
I am already taking one	296	11
Yes, I would take one	1595	58
No, I would not take one	606	22
Omit	240	

If occupational programs were offered as part of your high school curriculum, would you take one or several of them?

TOTALS FOR GUILFORD SENIOR HIGH

	#	%
I am already taking one	58	11
Yes, I would take one	269	51
No, I would not take one	143	27
Omit	61	11

STUDENTS CHOICES FOR OCCUPATIONAL/VOCATIONAL COURSES THAT COULD OR SHOULD BE INCLUDED IN THEIR HIGH SCHOOL CURRICULUM

*Note: Represents views of students that are currently taking or would take one or more of the following courses.

TOTALS FOR ALL HIGH SCHOOLS SURVEYED	Grade 9-10		Grade 12	
	1st choice	2nd choice	1st choice	2nd choice
Appliance Repair	5	3	2	1
Auto Body Repair	52	62	13	26
Bookkeeping	16	39	11	6
Building Trades	50	25	12	10
Commercial Art	109	52	36	16
Cosmetology	50	28	7	17
Data Processing	24	19	16	14
Dental Asst., etc.	106	66	49	28
Distributive Ed	13	16	11	8
Drafting	57	34	22	16
Electronics	82	56	29	13
Food Services	31	44	17	18
Gen. Agriculture	45	50	7	20
Home Economics	33	46	4	9
Horticulture, etc.	113	74	55	32
Machine Shop	8	23	4	8
Mechanics	90	67	29	31
Office Practices	22	28	8	14
Plastics	5	16	2	3
Practical Nursing	133	67	44	24
Printing	12	12	3	6
Secretarial	96	64	20	15
Sheet Metal, etc.	13	19	2	6
Tailoring	29	38	18	16
Undecided	215	461	61	125
Omitted	664	664	182	182
Totals	2073	2073	664	664

STUDENTS CHOICES FOR OCCUPATIONAL/VOCATIONAL COURSES THAT COULD OR SHOULD BE INCLUDED IN THEIR HIGH SCHOOL CURRICULUM

*Note: Represents views of students that are currently taking or who would take one or more of the following courses.

TOWN: GUILFORD	Grade 9-10 1st choice	Grade 9-10 2nd choice	Grade 12 1st choice	Grade 12 2nd choice
Appliance Repair	1	0	0	0
Auto Body Repair	10	14	0	4
Bookkeeping	8	12	1	0
Building Trades	10	6	2	1
Commercial Art	16	7	4	1
Cosmetology	5	1	2	3
Data Processing	3	6	5	1
Dental Asst., etc.	15	11	7	4
Distributive Ed	4	1	4	0
Drafting	12	4	6	2
Electronics	9	8	7	2
Food Services	2	5	2	3
Gen. Agriculture	6	7	3	2
Home Economics	2	2	0	1
Horticulture, etc.	19	14	6	4
Machine Shop	2	6	1	3
Mechanics	18	12	5	10
Office Practices	7	5	1	5
Plastics	1	1	0	0
Practical Nursing	19	11	9	3
Printing	1	3	0	2
Secretarial	28	10	5	3
Sheet Metal, etc.	2	6	1	3
Tailoring	1	6	3	1
Undecided	38	81	14	30
Omitted	162	162	42	42
Totals	401	401	130	130

TOWN: MADISON

NUMBER OF STUDENTS EXPECTING TO GRADUATE
FROM HIGH SCHOOL

Do you expect to graduate from high school?	Grades 9-10		12		Grades 9-10		12	
	1966				1972			
TOTALS FOR ALL HIGH SCHOOLS SURVEYED	#	%	#	%	#	%	#	%
Yes, I expect to graduate with my class	897	90	342	92	1897	92	642	97
Yes, I expect to graduate but later than my class	19	2	4	1	16	1	1	0
No, I expect to leave school and not graduate	5	1	*		21	1	2	0
I do not know at this time	77	7	17	5	131	6	17	3
Omit	2	0	7	2	8	0	2	0

Do you expect to graduate from high school?	Grade 9-10		12	
	1972			
TOTALS FOR DANIEL HAND HIGH	#	%	#	%
Yes, I expect to graduate with my class	348	92	111	97
Yes, I expect to graduate, but later than my class	4	1	0	0
No, I expect to leave school and not graduate	0	0	1	1
I do not know at this time	22	6	2	2
Omit	2	1	0	0

* Item not included on 12th grade questionnaire - 1966

TOWN: MADISON
THOUGHTS OF STUDENTS CONCERNING THEIR
FUTURE AFTER LEAVING HIGH SCHOOL

What are your present thoughts concerning your future after you leave high school?	Grades 9-10		Grades 12		Grades 9-10		Grades 12	
	1966				1972			
TOTALS FOR ALL HIGH SCHOOLS SURVEYED	#	%	#	%	#	%	#	%
I have a rather specific plan for the college and/or work I would like	369	37	247	67	602	29	421	64
I have a plan, but I am not sure of it	285	28	81	22	578	28	136	20
I have thought about it, but I do not know what I want to do	196	20	31	8	536	26	68	10
I have not given it much thought	40	4	6	2	130	6	8	1
I am concerned about it; I could use some assistance to help me decide	111	11	*		208	10	24	4
Omit	0	0	5	1	19	1	7	1

What are your present thoughts concerning your future after you leave high school?	Grades 9-10		Grades 12	
	1972			
TOTALS FOR DANIEL HAND HIGH	#	%	#	%
I have a rather specific plan for the college and/or work I would like	113	30	75	66
I have a plan, but I am not sure of it	110	29	31	27
I have thought about it, but I do not know what I want to do	99	26	5	4
I have not given it much thought	18	5	0	0
I am concerned about it; I could use some assistance to help me decide	32	9	3	3
Omit	4	1	0	0

*Item not included on 12th grade questionnaire - 1966

TOWN: MADISON
POST-HIGH SCHOOL PLANS
WHAT STUDENTS THINK WILL ACTUALLY HAPPEN UPON
LEAVING HIGH SCHOOL (GRADUATION OR OTHER)

What do you think actually will happen when you leave high school?	Grades 9-10		Grades 12		Grades 9-10		Grades 12	
	1966				1972			
TOTALS FOR ALL HIGH SCHOOLS SURVEYED	#	%	#	%	#	%	#	%
Work full-time	120	8	60	12	178	8	78	12
Work and education part-time	108	8	43	10	143	7	56	8
Enter apprenticeship program	27	2	9	2	41	2	13	2
Attend 4-yr. college or univ.	495	35	164	34	872	43	308	46
Attend 2-yr. college	168	12	60	12	148	7	64	10
Take vocational course work	50	4	20	4	21	1	13	2
Attend technical institute	56	4	25	5	49	2	18	3
Take business school courses	56	4	5	1	18	1	8	1
Get married and keep house	33	2	15	3	17	1	2	0
Get married and continue work	62	4	29	6	45	2	22	3
Enter Armed Forces	160	11	42	9	103	5	27	4
At this time I do not know	93	6	10	2	424	20	51	8
Omit	0	0	0	0	14	1	4	1

What do you think actually will happen when you leave high school?	Grades 9-10		Grades 12	
	1972			
TOTALS FOR DANIEL HAND HIGH	#	%	#	%
Work full-time	23	6	9	8
Work and education part-time	15	4	7	6
Enter apprenticeship program	2	1	2	2
Attend 4-yr. college or univ.	223	59	69	60
Attend 2-yr. college	28	7	9	8
Take vocational course work	3	1	3	3
Attend technical institute	9	2	1	1
Take business school courses	1	0	2	1
Get married and keep house	4	1	1	1
Get married and continue work	7	2	1	1
Enter Armed Forces	6	2	3	3
At this time I do not know	52	14	6	5
Omit	3	1	1	1

OCCUPATIONAL PLANS OF STUDENTS

TOTALS FOR ALL HIGH SCHOOLS SURVEYED - 1972

CATEGORY	Grade 9-10 Choice 1st	2nd	3rd	Grade 12 Choice 1st	2nd	3rd
Agriculture, Forestry, Fishing	149	121	138	42	36	55
Amusement - Entertainment	210	177	190	49	42	60
Building Construction	119	127	87	22	33	31
Business-Office Occupations	152	166	174	53	52	42
Distributive Occupations	55	68	65	16	20	30
Equipment Services	63	66	54	15	18	18
Food Services	43	83	102	6	20	27
Government	89	104	118	29	31	37
Health Services	97	136	83	48	36	32
Manufacturing - General	9	26	23	4	6	8
Manufacturing - Textiles & Garments	36	56	53	13	17	17
Personal Services	74	75	104	20	23	25
Printing and Graphic Arts	46	67	67	16	22	11
Professional	749	556	431	283	205	152
Public Utilities	2	5	14	2	6	8
Technician	26	44	64	14	31	16
Transportation & Heavy Equipment	104	101	154	19	27	28
Omitted	50	95	152	13	39	67
Totals	2073	2073	2073	664	664	664

TOWN: MADISON

OCCUPATIONAL PLANS OF STUDENTS - 1972

CATEGORY	Grade 9-10 Choice 1st	2nd	3rd	Grade 12 Choice 1st	2nd	3rd
Agriculture, Forestry, Fishing	16	21	24	5	9	8
Amusement - Entertainment	31	28	35	14	10	11
Building Construction	18	21	13	3	2	6
Business-Office Occupations	17	22	21	7	6	8
Distributive Occupations	12	8	15	4	4	6
Equipment Services	9	6	9	2	3	2
Food Services	6	11	8	1	4	3
Government	15	14	17	2	4	5
Health Services	17	30	15	8	6	5
Manufacturing - General	0	5	2	0	0	0
Manufacturing - Textiles & Garments	11	13	10	0	3	1
Personal Services	11	21	23	0	4	6
Printing and Graphic Arts	12	12	12	1	3	2
Professional	173	123	108	63	48	32
Public Utilities	0	0	0	1	0	1
Technician	3	9	12	0	3	3
Transportation & Heavy Equipment	19	17	26	1	3	5
Omitted	6	15	26	2	2	10
Totals	376	376	376	114	114	114

OCCUPATIONAL PLANS OF STUDENTS

TOTALS OF ALL 9th & 10th GRADERS SURVEYED

CATEGORY	1966		1972	
	Frequency	%	Frequency	%
Agriculture, Forestry, Fishing	95	3	408	5
Amusement - Entertainment	219	7	577	9
Building Construction	105	4	333	5
Business-Office Occupations	315	11	492	8
Distributive Occupations	99	3	188	3
Equipment Services	71	2	183	3
Food Services	80	3	228	4
Government	252	8	311	5
Health Services	155	5	316	6
Manufacturing - General	45	1	58	1
Manufacturing - Textiles & Garments	62	2	145	2
Personal Services	174	6	253	5
Printing and Graphic Arts	87	3	180	3
Professional	954	32	1736	28
Public Utilities	12	0	21	0
Technician	144	5	134	2
Transportation & Heavy Equipment	153	5	359	6
Omitted	0	0	297	5
Totals	3022	100	6219	100

OCCUPATIONAL PLANS OF STUDENTS

TOTALS FOR ALL SENIORS SURVEYED

CATEGORY	1966		1972	
	Frequency	%	Frequency	%
Agriculture, Forestry, Fishing	51	5	133	7
Amusement - Entertainment	72	7	151	8
Building Construction	24	2	86	4
Business-Office Occupations	134	12	147	7
Distributive Occupations	50	5	66	3
Equipment Services	30	3	51	3
Food Services	32	3	53	3
Government	81	7	97	5
Health Services	45	4	116	6
Manufacturing - General	15	1	18	1
Manufacturing - Textiles & Garments	30	3	47	2
Personal Services	45	4	68	3
Printing and Graphic Arts	39	3	49	2
Professional	339	31	640	32
Public Utilities	6	1	16	1
Technician	54	5	61	3
Transportation & Heavy Equipment	44	4	74	4
Omitted	0	0	119	6
Totals	1091	100	1992	100

TOWN: MADISON

STUDENTS INTEREST IN OCCUPATIONAL/VOCATIONAL PROGRAMS

If occupational/vocational programs were offered as part of your high school curriculum, would you take one or several of them?

TOTALS FOR ALL HIGH SCHOOLS SURVEYED

	#	%
I am already taking one	296	11
Yes, I would take one	1595	58
No, I would not take one	606	22
Omit	240	9

If occupational/vocational programs were offered as part of your high school curriculum, would you take one or several of them?

TOTALS FOR DANIEL HAND HIGH

	#	%
I am already taking one	21	6
Yes, I would take one	241	43
No, I would not take one	153	31
Omit	75	16

STUDENTS CHOICES FOR OCCUPATIONAL/VOCATIONAL COURSES THAT COULD OR SHOULD BE INCLUDED IN THEIR HIGH SCHOOL CURRICULUM

*Note: Represents views of students that are currently taking or would take one or more of the following courses.

TOTALS FOR ALL HIGH SCHOOLS SURVEYED	Grade 9-10		Grade 12	
	1st choice	2nd choice	1st choice	2nd choice
Appliance Repair	5	3	2	1
Auto Body Repair	52	62	13	26
Bookkeeping	16	39	11	6
Building Trades	50	25	12	10
Commercial Art	109	52	36	16
Cosmetology	50	28	7	17
Data Processing	24	19	16	14
Dental Asst., etc.	106	66	49	28
Distributive Ed	13	16	11	8
Drafting	57	34	22	16
Electronics	82	56	29	13
Food Services	31	44	17	18
Gen. Agriculture	45	50	7	20
Home Economics	33	46	4	9
Horticulture, etc.	113	74	55	32
Machine Shop	8	23	4	8
Mechanics	90	67	29	31
Office Practices	22	28	8	14
Plastics	5	16	2	3
Practical Nursing	133	67	44	24
Printing	12	12	3	6
Secretarial	96	64	20	15
Sheet Metal, etc.	13	19	2	6
Tailoring	29	38	18	16
Undecided	215	461	61	125
Omitted	664	664	182	182
Total	2073	2073	664	664

STUDENTS CHOICES FOR OCCUPATIONAL/VOCATIONAL COURSES THAT COULD OR SHOULD BE INCLUDED IN THEIR HIGH SCHOOL CURRICULUM

*Note: Represents views of students that are currently taking ot who would take one or more of the following courses.

TOWN: MADISON	Grade 9-10 1st choice	Grade 9-10 2nd choice	Grade 12 1st choice	Grade 12 2nd choice
Appliance Repair	0	0	0	0
Auto Body Repair	4	10	4	4
Bookkeeping	0	2	0	2
Building Trades	3	2	1	1
Commercial Art	22	5	7	2
Cosmetology	2	2	2	1
Data Processing	3	2	3	4
Dental Asst., etc.	17	8	9	3
Distributive Ed	5	3	0	2
Drafting	7	4	2	1
Electronics	10	5	4	1
Food Services	4	11	2	1
Gen. Agriculture	7	5	0	4
Home Economics	4	2	0	2
Horticulture, etc.	9	12	9	6
Machine Shop	1	1	0	0
Mechanics	9	2	4	3
Office Practices	3	3	0	1
Plastics	0	2	2	0
Practical Nursing	18	5	7	4
Printing	4	1	0	1
Secretarial	15	9	3	3
Sheet Metal, etc.	0	0	0	1
Tailoring	5	12	4	4
Undecided	40	84	7	19
Omitted	184	184	44	44
Totals	376	376	114	114

TOWN: OLD SAYBROOK

NUMBER OF STUDENTS EXPECTING TO GRADUATE
FROM HIGH SCHOOL

Do you expect to graduate from high school?	Grades 9-10		Grades 12		Grades 9-10		Grades 12	
TOTALS FOR ALL HIGH SCHOOLS SURVEYED	1966				1972			
	#	%	#	%	#	%	#	%
Yes, I expect to graduate with my class	897	90	642	92	1897	92	642	97
Yes, I expect to graduate, but later than my class	19	2	4	1	18	1	1	0
No, I expect to leave school and not graduate	5	1	*		21	1	2	0
I do not know at this time	77	7	17	5	131	6	17	3
Omit	2	0	7	2	8	0	2	0

Do you expect to graduate from high school?	Grades 9-10		Grades 12	
TOTALS FOR OLD SAYBROOK SENIOR HIGH	1972			
	#	%	#	%
Yes, I expect to graduate with my class	279	94	109	97
Yes, I expect to graduate, but later than my class	0	0	0	0
No, I expect to leave school and not graduate	1	0	0	0
I do not know at this time	14	5	2	2
Omit	3	1	1	1

*Item not included on 12th grade questionnaire - 1966.

TOWN: OLD SAYBROOK
THOUGHTS OF STUDENTS CONCERNING THEIR
FUTURE AFTER LEAVING HIGH SCHOOL

What are your present thoughts concerning your future after you leave high school?	Grades 9-10		Grades 12		Grades 9-10		Grades 12	
	1966				1972			
TOTALS FOR ALL HIGH SCHOOLS SURVEYED	#	%	#	%	#	%	#	%
I have a rather specific plan for the college and/or work I would like	369	37	247	67	602	29	421	64
I have a plan, but I am not sure of it	285	28	81	22	578	28	136	20
I have thought about it, but I do not know what I want to do	196	20	31	8	536	26	68	10
I have not given it much thought	40	4	6	2	130	6	8	1
I am concerned about it; I could use some assistance to help me decide	111	11	*		208	10	24	4
Omit	0	0	5	1	19	1	7	1

What are your present thoughts concerning your future after you leave high school?	Grades 9-10		Grades 12	
	1972			
TOTALS FOR OLD SAYBROOK SENIOR HIGH	#	%	#	%
I have a rather specific plan for the college and/or work I would like	87	29	66	59
I have a plan, but I am not sure of it	79	27	28	25
I have thought about it, but I do not know what I want to do	74	25	15	13
I have not given it much thought	20	7	0	0
I am concerned about it; I could use some assistance to help me decide	33	11	2	2
Omit	4	1	1	1

*Item not included on 12th grade questionnaire - 1966

TOWN: OLD SAYBROOK
POST-HIGH SCHOOL PLANS
WHAT STUDENTS THINK WILL ACTUALLY HAPPEN UPON
LEAVING HIGH SCHOOL (GRADUATION OR OTHER)

What do you think actually will happen when you leave high school?	Grades 9-10		Grades 12		Grades 9-10		Grades 12	
	1966				1972			
TOTALS FOR ALL HIGH SCHOOLS SURVEYED	#	%	#	%	#	%	#	%
Work full-time	120	8	60	12	178	8	78	12
Work and education part-time	108	8	43	10	143	7	56	8
Enter apprenticeship program	27	2	9	2	41	2	13	2
Attend 4-yr. college or univ.	495	35	164	34	872	43	308	46
Attend 2-yr. college	168	12	60	12	148	7	64	10
Take vocational course work	50	4	20	4	21	1	13	2
Attend technical institute	56	4	25	5	49	2	18	3
Take business school courses	56	4	5	1	18	1	8	1
Get married and keep house	33	2	15	3	17	1	2	0
Get married and continue work	62	4	29	6	45	2	22	3
Enter Armed Forces	160	11	42	9	103	5	27	4
At this time I do not know	93	6	10	2	424	20	51	8
Omit	0	0	0	0	14	1	4	1

What do you think actually will happen when you leave high school?	Grades 9-10		Grades 12	
	1972			
TOTALS FOR OLD SAYBROOK SENIOR HIGH	#	%	#	%
Work full-time	23	8	13	12
Work and education part-time	18	6	5	4
Enter apprenticeship program	7	2	1	1
Attend 4-yr. college or univ.	126	42	59	53
Attend 2-yr. college	27	9	7	6
Take vocational course work	2	1	2	2
Attend technical institute	9	3	5	4
Take business school courses	3	1	1	1
Get married and keep house	0	0	0	0
Get married and continue work	3	1	2	2
Enter Armed Forces	11	4	5	4
At this time I do not know	66	22	10	9
Omit	2	1	2	2

OCCUPATIONAL PLANS OF STUDENTS

TOTALS FOR ALL HIGH SCHOOLS SURVEYED - 1972

CATEGORY	Grade 9-10 Choice			Grade 12 Choice		
	1st	2nd	3rd	1st	2nd	3rd
Agriculture, Forestry, Fishing	149	121	138	42	36	55
Amusement - Entertainment	210	177	190	49	42	60
Building Construction	119	127	87	22	33	31
Business-Office Occupations	152	166	174	53	52	42
Distributive Occupations	55	68	65	16	20	30
Equipment Services	63	66	54	15	18	18
Food Services	43	83	102	6	20	27
Government	89	104	118	29	31	37
Health Services	97	136	83	48	36	32
Manufacturing - General	9	26	23	4	6	8
Manufacturing - Textiles & Garments	36	56	53	13	17	17
Personal Services	74	75	104	20	23	25
Printing and Graphic Arts	46	67	67	16	22	11
Professional	749	556	431	283	205	152
Public Utilities	2	5	14	2	6	8
Technician	26	44	64	14	31	16
Transportation & Heavy Equipment	104	101	154	19	27	28
Omitted	50	95	152	13	39	67
Totals	2073	2073	2073	664	664	664

TOWN: OLD SAYBROOK

OCCUPATIONAL PLANS OF STUDENTS - 1972

CATEGORY	Grade 9-10 Choices			Grade 12 Choice		
	1st	2nd	3rd	1st	2nd	3rd
Agriculture, Forestry, Fishing	24	13	16	8	5	12
Amusement - Entertainment	29	25	29	10	5	4
Building Construction	17	22	14	5	5	5
Business-Office Occupations	18	21	16	10	10	7
Distributive Occupations	7	5	11	1	3	5
Equipment Services	4	5	7	0	2	3
Food Services	10	9	13	2	5	6
Government	10	13	14	6	4	1
Health Services	17	17	12	7	9	8
Manufacturing - General	1	3	3	1	2	0
Manufacturing - Textiles & Garments	4	12	13	3	3	3
Personal Services	13	12	19	7	2	3
Printing and Graphic Arts	7	8	19	3	4	1
Professional	110	91	59	41	37	30
Public Utilities	1	1	3	0	2	3
Technician	5	6	14	1	6	6
Transportation & Heavy Equipment	9	16	18	4	0	3
Omitted	11	18	17	3	8	11
Totals	297	297	297	112	112	112

OCCUPATIONAL PLANS OF STUDENTS

TOTALS OF ALL 9th & 10th GRADERS SURVEYED

CATEGORY	1966 Frequency	1966 %	1972 Frequency	1972 %
Agriculture, Forestry, Fishing	95	3	408	5
Amusement - Entertainment	219	7	577	9
Building Construction	105	4	333	5
Business-Office Occupations	315	11	492	8
Distributive Occupations	99	3	188	3
Equipment Services	71	2	183	3
Food Services	80	3	228	4
Government	252	8	311	5
Health Services	155	5	316	6
Manufacturing - General	45	1	58	1
Manufacturing - Textiles & Garments	62	2	145	2
Personal Services	174	6	253	5
Printing and Graphic Arts	87	3	180	3
Professional	954	32	1736	28
Public Utilities	12	0	21	0
Technician	144	5	134	2
Transportation & Heavy Equipment	153	5	359	6
Omitted	0	0	297	5
Totals	3022	100	6219	100

OCCUPATIONAL PLANS OF STUDENTS

TOTALS FOR ALL SENIORS SURVEYED

CATEGORY	1966		1972	
	Frequency	%	Frequency	%
Agriculture, Forestry, Fishing	51	5	133	7
Amusement - Entertainment	72	7	151	8
Building Construction	24	2	86	4
Business-Office Occupations	134	12	147	7
Distributive Occupations	50	5	66	3
Equipment Services	30	3	51	3
Food Services	32	3	53	3
Government	81	7	97	5
Health Services	45	4	116	6
Manufacturing - General	15	1	18	1
Manufacturing - Textiles & Garments	30	3	47	2
Personal Services	45	4	68	3
Printing and Graphic Arts	39	3	49	2
Professional	339	31	640	32
Public Utilities	6	1	16	1
Technician	54	5	61	3
Transportation & Heavy Equipment	44	4	74	4
Omitted	0	0	119	6
Totals	1091	100	1992	100

TOWN: OLD SAYBROOK

STUDENTS INTEREST IN OCCUPATIONAL/VOCATIONAL PROGRAMS

If occupational/vocational programs were offered as part of your high school curriculum, would you take one or several of them?

TOTALS FOR ALL HIGH SCHOOLS SURVEYED

	#	%
I am already taking one	296	11
Yes, I would take one	1595	58
No, I would not take one	606	22
Omit	240	9

If occupational/vocational programs were offered as part of your high school curriculum, would you take one or several of them?

TOTALS FOR OLD SAYBROOK SENIOR HIGH

	#	%
I am already taking one	32	8
Yes, I would take one	251	62
No, I would not take one	91	22
Omit	35	8

STUDENTS CHOICES FOR OCCUPATIONAL/VOCATIONAL COURSES THAT COULD OR SHOULD BE INCLUDED IN THEIR HIGH SCHOOL CURRICULUM

*Note: Represents views of students that are currently taking or would take one or more of the following courses.

TOTALS FOR ALL HIGH SCHOOLS SURVEYED	Grade 9-10		Grade 12	
	1st choice	2nd choice	1st choice	2nd choice
Appliance Repair	5	3	2	1
Auto Body Repair	52	62	13	26
Bookkeeping	16	39	11	6
Building Trades	50	25	12	10
Commercial Art	109	52	36	16
Cosmetology	50	28	7	17
Data Processing	24	19	16	14
Dental Asst., etc.	106	66	49	28
Distributive Ed	13	16	11	8
Drafting	57	34	22	16
Electronics	82	56	29	13
Food Services	31	44	17	18
Gen. Agriculture	45	50	7	20
Home Economics	33	46	4	9
Horticulture, etc.	113	74	55	32
Machine Shop	8	23	4	8
Mechanics	90	67	29	31
Office Practices	22	28	8	14
Plastics	5	16	2	3
Practical Nursing	133	67	44	24
Printing	12	12	3	6
Secretarial	96	64	20	15
Sheet Metal, etc.	13	19	2	6
Tailoring	29	38	18	16
Undecided	215	461	61	125
Omitted	664	664	182	182
Totals	2073	2073	664	664

STUDENTS CHOICES FOR OCCUPATIONAL/VOCATIONAL COURSES THAT COULD OR SHOULD BE INCLUDED IN THEIR HIGH SCHOOL CURRICULUM

*Note: Represents views of students that are currently taking or who would take one or more of the following courses.

TOWN: OLD SAYBROOK	Grade 9-10 1st choice	Grade 9-10 2nd choice	Grade 12 1st choice	Grade 12 2nd choice
Appliance Repair	0	0	0	0
Auto Body Repair	8	8	0	3
Bookkeeping	1	4	0	0
Building Trades	15	3	4	2
Commercial Art	24	6	6	5
Cosmetology	4	5	0	4
Data Processing	4	2	3	2
Dental Asst., etc.	19	11	10	2
Distributive Ed	0	2	1	2
Drafting	9	4	5	6
Electronics	12	9	4	4
Food Services	1	8	3	6
Gen. Agriculture	7	11	1	4
Home Economics	3	5	1	1
Horticulture, etc.	14	6	13	9
Machine Shop	3	8	1	0
Mechanics	9	10	5	1
Office Practices	2	3	0	1
Plastics	0	3	0	0
Practical Nursing	13	5	5	2
Printing	0	0	0	0
Secretarial	8	5	5	1
Sheet Metal, etc.	2	0	0	2
Tailoring	5	3	1	2
Undecided	35	77	17	26
Omitted	99	99	27	27
Totals	297	297	112	112

TOWN: WESTBROOK

NUMBER OF STUDENTS EXPECTING TO GRADUATE
FROM HIGH SCHOOL

Do you expect to graduate from high school?	Grades 9-10		Grades 12		Grades 9-10		Grades 12	
	1966				1972			
TOTALS FOR ALL HIGH SCHOOLS SURVEYED	#	%	#	%	#	%	#	%
Yes, I expect to graduate with my class	897	90	342	92	1897	92	642	97
Yes, I expect to graduate but later than my class	19	2	4	1	16	1	1	0
No, I expect to leave school and not graduate	5	1	*		21	1	2	0
I do not know at this time	77	7	17	5	131	6	17	3
Omit	2	0	7	2	8	0	2	0

Do you expect to graduate from high school?	Grades 9-10		Grades 12	
	1972			
TOTALS FOR WESTBROOK JR. - SR. HIGH	#	%	#	%
Yes, I expect to graduate with my class	112	89	39	95
Yes, I expect to graduate, but later than my class	2	2	0	0
No, I expect to leave school and not graduate	2	2	0	0
I do not know at this time	9	7	2	5
Omit	0	0	0	0

* Item not included on 12th grade questionnaire - 1966

TOWN: WESTBROOK
THOUGHTS OF STUDENTS CONCERNING THEIR
FUTURE AFTER LEAVING HIGH SCHOOL

What are your present thoughts concerning your future after you leave high school?	Grades 9-10 1966		Grades 12 1966		Grades 9-10 1972		Grades 12 1972	
TOTALS FOR ALL HIGH SCHOOLS SCHOOLS SURVEYED	#	%	#	%	#	%	#	%
I have a rather specific plan for the college and/or work I would like	369	37	247	67	602	29	421	64
I have a plan, but I am not sure of it	285	28	81	22	578	28	136	20
I have thought about it, but I do not know what I want to do	196	20	31	8	536	26	68	10
I have not given it much thought	40	4	6	2	130	6	8	1
I am concerned about it; I could use some assistance to help me decide	111	11	*		208	10	24	4
Omit	0	0	5	1	19	1	7	1

What are your present thoughts concerning your future after you leave high school?	Grades 9-10 1972		Grades 12 1972	
TOTALS FOR WESTBROOK JR. - SR. HIGH	#	%	#	%
I have a rather specific plan for the college and/or work I would like	31	25	18	44
I have a plan, but I am not sure of it	34	27	9	22
I have thought about it, but I do not know what I want to do	43	35	8	20
I have not given it much thought	8	6	1	2
I am concerned about it; I could use some assistance to help me decide	9	7	3	7
Omit	0	0	2	5

* Item not included on 12th grade questionnaire - 1966

TOWN: WESTBROOK
POST-HIGH SCHOOL PLANS
WHAT STUDENTS THINK WILL ACTUALLY HAPPEN UPON
LEAVING HIGH SCHOOL (GRADUATION OR OTHER)

What do you think actually will happen when you leave high school?	Grades 9-10		Grades 12		Grades 9-10		Grades 12	
	1966				1972			
TOTALS FOR ALL HIGH SCHOOLS SURVEYED	#	%	#	%	#	%	#	%
Work full-time	120	8	60	12	178	8	78	12
Work and education part-time	108	8	43	10	143	7	56	8
Enter apprenticeship program	27	2	9	2	41	2	13	2
Attend 4-yr. college or univ.	495	35	164	34	872	43	308	46
Attend 2-yr. college	168	12	60	12	148	7	64	10
Take vocational course work	50	4	28	4	21	1	13	2
Attend technical institute	56	4	25	5	49	2	18	3
Take business school courses	56	4	5	1	18	1	8	1
Get married and keep house	33	2	15	3	17	1	2	0
Get married and continue work	62	4	29	6	45	2	22	3
Enter Armed Forces	160	11	42	9	103	5	27	4
At this time I do not know	93	6	10	2	424	20	51	8
Omit	0	0	0	0	14	1	4	1

What do you think actually will happen when you leave high school?	Grades 9-10		Grades 12	
	1972			
TOTALS FOR WESTBROOK JR. - SR. HIGH	#	%	#	%
Work full-time	17	14	8	20
Work and education part-time	15	12	2	5
Enter apprenticeship program	2	2	0	0
Attend 4-yr. college or univ.	32	26	6	15
Attend 2-yr. college	8	6	4	9
Take vocational course work	3	2	2	5
Attend technical institute	2	2	2	5
Take business school courses	2	2	1	2
Get married and keep house	3	2	0	0
Get married and continue work	6	5	6	15
Enter Armed Forces	7	5	5	12
At this time I do not know	28	22	5	12
Omit	0	0	0	0

OCCUPATIONAL PLANS OF STUDENTS

TOTALS FOR ALL HIGH SCHOOLS SURVEYED - 1972

CATEGORY	Grade 9-10 Choice 1st	2nd	3rd	Grade 12 Choice 1st	2nd	3rd
Agriculture, Forestry, Fishing	149	121	138	42	36	55
Amusement - Entertainment	210	177	190	49	42	60
Building Construction	119	127	87	22	33	31
Business-Office Occupations	152	166	174	53	52	42
Distributive Occupations	55	68	65	16	20	30
Equipment Services	63	66	54	15	18	18
Food Services	43	83	102	6	20	27
Government	89	104	118	29	31	37
Health Services	97	136	83	48	36	32
Manufacturing - General	9	26	23	4	6	8
Manufacturing - Textiles & Garments	36	56	53	13	17	17
Personal Services	74	75	104	20	23	25
Printing and Graphic Arts	46	67	67	16	22	11
Professional	749	556	431	283	205	152
Public Utilities	2	5	14	2	6	8
Technician	26	44	64	14	31	16
Transportation & Heavy Equipment	104	101	154	19	27	28
Omitted	50	95	152	13	39	67
Totals	2073	2073	2073	664	664	664

TOWN: WESTBROOK

OCCUPATIONAL PLANS OF STUDENTS - 1972

CATEGORY	Grade 9-10 Choice			Grade 12 Choice		
	1st	2nd	3rd	1st	2nd	3rd
Agriculture, Forestry, Fishing	8	5	11	6	3	4
Amusement - Entertainment	22	14	10	3	2	3
Building Construction	4	1	4	1	1	0
Business-Office Occupations	14	9	16	4	9	4
Distributive Occupations	2	9	2	2	0	1
Equipment Services	6	8	3	1	2	2
Food Services	2	10	10	0	1	4
Government	7	8	8	3	1	5
Health Services	6	4	5	2	1	1
Manufacturing - General	1	5	3	0	0	0
Manufacturing - Textiles & Garments	0	1	2	0	0	2
Personal Services	8	3	4	2	5	3
Printing and Graphic Arts	0	1	1	3	2	2
Professional	35	32	26	11	8	8
Public Utilities	0	1	2	0	0	0
Technician	0	2	2	2	1	0
Transportation & Heavy Equipment	10	12	15	0	2	1
Omitted	0	0	1	1	3	1
Totals	125	125	125	41	41	41

OCCUPATIONAL PLANS OF STUDENTS

TOTALS OF ALL 9th & 10th GRADERS SURVEYED

CATEGORY	1966		1972	
	Frequency	%	Frequency	%
Agriculture, Forestry, Fishing	95	3	408	5
Amusement - Entertainment	219	7	577	9
Building Construction	105	4	333	5
Business-Office Occupations	315	11	492	8
Distributive Occupations	99	3	188	3
Equipment Services	71	2	183	3
Food Services	80	3	228	4
Government	252	8	311	5
Health Services	155	5	316	6
Manufacturing - General	45	1	58	1
Manufacturing - Textiles & Garments	62	2	145	2
Personal Services	174	6	253	5
Printing and Graphic Arts	87	3	180	3
Professional	954	32	1736	28
Public Utilities	12	0	21	0
Technician	144	5	134	2
Transportation & Heavy Equipment	153	5	359	6
Omitted	0	0	297	5
Totals	3022	100	6219	100

OCCUPATIONAL PLANS OF STUDENTS

TOTALS FOR ALL SENIORS SURVEYED

CATEGORY	1966		1972	
	Frequency	%	Frequency	%
Agriculture, Forestry, Fishing	51	5	133	7
Amusement - Entertainment	72	7	151	8
Building Construction	24	2	86	4
Business-Office Occupations	134	12	147	7
Distributive Occupations	50	5	66	3
Equipment Services	30	3	51	3
Food Services	32	3	53	3
Government	81	7	97	5
Health Services	45	4	116	6
Manufacturing - General	15	1	18	1
Manufacturing - Textiles & Garments	30	3	47	2
Personal Services	45	4	68	3
Printing and Graphic Arts	39	3	49	2
Professional	339	31	640	32
Public Utilities	6	1	16	1
Technician	54	5	61	3
Transportation & Heavy Equipment	44	4	74	4
Omitted	0	0	119	6
Totals	1091	100	1992	100

TOWN: WESTBROOK

STUDENTS INTEREST IN OCCUPATIONAL/VOCATIONAL PROGRAMS

If occupational/vocational programs were offered as part of your high school curriculum, would you take one or several of them?

TOTALS FOR ALL HIGH SCHOOLS SURVEYED

	#	%
I am already taking one	296	11
Yes, I would take one	1595	58
No, I would not take one	606	22
Omit	240	9

If occupational/vocational programs were offered as part of your high school curriculum, would you take one or several of them?

TOTALS FOR WESTBROOK JR. - SR. HIGH

	#	%
I am already taking one	12	7
Yes, I would take one	134	81
No, I would not take one	15	9
Omit	5	3

STUDENTS CHOICES FOR OCCUPATIONAL/VOCATIONAL COURSES THAT COULD OR SHOULD BE INCLUDED IN THEIR HIGH SCHOOL CURRICULUM

*Note: Represents views of students that are currently taking or would take one or more of the following courses.

TOTALS FOR ALL HIGH SCHOOLS SURVEYED	Grade 9-10		Grade 12	
	1st choice	2nd choice	1st choice	2nd choice
Appliance Repair	5	3	2	1
Auto Body Repair	52	62	13	26
Bookkeeping	16	39	11	6
Building Trades	50	25	12	10
Commercial Art	109	52	36	16
Cosmetology	50	28	7	17
Data Processing	24	19	16	14
Dental Asst., etc.	106	66	49	28
Distributive Ed	13	16	11	8
Drafting	57	34	22	16
Electronics	82	56	29	13
Food Services	31	44	17	18
Gen. Agriculture	45	50	7	20
Home Economics	33	46	4	9
Horticulture, etc.	113	74	55	32
Machine Shop	8	23	4	8
Mechanics	90	67	29	31
Office Practices	22	28	8	14
Plastics	5	16	2	3
Practical Nursing	133	67	44	24
Printing	12	12	3	6
Secretarial	96	64	20	15
Sheet Metal, etc.	13	19	2	6
Tailoring	29	38	18	16
Undecided	215	461	61	125
Omitted	664	664	182	182
Totals	2073	2073	664	664

STUDENTS CHOICES FOR OCCUPATIONAL/VOCATIONAL COURSES THAT COULD OR SHOULD BE INCLUDED IN THEIR HIGH SCHOOL CURRICULUM

*Note: Represents views of students that are currently taking or who would take one or more of the following courses.

TOWN: WESTBROOK	Grade 9-10		Grade 12	
	1st choice	2nd choice	1st choice	2nd choice
Appliance Repair	0	0	0	0
Auto Body Repair	6	5	2	2
Bookkeeping	0	5	4	0
Building Trades	0	1	0	1
Commercial Art	2	5	5	1
Cosmetology	6	4	1	1
Data Processing	1	2	1	1
Dental Asst., etc.	4	7	3	3
Distributive Ed	1	1	0	0
Drafting	4	1	2	0
Electronics	5	1	2	0
Food Services	3	3	2	2
Gen. Agriculture	5	2	0	2
Home Economics	3	2	0	1
Horticulture, etc.	15	5	3	1
Machine Shop	0	3	0	1
Mechanics	11	10	2	4
Office Practices	2	4	2	3
Plastics	1	3	0	2
Practical Nursing	15	6	2	4
Printing	0	1	0	0
Secretarial	7	5	1	0
Sheet Metal, etc.	3	1	1	0
Tailoring	0	4	0	2
Undecided	14	27	5	7
Omitted	17	17	3	3
Totals	125	125	41	41

PARENTS

Survey questionnaires were sent home to parents by their sons and daughters. Questionnaires were returned via the same process. Results of the parent survey are presented in percentage form even though the number of questionnaires completed was considerably smaller than the student base. The total of 1001 parent surveys returned equals approximately 27% of the student toal and represents a very commendable numerical participation for this type of survey technique.

In response to the question:

If the vocational courses your son or daughter wants were offered at a convenient time in the public school vocational and technical programs, would you permit your son or daughter to enroll?

90% Yes 3% No 6% Undecided 1% Omitted

While in response to the question:

If the vocational/occupation courses your son or daughter wants were offered at a regional training center on a 1/2 day basis for an 8 - 10 week period and transportation was provided, would you encourage your child to enroll?

78% Yes 7% No 14% Undecided 1% Omitted

For youth who think that they may go to work directly upon leaving high school (this could range from 30 - 40% for 12th grade students) the parents responding thought that high schools should assist them to:

	Grades 9 & 10	Grade 12
Discover and understand their employment interests and abilities?	93%	95%
Enter, if they wish, vocational and technical education courses in addition to those in general education:	93%	97%
Understand employment trends and conditions-the type and rate of change in jobs and industry?	82%	86%
Understand how to locate and apply for jobs?	93%	93%
Understand factors which contribute to under-employment and unemployment?	83%	84%

Included in the parent survey was a section in which parents could indicate their agreement or disagreement with the first, second and third occupational choice of their children. In general, there is a great deal of harmony and accord between parent and child in occupational goals, with a higher percentage of agreement about the first choice than with the second and third choices. Also, there is a slightly higher percentage agreement between 12th grade students and parents than between 9th and 10th grade students and parents.

Grades 9 & 10

	Agree	Disagree	Omit
1st choice	87%	8%	5%
2nd choice	77%	15%	8%
3rd choice	71%	18%	11%

Grade 12

1st choice	89%	4%	7%
2nd choice	77%	10%	13%
3rd choice	70%	13%	17%

VIEWPOINTS OF PARENTS OF NINTH AND TENTH GRADE STUDENTS
TOWARD FACTORS WHICH LEAD TO OR LENGTHEN
PERIODS OF UNEMPLOYMENT

Factors	1966	Degree of Importance Most	Some	Least
Technological changes: automation, changes in methods, materials, machines, processes		36%	50%	14%
Limited job knowledge, skill-education and training		80%	17%	3%
Uncertainty as to where the jobs are and how to look for a job; also wages, hours, conditions		29%	54%	17%
Inability to make a good impression on potential employers (aptitude, appearance)		48%	42%	10%

	1972	Degree of Importance Most	Some	Least
Composite of all students surveyed in Grades 9, 10 and 12				
Technological changes: automation, changes in methods, materials, machines, processes		31%	57%	12%
Limited job knowledge, skill-education and training		72%	24%	4%
Uncertainty as to where the jobs are and how to look for a job; also wages, hours, conditions		30%	51%	19%
Inability to make a good impression on potential employers (aptitude, appearance)		46%	46%	8%

VIEWPOINTS OF PARENTS OF NINTH AND TENTH GRADE STUDENTS
TOWARD FACTORS RELATED TO EMPLOYABILITY

Factors 1966	Degree of Importance Most	Some	Least
Skill required, including speed, accuracy dexterity and timing	68%	26%	6%
Education and training required, including experience in previous jobs	65%	30%	5%
Effort required, including muscular effort and mental or visual demands	61%	31%	8%
Communication at work, including spoken, printed and written as to quality, speed, accuracy	66%	28%	6%
Responsibility for equipment or process, material or product and the safety or work of others	65%	25%	10%

Composite of all students surveyed in Grades 9, 10 and 12 1972	Degree of Importance Most	Some	Least
Skill required, including speed, accuracy dexterity and timing	64%	30%	6%
Education and training required, including experience in previous jobs	63%	31%	5%
Effort required, including muscular effort and mental or visual demands	61%	32%	7%
Communication at work, including spoken, printed and written as to quality, speed, accuracy	73%	23%	4%
Responsibility for equipment or process, material or product and the safety or work of others	67%	24%	9%

FACULTY

The attitude of teachers is an extremely important factor in influencing the way high school students plan their future and react to occupational/vocational education.

The current, 1972, survey when contrasted with the 1966 report indicates a more positive, receptive, supportive attitude on the part of high school teachers.

The results of both surveys are presented for comparison on the following pages.

The 1972 survey also had one page for an essay type response. Selected samples of these responses are presented for the reader's perusal on succeeding pages.

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INDICATING ATTITUDES TOWARD HIGH SCHOOL VOCATIONAL EDUCATION
RESPONSES BY PARTICIPATING SCHOOL FACULTIES

	SA %	A %	U %	D %	SD* %	
1. It is important to provide many students with both a sound basic education and vocational education.	77	18	2	3	0	1966
	73	26	1	0	0	1972
2. Vocational education does not make enough students useful members of society to justify its cost.	0	5	9	34	52	1966
	1	6	11	31	51	1972
3. There are not enough students in vocational education at the high school level.	29	46	11	8	6	1966
	30	49	11	10	0	1972
4. The values of vocational education should be made known to more parents than is now the case.	56	40	2	2	0	1966
	61	36	3	0	0	1972
5. Vocational education programs in high school should not be expanded when so many students need the basic subjects	2	4	8	56	30	1966
	1	5	3	51	40	1972
6. Vocational education programs cannot possibly prepare high school students for the range of job opportunities available to them.	7	21	11	45	16	1966
	4	11	10	50	25	1972
7. Taking vocational education hinders students from further education after high school.	2	12	9	51	26	1966
	0	7	6	47	40	1972
8. Results of vocational education programs I have seen or heard about were beneficial to the communities involved.	17	46	32	3	2	1966
	9	55	32	4	0	1972

*SA = Strongly Agree
A = Agree
U = Uncertain
D = Disagree
SD = Strongly Disagree

2360

INDICATING ATTITUDES TOWARD HIGH SCHOOL VOCATIONAL EDUCATION
RESPONSES BY PARTICIPATING SCHOOL FACULTIES
(CONTINUED)

		SA %	A %	U %	D %	SD %	
9.	I do not think vocational education in high school is as necessary for most students as are other worthwhile programs.	2	17	9	51	21	1966
		4	7	8	60	21	1972
10.	Most students who take vocational education in high school lack too many other scholastic skills	3	36	21	34	6	1966
		2	26	25	41	6	1972
11.	Good vocational education programs in public schools attract new industries to a community.	2	17	66	11	4	1966
		3	21	61	13	2	1972
12.	A more considerable portion of the high school curriculum than at present should be devoted to vocational education.	17	54	18	9	2	1966
		24	54	14	7	1	1972
13.	In my opinion most public schools do not provide vocational education programs early enough.	14	43	21	20	2	1966
		16	50	25	8	1	1972
14.	I would cooperate with others in order to develop the best vocational education program for this community.	33	60	7	0	0	1966
		28	59	13	0	0	1972
15.	This area should provide a wide variety of vocational programs to fit the abilities of most students not going to college.	55	39	4	2	0	1966
		33	61	3	3	0	1972
16.	Students should be allowed to select their vocational subjects.	22	69	6	3	0	1972
17.	Students should be allowed to add and drop vocational subjects during the school year.	6	34	31	25	4	1972

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RESPONSES OF PARTICIPATING SCHOOL FACULTY MEMBERS TO
"THINK ABOUT VOCATIONAL EDUCATION IN HIGH SCHOOL."

	% Very	% Somewhat	% Neither or Both	% Somewhat	% Very	
1966-Worthy	70	30	0	0	0	Unworthy
1972-	75	22	3	0	0	
1966-Satisfactory	24	48	0	17	11	Unsatisfactory
1972-	25	36	13	18	8	
1966-Impractical	3	8	6	25	58	Practical
1972-	3	8	9	20	60	
1966-Desirable	79	21	0	0	0	Undesirable
1972-	80	17	1	1	1	
1966-Unessential	4	3	4	20	69	Essential
1972-	1	2	8	18	71	
1966-Meaningful	65	33	2	0	0	Meaningless
1972-	69	24	5	1	1	
1966-Attractive	28	43	18	7	4	Unattractive
1972-	27	39	22	10	2	
1966-Profitable	47	35	15	3	0	Unprofitable
1972-	43	35	18	4	0	
1966-Aimless	0	2	7	34	57	Purposeful
1972-	0	9	8	25	58	
1966-Disreputable	5	5	12	29	49	Respectable
1972-	1	6	15	29	49	

I should describe my attitude towards vocational education in high school as:

	% Very	% Somewhat	% Neither or Both	% Somewhat	% Very	
1966-Favorable	86	11	3	0	0	Unfavorable
1972	77	20	2	1	0	

COMMUNITY

Community responses were gathered by the research assistants visiting, on a random selection basis, a number of community groups such as PTA, Rotary, Lions, Kiwanis, adult education classes, etc.

There is a great similarity between the responses of the community and the responses of the faculty. This presents another strong indication of the accord between parents, faculty and community of the desirability and need for improved occupational/vocational opportunities.

The tabulations of the community survey are presented on the following pages in a manner which makes it convenient for comparison with the faculty survey.

INDICATING ATTITUDES TOWARD HIGH SCHOOL VOCATIONAL EDUCATION
RESPONSES BY PARTICIPATING COMMUNITY MEMBERS

1972

	SA %	A %	U %	D %	SD* %
1. It is important to provide many students with both a sound basic education and vocational education	80	16	3	1	0
2. Vocational education does not make enough students useful members of society to justify its cost.	1	4	5	38	52
3. There are not enough students in vocational education at the high school level.	14	42	21	15	8
4. The values of vocational education should be made known to more parents than is now the case.	52	43	4	1	0
5. Vocational education programs in high school should not be expanded when so many students need th basic subjects.	3	1	16	58	22
6. Vocational education programs cannot possibly prepare high school students for the range of job opportunities available to them.	0	11	12	52	25
7. Taking vocational education hinders students from further education after high school.	1	2	12	53	32
8. Results of vocational education programs I have seen or heard about were beneficial to the communities involved.	20	52	24	4	0

*SA = Strongly Agree
A = Agree
U = Uncertain
D = Disagree
SD = Strongly Disagree

2364

INDICATING ATTITUDES TOWARD HIGH SCHOOL VOCATIONAL EDUCATION
RESPONSES BY PARTICIPATING COMMUNITY MEMBERS
(continued)
1972

		SA %	A %	U %	D %	SD %
9.	I do not think vocational education in high school is as necessary for most students as are other worthwhile programs.	0	10	9	52	29
10.	Most students who take vocational education in high school lack too many other scholastic skills.	0	13	16	53	18
11.	Good vocational education programs in public schools attract new industries to a community.	14	39	37	9	1
12.	A more considerable portion of the high school curriculum than at present should be devoted to vocational education.	20	51	20	5	4
13.	In my opinion most public schools do not provide vocational education programs early enough.	14	51	28	6	1
14.	I would cooperate with others in order to develop the best vocational education program for this community.	11	78	11	0	0
15.	This area should provide a wide variety of vocational programs to fit the abilities of most students not going to college.	20	76	4	0	0
16.	Students should be allowed to select their vocational subjects.	20	75	4	1	0
17.	Students should be allowed to add and drop vocational subjects during the school year.	10	31	30	25	4

2365

RESPONSES OF PARTICIPATING COMMUNITY MEMBERS TO
"THINK ABOUT VOCATIONAL EDUCATION IN HIGH SCHOOL."

1972

	% Very	% Somewhat	% Neither or Both	% Somewhat	% Very	
Worthy	80	20	0	0	0	Unworthy
Satisfactory	39	40	5	14	2	Unsatisfactory
Impractical	1	7	4	22	66	Practical
Desirable	84	14	1	1	0	Undesirable
Unessential	0	4	3	13	80	Essential
Meaningful	70	28	1	1	0	Meaningless
Attractive	48	32	13	7	0	Unattractive
Profitable	65	25	5	5	0	Unprofitable
Aimless	0	3	5	25	67	Purposeful
Disreputable	0	3	3	20	74	Respectable

I should describe my attitude towards vocational education in high school as:

	% Very	% Somewhat	% Neither or Both	% Somewhat	% Very	
Favorable	84	15	1	0	0	Unfavorable

ESSAY COMMENTARIES

The comments listed below represent the attitudes and interests of parents, teachers and other adult community members throughout the Southeastern Connecticut shoreline. Their statements were written as voluntary responses to the following request at the close of the questionnaire form:

"This (blank) page is provided for your comments concerning occupational and vocational training in a comprehensive high school. Please comment if you so desire."

The great majority of the written comments, about nineteen of every twenty responses, were clearly favorable toward expanded career education programs in the regular high schools. Very few of the "one out of twenty group" indicated a definite "no" to this program. They simply indicated that special technical or vocational schools should provide such career education programs.

The list of statements are separated into three groups but perusal of these statements truly indicates a strong unanimity among the adult members of the neighboring communities.

FACULTY:

"In my opinion, vocational training is one of the most neglected areas in education. I wish the public attitude did not regard it as a "step-child or in some way denigrating to the individual. I believe it is needed for the college-bound as well as for the non-college."

"Education in the public schools seems to be aimed at a certain average level - little or no place is set for individual talents. Motivation is a greater factor in learning than intelligence and meaningful programs which prepare each individual to fulfill his own natural capacities for life - should be given. (for example, if he has a natural talent for wood-working, average washed-out levels of history and English and math only serve to bore and destroy his interest in school) He finishes with a dislike for learning. little or no progress in these areas and his own talent left to haphazard, self discovery. The school has failed him!!"

"I feel vocational training would best be accomplished if it were established by several communities rather than in the individual town's high school."

"Public education too often ignores the needs of the non-academic oriented student. The community has a great need for people possessing other than academic skills and training. Public education has a total responsibility to both the community and the students to present a comprehensive, all inclusive curriculum. This must include vocational education on a par with academic education."

FACULTY (continued)

"Vocational training as it now exists in our high school is completely inadequate. This inadequacy tends to give it a somewhat "disreputable" tinge, as those students advised to elect courses in this field are those who are unlikely to succeed in any academic field. There is not enough teacher time available to offer enough courses to a wide enough variety of students. I feel very strongly that this is WRONG! Not everyone should be encouraged to go to college, yet our schools are geared to the college-bound student."

"Absolutely imperative to expand vocational education and information in grades K-12 - would be well worth any additional cost."

"The original concept of vocational schools has failed to meet the needs of enough students by virtue of the fact many are unable to meet test standards required for entrance and the facilities presently available are limited for space. In other words, any child can attend a public high school but only a select few are admitted to vocational schools. It is imperative that the public school systems provide a broader based vocational program and then perhaps we would have a few more "Indians" to go with all the "Chiefs" we've been trying to educate for the past 20 years!

"Vocational education should be started at least in the middle school with a large and "in school" operation. In the middle school it should be required of all and in the high school every student should be required to take a minimum of one course (shop or home economics) to graduate. This requirement for graduation should in a few years develop in the community an appreciation for the vocational program and an understanding for its benefits. This understanding and appreciation is now lacking. We need community support. We should be preparing people (now students) for a place in life and society. Most of our students today will someday own their own home, work and raise a family. Let us prepare them for this realistic goal."

"There are many students in high school who should receive more occupational training. Many of those who have evinced a desire to go to a four-year college would be better off in a vocational program. Even those who are qualified to attend college would benefit from some occupational training."

"I feel that a vocational training program would be valuable, provided that it wouldn't jeopardize the basic educational subjects. Therefore, in my opinion, the vocational program should be set up as an elective. Perhaps if a student chose one vocational course per semester, he would have enough in order to decide in his senior year whether to go on to a formal education college or to go to a vocational school. This way, your vocational program would not dominate your educational program, but would aid the student in directing his educational future."

PARENTS:

"It is my opinion that the time has arrived when the high school will have to make many changes. It is not enough to teach a general education approach to life and a college approach to life. I feel the student should be exposed to the many occupational and vocational positions available and so many students who would appreciate the "doors being open to them". To me, your showing so much foresight - is a ray of light for the many students who will need to learn a way of life with occupational or vocational courses. Best of luck with this great idea!"

"Due to today's obvious lack of employment for highly-educated people, there should be an equal amount of importance attached to becoming a skilled worker in any number of jobs. Too much stress on a college education makes those young people who cannot attend a school of higher learning, feel they are destined to become low men on the totem pole, which they certainly are not."

"I have felt for a long time that we are not educating all our high school students. We have a fine college course and a fine business course, but the majority of students have no other choice. My daughter is not college material and is not at all interested in business education. I think these children should be offered a variety of courses in technical skills, so that they may try them out and see where their abilities and interests lie. Only then will we prevent great numbers of children from becoming bored and frustrated with school and eventually "dropping out" before their education is complete. I certainly hope this will be put into effect before it is too late for my daughter."

"Too many children, not academically qualified, are encouraged by parents and faculty to go to college. Many eventually graduate, flooding a market already oversupplied. Technical schools and institutes are somehow cast in the light of providing "second-rate" education. A greater emphasis should be made to encourage such students to enter such institutions which provide challenging experiences which are within their capabilities. The U. S. Suffers from an oversupply of college-trained people in most categories (except physicians, and that is due to a lack of sufficient educational capacity) but a shortage of skilled tradesmen - auto mechanics, television repairmen, plumbers, etc."

"I feel this is a very good trend. Looking at the drop-out rate, it is apparent that the high schools have definitely failed with the present curriculum. A more realistic, student-oriented (instead of outmoded traditional) offering is far overdue. Please let us know what we (parents) can do to hasten such a development."

"I think GOOD occupational training and attitudes toward the trades for both boys and girls is long overdue."

PARENTS (continued)

"I feel occupational and vocational subjects at the high school level have been placed too far down on the academic achievement ladder. If individual treatment is to be kept and the high schooler requests vocational subjects, why not drop physical education, art or music and prepare this boy or girl for employment upon graduation. I feel if the occupational and vocational subjects are taught efficiently they will encourage the high schooler scholastically."

"For my own daughter, I consider the high school's job is to prepare her adequately for college, not to provide vocational training."

"I believe we should increase public education by two years and include vocational education for the 11, 12, 13 and 14th years for those who desire such training."

"Our educational system offers little to the youngster who is not planning to go to college. High school graduates are unfit to enter the job market without much more training. Many drop-outs are the result of the school not meeting the needs of the students who do not need and cannot handle academic subjects."

GENERAL COMMUNITY:

"For so long, probably since the launching of Sputnik, we have been so concerned in the U. S. over academic success and the practical training of the blue collar worker has taken a back seat. It is important to realize that people have definite abilities in academic areas and should utilize them and at the same time some young men and women may be talented in a mechanical, business, agricultural or similar area. These students have the right to have the necessary training so that they will be ready to seek employment after high school with some skills accomplished. I am pleased that people are taking this survey and sincerely hope that a more comprehensive program in vocational training and work experience will be introduced in the shoreline area."

"We, as a manufacturer, are unable to complete all of the statements on these pages due to a lack of knowledge of the school system; however, we do feel - and have tried to indicate - that vocational education is important and deserves to play an important role in the school curriculum."

"The average student in todays high school is bored silly and unprepared upon graduation to meet the problems of supporting himself. Vocational training is a must in todays society as many college graduates are looking for employment. Please give our youth an opportunity for gaining self-respect by training them for useful employment. Too much time is spent on old news when it is today that is important."

GENERAL COMMUNITY (continued)

"Graduates of a good vocational or occupational high school program are in great demand, but curricula must be strong enough to provide students with truly employable skills. A little or inadequate vocational training is frustrating to a graduate and not of much benefit to an employer."

"So many high school students do not plan to go on to higher education after high school. Vocational education in high school would give them specialized training to open more opportunities after high school."

"I strongly advocate vocational high schools on regional level with as much or more emphasis and money as classical studies receive."

"The public town high school can not afford to be all things to all people. I feel its purpose would be academic in nature. There should be broad base vocational-technical schools to take up where the town schools leave off."

"I feel there are many high school students who are not college material, and therefore should be allowed to learn occupational and vocational training. In this way they can often go into jobs at factories, in construction and other positions that will not be menial. In other words they do not start at the bottom, because they have training."

"I feel that students would be putting their time to better use and getting a better all around education if a vocational subject were substituted for some of the scholastic or extra curricular work. This is particularly true where an average or below average student is involved. Also, I believe that vocational training would make school more interesting for many students."

"I feel that a good college curriculum is essential for those students who are able to achieve college. However, for the average or below average student, I feel that a vocational education is a must - for the town involved, for the society on the whole, and most of all, for the child involved!"

CONCLUSIONS

When forming conclusions and interpreting the results of this survey, the reader should be reminded that six years separate these comparative surveys and that the total number of students tested in 1972 exceeded the 1966 group by 1,367 students.

The percentage of pupils expecting to graduate from High School remained at over 90% for both 1966 and 1972 groups in every school. However, for seniors the percentage has increased from 92% expecting to graduate in 1966 to 97% expecting to graduate in 1972.

Twelfth grade students planning to attend 4 year colleges or universities has increased from 34% in 1966 to 46% in 1972. The number of seniors planning to attend 2 year colleges has dropped 2% from 12% in 1966 to 10% in 1972.

In their planning for post high school life, about 50% of grade nine and ten pupils and 30% of the seniors were indecisive in both the '66 and '72 surveys. Also, about 11% of grade nine and ten pupils wished some direct assistance in future planning while 4% of the seniors checked a concern and need of assistance. Consequently about 60% of ninth and tenth grade pupils and about 35% of the seniors have expressed a definite need for career planning assistance.

The occupational/vocational needs and concerns could be illustrated in another fashion by the percentage of pupils who have indicated work-career plans <u>other than</u> 4 year or 2 year college.

1966	(Grades 9 & 10 - average for all schools:	53%
	(Grades 12 - average for all schools:	54%
1972	(Grades 9 & 10 - average for all schools:	50%
	(Grades 12 - average for all schools:	44%

There are some variations among the high schools surveyed which may be best illustrated in the percentages of pupils planning on college and the percentage of pupils who are non-college bound.

Percentages of students indicating post high school plans other than 4 year or 2 year colleges.

		Cl.	E.L.	Gu.	Ma.	O.S.	West.
1972	(Grades 9 & 10:	57%	57%	50%	34%	49%	68%
	(Grade 12:	58%	43%	35%	32%	41%	76%

Percentages of students indicating 4 and 2 year college plans.

		Cl.	E.L.	Gu.	Ma.	O.S.	West.
1972	(Grades 9 & 10:	43%	43%	50%	66%	51%	32%
	(Grade 12:	42%	57%	65%	68%	59%	24%

Another important conclusion reflected in this survey showed that eleven percent of the students in grades nine, ten and twelve are currently taking occupational/vocational courses. However, another fifty-eight percent of the students surveyed would take one or more occupational/vocational courses if they were offered as part of their high school curriculum.

Students and parents have consistently displayed in several sections of this survey a preference for occupational/career oriented courses within their own existing high schools rather than making a full time commitment to vocational training in a separate center. Trends are discernible toward flexible approaches that would allow students as many options as possible throughout their 4 years of high school. There are strong indications that occupational/vocational opportunities should not necessarily be an all or nothing decision.

The survey validates this report's final conclusion that there is remarkable harmony and agreement among parents, teachers, students and community members as to the importance of and need for improvements in this segment of the comprehensive high school curriculum. There is total agreement as to the urgency and the immediacy of the need.

RECOMMENDATIONS

Survey results warrant that serious consideration be given to the implementation of the following recommendations:

I. Encourage and fund, on a two year trial basis, a Shoreline Career Education Resource Center.

This recommendation has been more fully developed for State Department consideration for funding, on a prepaid basis, as it represents one of the most appropriate and productive courses of immediate action. A Career Education Resource Center would provide students with information and skills necessary for purposeful orientation toward the world of work.

The design of a Career Education Resource Center should include the following:

A. The establishment of a School/Employer Based Career Education Program to be developed cooperatively among LEARN area communities.

B. A comprehensive follow-up study of the results of this occupational survey.

C. The development of a program of career education that promotes articulation from elementary school through post-secondary education.

D. The implementation of a "cluster" career development approach. Some advantages of a cluster approach:

1. Insures that many students keep their career options open through high school.
2. Pursues introductory and/or advance training in a variety of specialized fields.
3. Changes in technology or manpower supply will not render all skills obsolete.

E. The exploration of existing school studies for teaching opportunities relevant to career orientation.

F. The development of an "Information Center for Career Education" that will include:

1. collections of occupational resource materials and information.
2. provisions for distribution of such resources to the participating schools and communities.
3. in-service programs for the purpose of updating administrators, teachers, and parents regarding career-oriented education.
4. ways of matching student abilities and interest with career opportunities.

G. The establishment of cooperative arrangements between the schools and industry for the purpose of planning a viable school/employer based program. Obtain committments from companies in specific ways that will provide assistance to a school staff and students, i.e. speakers; job observation; job interviews; teaching resources and machines; on the job training; teaching personnel for a "length of time"; etc.

H. The provision of a job bank maintained through a continuous investigation and projection in the matching of human resources with emerging job opportunities.

I. The dissemination of information regarding recent research data in career education to students, administrators, teachers and citizens.

II. Encourage and fund several intermediate regional occupational career training centers.

A. Curriculum should be designed for student entry at any given grade level, ie: 9, 10, 11, 12.

B. Course work may be taken in conjunction with regular high school studies. Students should have the opportunity to attend 1/2 or 1/4 time as well as evenings or summers.

C. Programs should support exploratory courses essential for preliminary training for selected "cluster" employment opportunities.

D. Curriculum should be designed to provide basic career training courses in such cases whereby one high school would not have sufficient enrollment to justify the cost of facilities and faculty.

E. Curriculum should be designed to provide advanced programs in such cases when one high school would not have sufficient enrollment to justify costs of facilities and faculty.

F. Such programs could start immediately in leased temporary buildings located on the grounds of present shoreline high schools.

III. Encourage and fund at least one "Specialty Program" such as electronics, communications, food and hotel services, plastics, dental aide, etc. at each high school. Inter-town cooperation would encourage the exchange of students-via shuttling-to benefit from expanded, more sophisticated facilities, equipment and staff at a given school. Such programs might be conducted in existing facilities or in temporary leased buildings.

IV. Encourage and fund the development of mobil and/or portable units to serve a high school for a ten week period to determine the effectiveness and practicality of moving an "instructional unit" several times a year rather than daily transporting a number of students to and from a fixed base of operations.

A. Mobil units would be ideal for developing curriculum and instructional approaches for emerging job opportunities.

B. Portable units would provide needed valuable data for the design, construction and staffing of permanent facilities.

C. The units would not be a long-term cost burden or mistake if the emerging career opportunities turned out to be short term or "faddish".

V. Encourage and fund the construction of a State Regional Vocational Technical School in the shoreline area.

A. The area now has a sufficient student population and interest to justify such a facility.

B. The State School would provide for standard programs such as carpentry, plumbing, welding, auto mechanics, etc. as well as provide for greater flexibility of programs for area high school pupils desiring some occupational/vocational training.

1. Curriculum should be designed for student entry at any given grade level, ie: 9, 10, 11, 12.

2. Course work may be taken in conjunction with regular high school studies. Students should have the opportunity to attend 1/2 or 1/4 time as well as evenings or summers.
3. Programs should support exploratory courses basic to larger clusters of employment opportunities.

VI. Encourage and fund differentiated staffing patterns which could involve the use of non-certified staff. Example: Use of local chefs during slack winter season to prepare students for a wide range of recreation, food and restaurant careers; or, the use of personnel from Pfizer and Lawrence Memorial Hospital for lab-aide, lab-technician or health-aide career training.

VII. Encourage and fund programs dealing with the extended school day and extended school year concepts. Example: Operate late afternoon, evening and summer classes in a regional complex or in expanded high school facilities.

NOTE: Recommendations involving joint effort on the part of two or more communities have been presented with the goals of quality and efficiency in view. Co-operative regional approaches to some occupational/vocational programs would assure the following positive features:

a. Sufficient student enrollment.

b. Sufficient size and quality of staff.

c. Reasonable cost per student.

d. Adequate instructional space.

e. Substantial amount of specialized equipment.

It is recommended that all of those programs mentioned above be designed and funded to operate for adult education and job upgrading as well as to operate for students during the evening and summer months.

VIII. Encourage and draft legislation that would provide 100% reimbursement for construction of occupational/vocational facilities on existing high school sites.

IX. Encourage and draft legislation that would provide 100% reimbursement for the construction of intermediate regional occupational career training centers.

Project LEARN Shoreline Career Education Survey
Student Questionnaire: Grades 9, 10 and 12

Your town, along with other neighboring towns, is studying the interests of the people of this area, their training needs, and the support of the community. Results of the study will be used as a guide to plan and to develop adequate vocational education programs. Your cooperation is needed and appreciated in this important undertaking. All information furnished will be treated as confidential.

Name_____ Male____ Female____ Birthdate_____
Month/Day/Year

High School_____ Grade_____

VII. DO NOT WRITE IN THIS SPACE UNTIL DIRECTIONS ARE GIVEN TO DO SO.

		Job Number	Job Title
21-23)	A Choice	_____	_____
24-26)	B Choice	_____	_____
27-29)	C Choice	_____	_____

Please check your viewpoint on the following questions.

30) I. Do you expect to graduate from high school?
___(1) Yes, I expect to graduate with my class.
___(2) Yes, I expect to graduate, but later than my classmates.
___(3) No, I expect to leave high school and not graduate.
___(4) I do not know at this time (may be moving from area; may depend upon passing a particular subject; etc.)

31) II. What are your present thoughts concerning your future after you leave high school?
___(1) I have a rather specific future plan for the college and/or the work I would like.
___(2) I have a plan, but I am not sure of it.
___(3) I have thought about it, but I do not know what I want to do.
___(4) I have not given it much thought.
___(5) I am concerned about it; I could use some assistance to help me decide.

III. What do you think actually will happen when you leave high school? (Check only one)

(32-33)____(1) I think that I will go to work full-time.
(34-35)____(2) I think that I will work part-time and continue my education part-time.
(36-37)____(3) I think that I will enter an apprenticeship program.
____(4) I think that I will attend a four-year college or university.
____(5) I think that I will attend a two-year college.
____(6) I think that I will take vocational course work.
____(7) I think that I will attend a technical institute.
____(8) I think that I will take course work in a private business school.
____(9) I think that I will get married and keep house.
____(10) I think that I will get married and continue working.
____(11) I think that I will enter the Armed Forces.
____(12) At this time I do not know what I will do.

IV. The courses listed in the subject fields below usually are not all offered by all high schools. Further, school counselors should be consulted about their acceptance for college entrance requirements; these vary considerably among the nearly 2,000 colleges and universities of the United States. Will you please check your viewpoint accordingly? (More than one item may be checked if you wish).

	COURSES IN SUBJECT FIELDS	HAVE TAKEN	AM TAKING	EXPECT TO TAKE	WOULD TAKE IF OFFERED
(38)	Agriculture				
(39)	Art				
(40)	Business & Office Practices				
(41)	Retail and Sales				
(42)	Home Economics				
(43)	Trade and Industrial				
(44)	Music				
(45)	Technical				

Please check your viewpoint on the following questions.

(46) V. Would you enroll in vocational courses in your area of interest if they were offered in a public school vocational program?

____ Yes ____ No _____ Undecided

(47) VI. Would you be willing to work in the Shoreline area if work in your area of interest were available?

____ Yes ____ No _____ Undecided

VII. Within each business, industry and profession, a number of job titles are used (more than 40,000 for the entire country). From among those listed below and others which you may add:

a. Select up to three which you intend to or hope to enter upon leaving or completing high school and letter them A, B, and C to show your first, second, and third choice.

b. When you are finished with this section, transfer the number and name of your first, second, and third choices to the enclosed block on the first page of this questionnaire.

Agriculture, Forestry and Fishing

___(1) Farmer, (dairy, fruit, livestock, poultry and truck)
___(2) Farm Hand
___(3) Fisherman
___(4) Florist, Nursery
___(5) Grader-Packer
___(6) Guide
___(7) Hatchery Man
___(8) Hunter, Trapper
___(9) Logger
___(10) Other_____

Amusement-Entertainment

___(11) Actor, Actress
___(12) Announcer (Radio-TV)
___(13) Concession Operator
___(14) Dancer
___(15) Motion Picture Projector Operator
___(16) Stagehand
___(17) Winter-Summer Sports: Operator-Skiing, Bowling, Golf, Etc.
___(18) Other_____

Building Construction

___(19) Bricklayer, Stonemason
___(20) Cabinet Maker, Carpenter
___(21) Electrician
___(22) Glazier
___(23) Iron and Structural Steel Worker
___(24) Millwright
___(25) Painter-Decorator
___(26) Plasterer
___(27) Plumber-steam & gas fitter
___(28) Roofer
___(29) Other_____

Business-Office Occupations

___(30) Bookkeeper, Accountant, Business Machine Operator
___(31) Clerk: Office, Hotel, Bank
___(32) Duplicating Machine Operator
___(33) Key-Punch Operator - Programmer
___(34) Receptionist
___(35) Secretary
___(36) Stenographer-Typist
___(37) Other_____

Distributive Occupations

___(38) Automotive: Rentals, Sales, Parking
___(39) Advertising: Lay-out Man, Copy-Writer
___(40) Cashier-Clerk
___(41) Key-Punch Operator
___(42) Operator: Hotel, Motel, Tourist Court, Restaurant
___(43) Purchasing Agent, Buyer
___(44) Window Trimmer, Display Man, Stockkeeper
___(45) Salesman, Saleswoman
___(46) Shipper-Warehouser
___(47) Other_____

Equipment Services

___(48) Airconditioning, Refrigeration Mechanic
___(49) Auto-Aviation Mechanic
___(50) Body-Fender Repairman
___(51) Business Machines Serviceman
___(52) Electrical Appliance, Heating, Radio-TV Serviceman
___(53) Furnace-heating Serviceman
___(54) Service Station Attendant
___(55) Other_____

Food Services

___(56) Baker
___(57) Candy Maker, Confectioner
___(58) Chef, Cook
___(59) Counterman, Fountain Worker
___(60) Grocer
___(61) Meat Cutter
___(62) Waiter, Waitress
___(63) Other_____

Government

___(64) Fireman, Policeman
___(65) Guard, Watchman
___(66) Librarian
___(67) Maintenance Worker: Parks, Playgrounds, Nurseries
___(68) Military: Army, Navy, Air-force, Marines
___(69) Operator: Power Plant, Sewage Plant, Water Plant
___(70) Other_____

Health Services

___(71) Dental Technician, Asst.
___(72) Dietary Assistant
___(73) Hospital Orderly, Attendant
___(74) Institutional Housekeeper
___(75) Medical Record Librarian, Technician
___(76) Nurse's Aide
___(77) Office Assistant: Medical, Dental
___(78) Optical Mechanic
___(79) Practical Nurse
___(80) Other_____

Manufacturing - General

___(81) Buffer, Polisher, Filer, Grinder
___(82) Foundryman, Smelter, Pourer, Furnaceman
___(83) Inspector
___(84) Heat Treater
___(85) Machinist
___(86) Molder
___(87) Patternmaker, Model Maker
___(88) Machine Operator
___(89) Miner, Mining or Quarry Machine Operator
___(90) Petroleum Refinery Worker
___(91) Set-up Man
___(92) Sheet Metal Worker
___(93) Shipfitter
___(94) Tool and Die Maker
___(95) Welder: Gas, Arc, Acetylene
___(96) Other_____

Manufacturing-Textiles and Garments

___(97) Cutter
___(98) Designer
___(99) Dressmaker
___(100) Furrier
___(101) Loom Worker
___(102) Glovemaker
___(103) Mender
___(104) Milliner
___(105) Sewing Machine Operator
___(106) Sorter
___(107) Stitcher
___(108) Upholsterer
___(109) Weaver
___(110) Other_____

Printing and Graphic Arts

___(140) Bindery Worker
___(141) Cartoonist, Illustrator
___(142) Commercial Artist
___(143) Electroplater
___(144) Impositor
___(145) Lay-out Man
___(146) Lithographer, Photo-offset Man
___(147) Platemaker
___(148) Sign and Showcard Artist
___(149) Stereotyper
___(150) Pressman (Job, Cylinder, Offset)
___(151) Typesetter, Compositor
___(152) Other_____

rofessional

___(111) Accountant, Auditor
___(112) Architect
___(113) Engineer
___(114) Lawyer, Judge
___(115) Physician, Dentist, Nurse
___(116) Clergymen: Priest, Minister, Rabbi
___(117) Psychologist, Economist, Social Worker
___(118) Physicist, Chemist, Pharmacist, Astronomer
___(119) Teacher, Professor, Counselor, Principal
___(120) Other_____

ersonal Services

___(121) Barber
___(122) Beauty Shop Operator
___(123) Cleaner, Dyer, Presser, Launderer
___(124) Domestic Worker
___(125) Gardener, Groundsworker
___(126) Janitor, Porter, Camp Attendant
___(127) Nursemaid
___(128) Photographer
___(129) Shoe Repairman
___(130) Tailor
___(131) Other_____

Public Utilities

___(132) Clerk
___(133) Dispatcher
___(134) Instrument Maker
___(135) Lineman, Serviceman
___(136) Meter Man
___(137) Specification Writer
___(138) Tester
___(139) Other_____

Technician

___(153) Analyst: material, process method
___(154) Dispatcher
___(155) Draftsman
___(156) Engineering Aide, Assistant
___(157) Estimator
___(158) Inspector
___(159) Laboratory Technician
___(160) Technical Writer
___(161) Tester
___(162) Other_____

Transportation & Heavy Equipment

___(163) Boat Builder
___(164) Bulldozer Operator
___(165) Crane, Shovel Operator
___(166) Merchant Mariner
___(167) Navigator
___(168) Pilot - Aircraft
___(169) Railroad Worker
___(170) Motor Trucks
___(171) Other_____

(48) VIII. If occupational/vocational programs were offered as part of your high school curriculum, would you take one or several of them? Check only one answer.

_____(1) I am already taking one.
_____(2) Yes, I would take one.
_____(3) No, I would not take one.

If you answered NO to the above stop here. Do not answer the next question.

(49) IX. Study the occupational/vocational programs listed below. If you could take one of these occupational/vocational programs in your high school which would you pick as a first choice and as your second choice? Check only one first choice. Check only one second choice.

First Choice	Second Choice	
_____	_____	(1) Appliance
_____	_____	(2) Auto Body Repair
_____	_____	(3) Bookkeeping
_____	_____	(4) Building Trades
_____	_____	(5) Business Data Processing
_____	_____	(6) Commercial Art
_____	_____	(7) Cosmetology
_____	_____	(8) Dental or Medical Assistant
_____	_____	(9) Distributive Education (Sales-retail, wholesale)
_____	_____	(10) Drafting
_____	_____	(11) Electronics or Electricity
_____	_____	(12) Food Preparation or Food Services
_____	_____	(13) Forestry, Landscaping or Horticulture
_____	_____	(14) General Agriculture
_____	_____	(15) General Home Economics
_____	_____	(16) General Office Practices (Clerical)
_____	_____	(17) Machine Shop
_____	_____	(18) Mechanics (Auto, Diesel, Farm)
_____	_____	(19) Plastics
_____	_____	(20) Practical Nursing and Child Care
_____	_____	(21) Printing and Duplicating
_____	_____	(22) Secretarial Practices (Stenography)
_____	_____	(23) Sheet Metal, Welding, or Foundry
_____	_____	(24) Tailoring and Dressmaking
_____	_____	(25) Undecided

Project LEARN Shoreline Career Education Survey

Viewpoints of Parents of 9th, 10th and 12th Grade Students

Your town, along with other neighboring towns, is studying the interests of the people of this area, their training needs, and the support of the community. Results of the study will be used as a guide to plan and to develop adequate vocational education programs Thus, your cooperation is needed and appreciated in this important undertaking. All information will be treated as confidential.

NOTE: Parents are requested to answer all questions.

Where numerals appear within parentheses, in margins or above words, they are placed there only to simplify the recording of data.

Parent's Name _____
First Initial Last

Student's Name _____ Male___ Female___
First Initial Last

Circle the Number indicating the school that your son or daughter attends.

1. Daniel Hand High, Madison.
2. Guilford Senior High.
3. Morgan School, Clinton.
4. Old Saybrook Senior High.
5. Westbrook Jr-Sr. High.
6. East Lyme Sr. High.

Circle the number indicating the present grade of your son or daughter.

9th. 12th.

10th.

Please indicate by an X whether you agree or disagree with the job choices listed below by your son or daughter.

JOB CHOICES

	Job Number	Job Title	(1) Agree	(2) Disagree	
(21-23)	1st Choice _____	_____	_____	_____	(30)
(24-26)	2nd Choice _____	_____	_____	_____	(31)
(27-29)	3rd Choice _____	_____	_____	_____	(32)

Please check your viewpoint on the following questions.

I. For youth who think that they may go to work directly upon leaving high school, do you think the high schools should assist them to:

	Questions	(1) Yes	(2) No	(3) Undecided
(33)	discover and understand their employment interests and abilities?	___	___	___
(34)	enter, if they wish, vocational and technical education courses in addition to those in general education?	___	___	___
(35)	understand employment trends and conditions - the type and rate of change in jobs and industry?	___	___	___
(36)	understand how to locate and apply for jobs?	___	___	___
(37)	understand factors which contribute to under-employment and unemployment?	___	___	___

II. Listed below are some of the factors which often lead to or lengthen periods of unemployment. Based on your experience and that of persons you know, what importance do you attach to the following?

	Factors	Degree of Importance (1) Most	(2) Some	(3) Least
(38)	Technological changes: automation, changes in methods, materials, machines, processes	___	___	___
(39)	Limited job knowledge, skill-education and training	___	___	___
(40)	Uncertainty as to where the jobs are and how to look for a job; also wages, hours, conditions	___	___	___
(41)	Inability to make a good impression on potential employers (aptitude, appearance)	___	___	___
(42)	Other_____	___	___	___

III. In your present job or position, what importance do you attach to the following factors:

	Factors	Degree of Importance (1) Much	(2) Some	(3) Little
(43)	Skill required, including speed, accuracy, dexterity and timing.	___	___	___
(44)	Education and training required, including experience in previous jobs.	___	___	___
(45)	Effort required, including muscular effort and mental or visual demands.	___	___	___
(46)	Communication at work, including spoken, printed and written as to quality, speed, accuracy.	___	___	___
(47)	Responsibility for equipment or process, material or product and the safety or work of others.	___	___	___

IV. If the vocational courses your son or daughter wants were offered at a convenient time in the public school vocational and technical programs, would you permit your son or daughter to enroll?

(48) _____ Yes _____ No _____ Undecided

(49) If the vocational/occupation courses your son or daughter wants were offered at a regional training center on a 1/2 day basis for an 8 - 10 week period and transportation was provided, would you encourage your child to enroll?

_____Yes _____No _____Undecided

(50) Do you expect your son or daughter to seek employment immediately after graduation from high school?

_____Yes _____No _____Undecided

THIS PAGE IS PROVIDED FOR YOUR COMMENTS CONCERNING OCCUPATIONAL AND VOCATIONAL TRAINING IN A COMPREHENSIVE HIGH SCHOOL. PLEASE COMMENT IF YOU SO DESIRE.

Project LEARN Shoreline Career Education Survey

Faculty - Community Questionnaire

Would you please participate in the Shoreline Career Education Survey by completing the attached questionnaire. Please do not sign it.

ATTITUDES TOWARDS HIGH SCHOOL VOCATIONAL EDUCATION

Please fill in the following information:

School_____

If teacher) Main Subject Taught_____

Vocational Education in high school means public school instruction that develops the basic skills, judgments, and job-related knowledge, sufficient to prepare youth for full-time employment in business, agriculture, trade, industry, and other occupational areas.

Directions:

We would like to know how you FEEL about vocational education in comparison with other high school programs. We want you to answer each item as honestly as you can. We ask you NOT to write your name on these sheets, for it is only your truthful answers that are important--it does not matter who gives the answers.

Do not take too much time in thinking about any particular item. Please do not leave any item out--there is no right or wrong answer--it is just how YOU feel about things. Other people may have different opinions.

Please circle the response which corresponds the closest to your feeling about each item in Part I, according to the following code.

SA = Strongly Agree
A = Agree
U = Uncertain
D = Disagree
SD = Strongly Disagree

Put a circle around the answer which comes the closest to representing your feeling. Even if your exact feeling is not found in one of the choices, pick the one which comes the closest to your true feeling. Sometimes it will be hard to make up your mind, but do the best you can and do not leave any out.

BEGIN HERE:

PART I

CIRCLE ONE

(4)	1.	SA A U D SD	1.	It is important to provide many students with both a sound basic education and vocational education.
(5)	2.	SA A U D SD	2.	Vocational education does not make enough students useful members of society to justify its cost.
(6)	3.	SA A U D SD	3.	There are not enough students in vocational education at the high school level.
(7)	4.	SA A U D SD	4.	The values of vocational education should be made known to more parents than is now the case.
(8)	5.	SA A U D SD	5.	Vocational education programs in high school should not be expanded when so many students need the basic subjects.
(9)	6.	SA A U D SD	6.	Vocational education programs cannot possibly prepare high school students for the range of job opportunities available to them.
(10)	7.	SA A U D SD	7.	Taking vocational education hinders students from further education after high school.
(11)	8.	SA A U D SD	8.	Results of vocational education programs I have seen or heard about were beneficial to the communities involved.
(12)	9.	SA A U D SD	9.	I do not think vocational education in high school is as necessary for most students as are other worthwhile programs.
(13)	10.	SA A U D SD	10.	Most students who take vocational education in high school lack too many other scholastic skills.
(14)	11.	SA A U D SD	11.	Good vocational education programs in public schools attract new industries to a community.
(15)	12.	SA A U D SD	12.	A more considerable portion of the high school curriculum than at present should be devoted to vocational education.
(16)	13.	SA A U D SD	13.	In my opinion most public schools do not provide vocational education programs early enough.
(17)	14.	SA A U D SD	14.	I would cooperate with others in order to develop the best vocational education program for this community.
(18)	15.	SA A U D SD	15.	This area should provide a wide variety of vocational programs to fit the abilities of most students.
(18a)	16.	SA A U D SD	16.	Students should be allowed to select their vocational subjects.
(18b)	17.	SA A U D SD	17.	Students should be allowed to add and drop vocational subjects during the school year.

PART II

The following scale is quite different from the preceding statements. Read through the example which indicates how you should respond.

EXAMPLE:
Think about Vocational Education in High School

	Very	Somewhat	Neither or both	Somewhat	Very	
Useful	____:	_____:	_____:	_____:	____	Useless

You should ask yourself, "Does the phrase, Vocational Education in High School, mean to me something useful or useless?" You decide and mark the scale in the space closest to your feeling. The Mark X here indicates the feeling that Vocation Education in High School is somewhat useful.

With the following, first read the phrase at the top, then glance down at each pair of words. Put an X in the space under the response that best describes your true feeling for the pair. Move to the next set and do the same. Please answer every item.

Think about Vocational Education in High School

	Very	Somewhat	Neither or both	Somewhat	Very	
(19) Worthy	___:	_____:	_____:	_____:	____	Unworthy
20) Satisfactory	___:	_____:	_____:	_____:	____	Unsatisfactory
(21) Impractical	___:	_____:	_____:	_____:	____	Practical
(22) Desirable	___:	_____:	_____:	_____:	____	Undesirable
(23) Unessential	___:	_____:	_____:	_____:	____	Essential
24) Meaningful	___:	_____:	_____:	_____:	____	Meaningless
(25) Attractive	___:	_____:	_____:	_____:	____	Unattractive
(26) Profitable	___:	_____:	_____:	_____:	____	Unprofitable
27) Aimless	___:	_____:	_____:	_____:	____	Purposeful
(28) Disreputable	___:	_____:	_____:	_____:	____	Respectable

Please mark with an X one of the following:

I should describe my attitude towards vocational education in high school as:

	Very	Somewhat	Neither or both	Somewhat	Very	
29) Favorable	___:	_____:	_____:	_____:	___:	Unfavorable

THIS PAGE IS PROVIDED FOR YOUR COMMENTS CONCERNING OCCUPATIONAL AND VOCATIONAL TRAINING IN A COMPREHENSIVE HIGH SCHOOL. PLEASE COMMENT IF YOU SO DESIRE.

VT 017 862
DASHER, JAMES
PILOT OCCUPATIONAL EDUCATION PROGRAMS FOR SMALL RURAL AND SUBURBAN ARKANSAS SCHOOLS IN GRADES FIVE THROUGH TWELVE. INTERIM REPORT.

ARKANSAS STATE DEPT. OF EDUCATION, LITTLE ROCK. DIV. OF VOCATIONAL, TECHNICAL AND ADULT EDUCATION.
BUREAU OF ADULT, VOCATIONAL, AND TECHNICAL EDUCATION (DHEW/OE), WASHINGTON, D.C.
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IDENTIFIERS - *ARKANSAS; CAREER AWARENESS

ABSTRACT - THE PURPOSE OF THIS PROJECT IS TO ASSIST RURAL AND SMALL SUBURBAN SCHOOL DISTRICTS IN ESTABLISHING OCCUPATIONAL EDUCATION PROGRAMS FOR GRADES 5-12. THE PROJECT IS DESIGNED TO PROVIDE OCCUPATIONAL ORIENTATION TO CREATE MORE FAVORABLE ATTITUDES IN MARGINAL OR DISADVANTAGED STUDENTS TOWARD EDUCATION AND ITS IMPORTANCE, AND TO PROVIDE OCCUPATIONAL COUNSELING AND TRAINING. EACH OF THE NINE PARTICIPATING SCHOOLS HIRED A COUNSELOR AND COORDINATOR OF COOPERATIVE EDUCATION. PERSONNEL FROM THE SCHOOLS ATTENDED A 1-WEEK WORKSHOP FOLLOWED BY OTHER INSERVICE SESSIONS. RESULTS OF THE PROGRAM INCLUDE: (1) PUBLICATION OF A CAREER AWARENESS GUIDE K-6, (2) DEVELOPMENT OF A VOCATIONAL ORIENTATION GUIDE TO SERVE AS A MODEL FOR CAREER EDUCATION IN JUNIOR HIGH SCHOOLS IN THE STATE, (3) IMPLEMENTATION OF EXPLORATORY PROGRAMS IN SKILL TRAINING IN GRADES 10, 11, AND 12, (4) DEVELOPMENT OF INNOVATIVE TEACHING PROCEDURES RELATED TO CAREER ORIENTATION, AND (5) INVOLVEMENT OF THE COMMUNITY IN THE PROGRAM. AN EVALUATION OF THE PROGRAM BY A THIRD-PARTY CONTRACT INDICATED THAT TEN OF THE 15 PERFORMANCE STANDARDS SET BY THE EVALUATORS HAD BEEN MET AND CONTINUATION OF THE PROJECT WAS RECOMMENDED. INDIVIDUAL SCHOOL REPORTS AND STATISTICAL DATA ARE APPENDED. (KH)

VT 017 862

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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INTERIM REPORT

Project No. 0-361-0032
Contract No. OEC-0-70-5189(361)

Pilot Occupational Education Programs for Small Rural and Suburban Arkansas Schools in Grades Five Through Twelve

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

James Dasher
Arkansas State Department of Education
Division of Vocational, Technical and Adult Education
Arch Ford Education Building
Little Rock, Arkansas 72201

June 1972

VT 017 362

Interim Report

Project No. 0-361-0032
Contract No. OEC-0-70-5189(361)

Pilot Occupational Education Programs for Small Rural and Suburban Arkansas Schools in Grades Five Through Twelve

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

The project reported herein was performed pursuant to a contract with the Bureau of Adult, Vocational, and Technical Education, Office of Education, U. S. Department of Health, Education and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

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June 1972

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STATE REPORT

2397

Summary of the Report

Time Period covered by the report: July 1, 1971 to June 30, 1972

The purpose of this project is to assist rural and small suburban school districts (particularly those in depressed areas) in establishing occupational education programs for grades five through twelve. More specifically this project is designed to provide meaningful vocational education to youth by (1) providing occupational orientation (2) creating a favorable attitude in marginal students, slow learners, and socio-economically disadvantaged students toward the value of education and its contribution to the world of work (3) bridging the gap between education and the world of work by relating classroom instruction to an immediate job (4) providing occupational guidance and counseling during the last years of school and assisting in initial placement (5) providing short intensive training for seniors who have had no previous occupational training.

The procedures used to achieve the objectives are: (1) Eight schools were originally selected and an additional school was added this year, bringing the total to nine. (2) Each school employed a counselor and coordinator of Cooperative Education. (3) Personnel from participating schools attended a one-week workshop followed by quarterly two-day sessions relevant to the above objectives.

Career Awareness Guides and Orientation Guides were developed and refined as they were used by the participating schools. The seed has been planted to bring career awareness down through the first grade, although this was not an original objective.

These schools will serve as models for career education in Arkansas in the future. It is recommended that additional funding be made available to strengthen these models in succeeding years.

Body of the Report

a. Problem

It is important that the artifical separation that characterizes general and vocational programs be eliminated and that occupational orientation be integrated into the mainstream of the educational systems of the public schools.

Career development should be viewed as a pyramid offering a broad base of exploratory experiences for the world of work at the elementary and junior high school levels if present conditions of occupational illiteracy and unemployability are to be overcome.

Individuals begin forming attitudes regarding certain occupations early in life. It is important that youth are made aware of the ever-widening range of occupations and that a realistic perception of

these occupations be developed in order that these youth may make an exploration of themselves in regard to a wide range of occupations. Youth should also be oriented to the fact that work is an integral part of life and a major ingredient for happiness.

After creating an awareness of the world of work, it is important that the teacher help the student see the occupational relevancy of subject matter be studied. As the student sees that English, math, science and social studies contribute to his ultimate world of work, education becomes a practical and meaningful goal. All his education becomes vocational in nature.

At the junior high school level, some youngsters do not have the tolerance or ego-strength to proceed through a series of experiences that are meaningless to them personally. Interest is awakened in the ninth, tenth, or eleventh grades when they can get their hands on the tangible and the concrete. Therefore, experiences which are timely and immediate to the questions which they are asking themselves must be designed for these grades.

Basically, Arkansas is a rural state consisting of many small trade centers. Students attending school in these small trade centers are receiving basic academic education with some receiving training in home economics, vocational agriculture and business education. One of the major resources in these communities is agriculture, but mechanization has created a manpower surplus in production agriculture. Due to mechanization and in some communities, to change from an agricultural to a related agricultural or non-agricultural base, it is essential that present programs in vocational education be implemented and/or expanded to include occupational orientation beginning early in the student's school career and continuing to graduation, with guidance and counseling services which facilitate realistic occupational choices as early as possible. The capstone of this orientation and counseling should be an interdisciplinary general cooperative education program in which students can receive intensive job-related instruction in school and actual work experience in their chosen occupations.

Of great concern are the schools in designated socio-economically depressed areas. These areas consist largely of under-employed or unemployed people, with a high percent of school dropouts and a low income index resulting in an inadequate tax base to provide adequate in-school programs. Too often such socio-economic situations perpetuate themselves.

It seems reasonable that a project of this nature should greatly alleviate economically depressed conditions by providing meaningful education to students who view education as being of little significance in earning a living. There appears to be an urgent need to strengthen training and job adjustment programs for these disadvantaged youth in

order to make them productive workers and citizens. Moreover, there are many "regular" students attending these schools who will benefit from such a program.

Often employment opportunities are available to youth within their immediate area if they know about them and are equipped with entry level skills for the jobs. The proposed program is designed to meet these needs. In addition to this, highly organized and intensive courses in job attitudes and skills, combined with extensive counseling and guidance, will be a valuable offering for seniors who have not previously had vocational training.

Due to limitations of money and training space, it appears that the most feasible approach to meeting most training needs in small schools is through cooperative education as a capstone to orientation.

New concepts proposed in this project involve planned occupational orientation beginning at the fifth grade level and progressing through the twelfth grade; general cooperative education offered to eleventh and twelfth grade students; short intensive training for seniors without previous occupational training; and intensive guidance, counseling and placement services for all students.

Occupational Orientation Beginning in the Elementary Grades - Previous research has been conducted by Goff (9)* which supports this new concept for schools involved in this proposal. Goff demonstrated in two elementary schools which differed socio-economically, that measurable increments in vocational knowledge, level of occupational aspiration and realism of occupational choice can be attained through a planned vocational guidance program. Results revealed that older elementary students exhibited greater vocational awareness.

Wellington and Olechowski (22)* found that even third graders showed an awareness of adults as working people, of specific jobs as having advantages and disadvantages and of the fact that the enjoyment of what one does is related to his interests. Also the children perceived that interests and abilities enter into an individual's choice of work.

Since schools to be selected for the project have not previously carried out a planned vocational guidance program, this proposed project will enable the teachers to incorporate occupational orientation into their studies and assist the students in exploring themselves individually in regard to the work world. Students can examine a wider range of occupations which will result in a broader meaning of work. As the student progresses through the grades, this background of orientation will give more meaning to his studies; certain occupations of interest to the student will be studied in greater depth;

*See Appendix A

and the career decision-making process will begin to develop.

General Cooperative Education - Several studies have been conducted regarding cooperative education for secondary students in which the students combine related classroom instruction with on the job work experience in a local business or industry. Cushman and others (6)* conducted a study of 103 cooperative work experience study students from 16 high schools. Findings of the project revealed that when these students were compared with students in similar programs without work experience, the students in the cooperative education programs rated higher in technical knowledge, entry into curriculum-related employment following graduation, and entry into curriculum-related programs of advanced training.

In a pilot project at Paola High School, Kansas (2)* the findings revealed that 85 percent of the students completing both years of the interdisciplinary program planned to work for the same employer in some capacity. Of those students in the project who attended college of trade school, 82 percent used their senior year experience to finance education expenses.

Due to changes in employment opportunities and manpower needs, it is essential that present programs in vocational education be expanded to include general cooperative education programs to offer students a wider and more realistic choice of programs. It is anticipated that these programs will bridge the gap between education and work, equip the youth with proper work habits and provide them with marketable skills for employment. It is recognized that it will be necessary to provide extensive individual assistance to handicapped and disadvantaged students.

Short, Intensive Training for Seniors with Previous Occupational Training - There are certain competencies, common to all jobs, which can be made available to high school seniors in need of occupational training. Stevenson (19)* found that there were several competencies that employers rated as essential to employment regardless of the type of business or level of employment. These competencies include such factors as attitude toward work, employee-employer relations and personal appearance. Most cooperative education programs have included these basic skills as an essential part of the related instructional program.

Miller (14)* conducted a pilot research project for vocational guidance in economically underdeveloped areas. Guidance services were provided for non-college bound high school seniors, dropout youth and recent high school graduates currently unemployed. An evaluation of the project indicated definite success in stimulating leadership for

*See Appendix A

the schools involved and adoption by other schools in Illinois and other states. Existing vocational education programs in Arkansas provide no planned approach for meeting the needs of the segment of population in local communities for which this proposal is designed. Failure in meeting the needs of these youth is costly to individuals and to society because of resulting high unemployment, delinquency and social disorganization.

The LEEP program (4)* was initiated in Georgia as a short-term program for youth who have separated themselves from school without the necessary skills for obtaining and maintaining a job. It was stated that 75 percent of these students enrolled only after one or more personal contacts by the coordinator. Over 80 percent of those placed in jobs were still working. Due to the success, Georgia plans to expand the number of pilot programs.

Such short-term training should be beneficial to high school students who either could not schedule vocational courses or who did not desire to pursue the regular vocational curriculum. This should be true regardless of whether the student enters directly into the work force or plans to obtain additional schooling.

Intensive Guidance, Counseling and Placement - In the past, vocational teachers have been concerned mainly with providing these services for students enrolled in their courses. All vocational teachers have been provided at least one period each day for counseling. The guidance and counseling of the non-vocational student has been left for the counselor or academic teacher to do. In many of the small schools, there are no counselors, and the only guidance provided for the non-vocational student comes from academic teachers.

Therefore, the concept of guidance and counseling is not new, but great emphasis will be placed on a concentrated effort of the counselor and all teachers on the secondary level to provide planned and meaningful guidance and counseling to all students in the last years of school. In order to do this it will be necessary to provide in-service training sessions to orient personnel. In-service training will provide techniques on helping the students to understand their capabilities and needs, sources of information, new instructional materials and help in other problem areas as they emerge.

South Carolina (21)* conducted a two-week summer institute for a group of 29 counselors on how they might better serve disadvantaged youth through individual and joint action projects. All the respondents indicated enthusiasm for continuing programs to serve disadvantaged youth.

*See Appendix A

The proposed project for the nine Arkansas schools will provide in-service training, not only for counselors, but for all secondary personnel involved with students in their last years of school.

In Montana (10)* fifteen certified secondary counselors participated in a project under which they were employed in various skilled and unskilled jobs. While employed they investigated characteristics, background and job experiences of successful and unsuccessful entry workers in three selected industries. Results of this study will be incorporated into the in-service training scheduled for school personnel.

Although counselors and some teachers have provided placement services to those students leaving school, a concentrated effort will be made to bring the counselor, academic teacher, vocational teacher, employment services and other manpower agencies together as a team which keep students informed of the employment trends and job vacancies.

b. Objectives

1. To initiate pilot occupational education programs for rural and small suburban Arkansas schools in grades five through twelve.

2. To broaden the occupational concept and awareness of youth by incorporating occupational orientation into the school curriculum, beginning at grade five.

3. To create a favorable attitude in marginal students, slow learners, and socio-economically disadvantaged students regarding the value of education and its contribution to the world of work.

4. To bridge the gap between education and the world of work by relating classroom instruction to an immediate job through a general cooperative education program.

5. To provide intensive occupational guidance and counseling for all students during the last years of school and to assist in the initial placement of all students upon leaving school.

6. To provide short intensive training for seniors who have had no previous vocational training.

c. Project Design and Procedures Followed

This project involves a comprehensive occupational education program beginning in the fifth grade and continuing through the twelfth grade.

*See Appendix A

Eight schools in rural or small suburban areas were originally selected and another school was added this year. Priority was given to areas of high unemployment, schools with a high dropout rate and in areas identified as economically depressed.

Three schools were located in northwest Arkansas, three in north central, one in east central, one in south central, and two in the southeast. Being scattered throughout the state, this provided opportunities to involve students having a variety of backgrounds and experiences.

Each school was provided funds for a full-time coordinator, a full-time counselor, plus expenses for travel, supplies, communications, dissemination, and equipment. All schools except one were able to hire personnel to fill these positions. One school was unable to find a counselor for their program.

Inservice training was provided for one week during the summer of 1971-72 to the personnel involved in the program. Most of the counselors also attended a three-week workshop in the summer of the 1972-73 school year on career education, while coordinators attended a one-week workshop.

To synchronize the efforts and bring current information to the exemplary personnel, four quarterly conferences were held during the year. The frequency of these conferences enabled the state staff to coordinate activities between the various schools.

Even though these schools were scattered throughout the state with a minimum amount of money allocated to each school, the career education concept has been implemented. Frequent site visitations to the participating schools did not prove difficult even though the schools were scattered. The fartherest school from the State Office was 200 miles and the nearest school was 86 miles, but these schools were located in a circle so that a week's work could be planned wherein you could be in a different school each day.

The coordinators in the program were required to have a Bachelor's Degree. Within three years they must have nine semester hours in Vocational Education courses. They were required to have three semester hours in teaching cooperative classes within the first year. (Forty clock hours of inservice training workshops could be substituted for the three semester hours.) Also, the coordinator was required to have 2,000 hours of work experience accumulated in two or more occupational areas.

The counselor had to meet all certification requirements in the State of Arkansas except that he (she) could enter the program with as few as twelve hours course work leading to the Master's Degree in Guidance and Counseling. He (she) then had to work toward full certification requirements by earning a minumum of twelve semester hours per year toward a Master's Degree.

Two curriculum specialists were employed on a part-time basis through the University of Arkansas under the guidance of the Vocational Education Division. The part-time basis consisted of graduate assistant grants to one student in Vocational Education and one in Guidance and Counseling. The curriculum specialists had the responsibility of reviewing research and other materials and making it available to the nine local programs. A newsletter was developed each month by these curriculum specialists on exemplary projects both within the state and on the national level. The use of this newsletter enabled the schools to keep in close contact with each other and to keep abreast of current developments in the national field on career education.

During the school year the counselor and coordinator were encouraged to visit other exemplary schools in their area and observe firsthand what other exemplary schools were doing. Ideas and activities were exchanged which stimulated programs in all the exemplary schools.

Elementary teachers and administrative personnel were included in the quarterly inservice training programs. By including a few each time from the nine participating schools, career awareness at the elementary level was more thoroughly implemented. Another valuable tool that enabled career awareness to be implemented was the inclusion of elementary teachers from the nine participating schools in writing a Career Awareness Guide K-6. In turn, they used and monitored this publication so that a revised edition has been published this summer.

Inservice training for elementary teachers was conducted at the local level for participating schools. Personnel from the state staff, as well as consultants from other exemplary schools, participated in these programs. Further implementation of the career education concept was made instrumental through use of these inservice meetings at the local level.

d. Results and Accomplishments

Publication of Career Awareness Guide K-6 and the field testing of this publication during the year has resulted in a revised edition being published this summer. Seventy-two hundred copies of this revised edition are being distributed throughout the elementary schools in Arkansas. State staff personnel have been responsible for inservice training on the use of these handbooks in many schools. The result of this handbook is that many more elementary schools other than the ones in the nine exemplary schools will begin a career awareness program during the coming year.

The publication and revision of a Vocational Orientation Guide has served as a model for career education in approximately 170 junior high schools throughout the state. The technique that has proved the most successful has been where three vocational teachers are used in a rotating class

system. Three classes of students are rotated each six weeks between the three teachers with each being responsible for only five clusters. Thus all students are exposed to the fifteen clusters recognized by HEW during the semester course. With each teacher only being responsible for five clusters, they are in a better position to concentrate their efforts on subjects with which they are familiar.

A new course in Orientation was taught at State College of Arkansas, Conway, Arkansas, with emphasis on career education. Orientation teachers from the nine exemplary schools were participants in this course. The result will be that career orientation in the 7th, 8th, and 9th grades will be more fully implemented as it relates to the career awareness concept in elementary grades.

Exploratory programs in skill training were limited in the 10th, 11th, and 12th grades because of the size and facilities in each school. Not enough money was allocated to provide comprehensive skill training in each school; therefore, General Cooperative Education became the key for skill training at all nine exemplary schools. This cooperative training program successfully bridged the gap between education and the world of work by relating classroom instruction to an immediate job. This is one of the most successful phases of the exemplary program.

A unique approach in teaching applying for a job, interviews, and writing résumés was provided by 12th grade English teachers in some schools. They made this a part of their course of study and had students role-play employer-employee interviews, write résumés, etc. Both the teachers and students were excited and pleased with this concept and traditional English became important to the student because it related to the world of work and was much more relevant.

Exemplary personnel were called upon to explain career education in many professional education groups, business, industry, and to the community and state as a whole. The state school administrators meeting was the setting for one elementary teacher to explain how career education has helped stimulate and motivate students in her classroom. This caused many school administrators to become aware of the need for career education.

Exemplary personnel attended the regional workshop in Dallas on career education. The career education film and slide series were used in their schools, as well as surrounding schools and schoolmasters meetings, to further the concept of career education. The Governor's Conference on Career Education has been set for September with two of the exemplary schools explaining their programs to the state as a whole. Exemplary personnel have been used this spring in other schools to explain the career education concept and how it can be implemented. This has helped the state staff tremendously in that the concept of career education can be explained one teacher to another, and then followed by state staff appearances on the program.

Four model career development centers have been established outside the nine exemplary schools with state-share money. These schools are not located close to exemplary schools and therefore, have caused a stimulation for career education even further in these areas.

Forty-five counselors have attended a two-and-a-half-week workshop on career education along with business and industry implications, funded through exemplary funds. These counselors have taken the career education concept back to their home schools and although funds are not available to intensify career education in their schools, they have taken the materials developed and will attempt to implement career education during the coming school year. State-share money was also used to fund an Area Wide Career Orientation Media Center. This program was established in one of the Area Vocational-Technical Schools which serves a nine-county area. The media center contains transparencies, tapes, filmstrips, Super 8mm film loops, and media kits combining different types of materials. Vo-Tech buses will be used to transport this material throughout the nine-county area so that it will be available on an every-other-day basis. Two schools with the exemplary project will be serviced by this media center.

e. Evaluation

(Refer to section entitled "Evaluation" as this was done by a third-party contract.)

f. Conclusions, Implications, and Recommendations

The Pilot Occupational Education Programs for Small Rural and Suburban Arkansas Schools in Grades Five Through Twelve has stimulated the career education concept in Arkansas. This project has been successful as a change agent in implementing career education in all of the nine exemplary schools. Complete implementation of career education has not been accomplished in all nine schools but a direct correlation between personnel involved in each exemplary school and the success of implementation is apparent. After two years, six of the nine schools could now be used as models for the rest of the state to observe and relate career education to their own local school district. The other three have had administrative or personnel problems and only part of the objectives of the program have been implemented. With more supervision and inservice training, these programs will also be able to serve as models after the third year.

The most useful tool in implementing career education in the nine scattered schools has been inservice training, at both the state and local level. Those schools that have had inservice training on the local level in career education have implemented the program much faster than those that have not. Any projects in the future should involve inservice training at the local level at the very beginning.

Rural and suburban schools are not able to offer skill training in all of the needed student areas. Therefore, General Cooperative Education must be substituted in those areas where it is not available until such time that funding is made so these skills can be incorporated into the school curriculum.

The program would have progressed more rapidly if the counselor employed had been named "Career Education Specialist". Administrative problems relating to the duties of the counselor have hindered the program in some instances. Possibly the ideal program for this type of school would be the employment of a counselor and a coordinator, plus a career education specialist to coordinate all efforts.

In using school districts scattered throughout the state, written materials useful to other school districts have not evolved as readily as if the project was centralized. Rather, career education activities, ideas, techniques, etc., have bec developed that would be useful to pattern after. Sequential career awareness is being developed by each school and no two sequences have been the same. If a model sequence had been developed at the beginning of the project, more correlation could have been achieved between the participating schools. Possibly with the larger national models working on this particular aspect, guidelines will be forthcoming so that future projects might take advantage of this sequence.

In conclusion, career education can be implemented at a low funding level in many scattered schools with intensive state coordination of the project.

James Fisher
Signature of Project Director

June 30 1972
Date

APPENDIX A

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APPENDIX A

Bibliography

1. A Demonstration System of Occupational Information for Career Guidance, Final Report, State University of New York, Albany, New York, 1968.

2. Agan, Raymond J., "The Development and Demonstration of a Coordinated and Integrated Program of Occupational Information, Selection, and Preparation in a Secondary School", Kansas State University, Manhattan, Kansas, 1968.

3. Becker, Harry A., "A Pilot Project to Develop a Program for Occupational Training for School Allienated Youth", Center for Vocational Arts, Norwalk, Connecticut.

4. Bottoms, Gene and Kenneth B. Matheny, "Occupational Guidance, Counseling, and Job Placement for Junior High and Secondary School Youth", A paper presented at the "National Conference on Exemplary Programs and Projects", --"1968 Vocational Amendments", Atlanta, Georgia, March 1969.

5. Circle, D. F., "The Career Information Service. A Guide to its Development and Use", Newton Public Schools, Massachusetts, 1968.

6. Cushman, Harold R. and Others, "The Development and Improvement of Directed Work Experience Programs in Expanded Vocational Education Offerings in Agriculture at the Secondary School Level", State University of New York, Ithaca, New York, 1968.

7. D'Costa, Ayres, David W. Wineforder and John G. Odgers, "Development of a system of Vocational Exploration Through the Use of the Dictionary of Occupational Titles and the Ohio Vocational Interest Survey", Division of Guidance and Testing, Ohio Department of Education, Columbus, Ohio, 1968.

8. Fisher, W. Holder, "A Comparative Study of the Employee Skills/ Training Acceptable to Employers under Varying Degrees by Labor Market Stringencies", Batelle Memorial Institute, Columbus, Ohio.

9. Goff, William and Others, Project P.A.C.E. (Preparing, Aspiring, Career Exploration), Dayton City School District, Dayton, Ohio, 1968.

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10. Gorman, Robert E., "A Guidance Project to Investigate Characteristics, Background, and Job Experiences of Successful and Unsuccessful Entry Workers in Three Selected Industries", Montana University, Missoula, Montana, 1966.

11. Huffman, Harry, "Guidelines for Cooperative Education", The Center for Vocational and Technical Education, Ohio State University, Columbus, Ohio, 1967.

12. Leonard, G. E., "Developmental Career Guidance in Action, the First Year", Wayne State University, Detroit, Michigan.

13. Meyer, Warren G., Mary K. Klaurens and Richard D. Ashmune, "A Guide for Cooperative Vocational Education", University of Minnesota, Minneapolis, Minnesota, 1969.

14. Miller, Carroll H., "A Pilot Project for Vocational Guidance in Economically Underdeveloped Areas", Illinois State Office of the Superintendent of Public Instruction, Department of Guidance, Springfield, Illinois, 1968.

15. Ritter, T., "Project Vision: An Approach to a Model System of Occupational Employment Information", Indiana Manpower Research Association, Indianapolis, Indiana, 1967.

16. Schill, William John, "Concurrent Work Education Programs in the 50 States", Office of Education, Washington, D.C., 1965-66.

17. Sherman, Vivian S., "Guidance Curriculum for Increased Self-Understanding and Motivation for Career Planning, Planning and Development of Research Programs in Selected Areas of Vocational Education, Vol. 3, American Institute for Research in Behavioral Science, 1966.

18. Sjorgren, Douglas and Others, "The Identification of Common Behavioral Factors as Bases for Pre-Entry Preparation of Workers for Gainful Employment. Final Report", Colorado State University, Fort Collins and Nebraska University, Lincoln, Nebraska.

19. Stevenson, William W., "Characteristics and Competencies Desired by Employers in Agricultural Related Businesses", Oklahoma State University, Stillwater, Oklahoma.

20. Sutton, J., "Revised Instructional Program for Slow-Learners to Improve their Job Placement Opportunities: A Three Phase Study", Medford School District No. 549C, Oregon, 1967.

21. Sweeney, Thomas J., "A Developmental Program for Vocational Counselors Directed Toward Serving Disadvantaged Youth More Effectively", University of South Carolina, Columbia, South Carolina, 1966.

22. Wellington, John A. and Nan Olechowski, "Attitudes Toward the World of Work in Elementary School", The Vocational Guidance Quarterly, Vol. 14, Spring, 1966.

23. Whitfield, E. A. & Hoover, R., "Regional Center for Collection, Synthesis and Dissemination of Career Information for Use by Schools of San Diego County", San Diego County Department of Education, California, 1967.

24. Zikmund, Dale G., "Handbook on Planning and Conducting Cooperative Occupational Education Programs in Off-Farm Agricultural Occupations", Nebraska State Department of Education, Lincoln, Nebraska.

EVALUATION REPORT
ON
PILOT OCCUPATIONAL EDUCATION PROGRAMS FOR SMALL RURAL
AND SUBURBAN ARKANSAS SCHOOLS IN GRADES FIVE THROUGH TWELVE

Submitted by Southern State College

OBJECTIVE A - To initiate pilot occupational information programs in grades five through twelve.

Performance Objective 1a

By June 30, 1972, the nine* schools in the exemplary project will have occupational information programs operating in grades five through twelve as indicated by:

a. All schools teaching an occupational information course in grades 7, 8, or 9.

To determine whether this objective was achieved, the exemplary schools submitted a questionnaire to the evaluator at the end of the school year. One of the questions in the questionnaire pertained to the extent to which the schools offered an occupational information course. The results are presented in the following Tables 1 and 2.

Table 1: THE EXTENT THAT EXEMPLARY SCHOOLS OFFER OCCUPATIONAL INFORMATION COURSES

School	Offers Course		Grade Level	Number of Students Enrolled
	Yes	No		
Gentry	X		7,8,9	150
Harrison	X		9	190
Hope		X		
Magnolia		X		
Mountain Home		X		
Rogers		X		
Valley Springs	X		7 & 8	108
Warren				
Wynne	X		9	57
Total				505

*Only eight schools submitted reports for the school year 1971-72. Warren did not report.

Table 2: AN ANALYSIS OF THE STUDENTS ENROLLED IN OCCUPATIONAL INFORMATION COURSES IN THE EXEMPLARY SCHOOLS

Grade Level	Number of Students
5	0
6	0
7, 8	238
9	267
10	0
11	0
12	0
Total	505

The information in Tables 1 and 2 indicates that only 44.44 percent of the exemplary schools offer courses in occupational information. The total enrollment in these courses was 505. All of the occupational courses were offered in grades 7, 8, or 9. The available information shows that a total of 505 students out of a total enrollment in grades 5-12 of 12,355 had an opportunity to become aware of occupational information through a course. This constitutes approximately four percent of the total students enrolled in these grades. According to this criteria for objective 1a, the standard was not achieved.

The next section will show, however, that all the schools use other methods of teaching occupational and educational information to students.

Performance Objective 1b

By June 30, 1972, the nine schools in the exemplary project will have occupational information programs operating in grades five through twelve as indicated by:

b. All schools in the exemplary program offering occupational units in some regular classes, grades 5-12;

To determine whether this objective was met, one question of the questionnaire mentioned above pertained to the extent to which the schools offered occupational units in regular classes in grades 5 through 12. The results are shown in Tables 3 and 4.

Table 3: THE EXTENT OCCUPATIONAL UNITS ARE PROVIDED IN REGULAR CLASSES IN THE EXEMPLARY SCHOOLS, GRADES 5-12

Grade Level	Number of Units Offered	Number of Exemplary Schools Providing Units
5	15	4
6	16	4
7	5	4
8	10	3
9	25	6
10	7	3
11	12	5
12	24	6
Total	114	

Table 4: THE OCCUPATIONAL UNITS USED BY REGULAR CLASSROOM TEACHERS TO PROVIDE OCCUPATIONAL INFORMATION

Name of Unit	Average Number of Days Spent on Unit	Number of Schools Using Unit	Number of Students Involved
Units will be named in final report.	11.66	8	5,265

The information in Tables 3 and 4 indicate that 5,265 students in the eight schools submitting reports studied occupations in units in regular classes. An average of 11.66 days were spent on each unit. Thus the objective was met in the eight schools submitting reports.

Performance Objective 1c

By June 30, 1972, the nine schools in the exemplary project will have occupational information programs operating in grades 5 through 12 as indicated by:

c. Teachers of the occupational information course and teachers using occupational units utilizing one or more of the following teaching activities:

(1) occupational films
(2) occupational tapes and/or videotapes
(3) occupational speakers
(4) occupational field trips

To determine whether this objective was met, one question of the above mentioned questionnaire pertained to the extent to which teaching aids were used. The results are presented in Table 5.

Table 5: THE EXTENT THAT OCCUPATIONAL INFORMATION TEACHING ACTIVITIES ARE USED IN OCCUPATIONAL INFORMATION COURSE AND IN REGULAR CLASSES

School	Teaching Activity Used In Occupational Information Course				Teaching Activity Used In Occupational Units in Regular Classes			
	Occupational Films	Occupational Tapes	Speakers	Field Trips	Occupational Films	Occupational Tapes	Speakers	Field Trips
Gentry	3				6	1	4	5
Harrison	38	Yes ?	Yes ?	Yes	7	1	9	7
Hope					6		4	2
Magnolia					93	141	80	272
Mountain Home					2	2	17	6
Rogers					6		4	4
Valley Springs	32	?	?	?	23	25	5	20
Warren								
Wynne	?		?	?	?		?	?
Total	73				143	170	123	316

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The information in Table 5 indicates that teaching aids were generously used in some of the eight schools reporting. Valley Springs and Wynne reported that some of these aids were used but did not state the number of times they were used.

Many excellent practices were reported under "Other Activities". There were too many to list in this Interim Report. Some among them were: visual displays, working on projects related to career choices, research on an occupation, learning to use the D.O.T., tax study, applying for Social Security card, et al.

Thus, it can be said that this objective was met in the eight schools reporting.

Performance Objective 1d

By June 30, 1972, the eight schools in the exemplary project will have occupational information programs operating in grades 5 through 12 as indicated by:

d. All counselors using group techniques and individual interviews to provide occupational information to both elementary and secondary students;

To determine whether this objective was achieved, one question of the aforementioned questionnaire pertained to the extent to which occupational information was provided in groups and to the extent to which it was presented in interviews. The results are presented in Tables 6 and 7.

Table 6: THE EXTENT THAT COUNSELORS PROVIDE OCCUPATIONAL INFORMATION IN GROUPS

	Occupational Information Provided in Groups		Extent of Information Provided				
					Grade Level Provided		
	Yes	No	Number of Times Group Technique Used	Av. No. of Students Involved	Elementary	Secondary	Both
Gentry	X		142	21 - 28	X	X	X
Harrison	X		10	7		X	
Hope	X		12	3 - 5	X	X	X
Magnolia	X		60	35	X	X	X
Mtn. Home	X		8	10		X	
Rogers	X		50	20 - 25	X	X	X
Valley Springs	X		25	25	X	X	X
Warren							
Wynne	X		72	3		X	

Table 7: THE EXTENT THAT COUNSELORS PROVIDE OCCUPATIONAL INFORMATION IN COUNSELING INTERVIEW

School	Occupational Information Presented in Interviews		Extent of Information Provided			
			Av. No. of Interviews Per Month	Percent Provided Occupational Information	Percent of Interviews That Include Occupational Infor.	
	Yes	No			Elementary Students	Secondary Students
Gentry	X		Not Answered	75	25	75
Harrison	X		60	50		100
Hope	X		105-170	20-25	5	95
Magnolia	X		300	40	15	85
Mtn. Home	X		18	75	15	85
Rogers	X		80	60	2	98
Valley Springs	X		100	40		100
Warren						
Wynne	X		120	75		100

The information in Tables 6 and 7 indicate that the objective has been met in the eight schools reporting.

Performance Objective 1e

By June 30, 1972, the eight schools in the exemplary project will have occupational information programs operating in grades 5 through 12 as indicated by:

e. An available file of occupational information and materials in the school and the school spending a minimum of $250.00 for occupational materials.

To determine whether this objective was met, a question of the aforementioned questionnaire pertained to the provision of a file of occupational information and materials.

The results are presented in Table 8.

Table 8: THE EXTENT THAT SCHOOL SUPPORTS AN OCCUPATIONAL INFORMATION PROGRAM

School	Occupational File Available		Location of File			Local Occ. Inf.		Use of Information			Amount Spent on Occupational Information
	Yes	No	Counselor's Office	Library	Both	Yes	No	Where Located	Take Home	In Class	
Gentry	X		X	X	X	X			X		Not Answered
Harrison	X		X	X	X	X			X		$1,200
Hope	X		X	X	X		X		X		$250 - $300
Magnolia	X		X	X	X	X			X		$500
Mountain Home	X		X			X			X		$660
Rogers	X		X	X	X	X			X		$271
Valley Springs	X		X				X		X		$ 45
Warren											
Wynne	X		X	X	X		X		X		Not Answered

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The information in Table 8 indicates that the objective has been met in Harrison, Hope, Magnolia, Mountain Home, and Rogers.

OBJECTIVE B - To broaden the occupational concept and awareness by incorporating occupational orientation into the school curriculum beginning at grade five.

Performance Objective 2a

The students in the exemplary schools will increase their occupational concepts and awareness as indicated by:

a. Seventy-five percent of selected students in the exemplary schools making a 25 percent gain on an educational and occupational test;

To determine whether this objective was met, the original plan was to analyze the pre and post test data according to the number and percent of students achieving various percentage gains. This will be done in the final report. For this Interim Report the test data is analyzed according to the mean gain made by students by schools by grades. The results are shown in Tables 9 and 10.

Table 9: AN ANALYSIS OF GAINS MADE BY STUDENTS BY SCHOOL ON A PRE AND POST TEST OF EDUCATION AND OCCUPATIONAL INFORMATION (10TH GRADE)

School	Pretest Score		Post Test Score		Difference	Percentage Difference
	N	M	N	M		
Gentry	38	66.05	38	67.86	1.81	2.74
Harrison	20	61.75	20	65.00	3.25	5.20
Hope	15	55.93	15	57.00	1.07	1.91
Magnolia	40	57.40	40	57.80	.40	.70
Mountain Home	32	69.46	40	69.50	.04	.06
Rogers	35	60.93	35	63.65	2.72	4.40
Valley Springs	38	66.55	38	68.73	2.18	3.20
Warren						
Wynne	43	59.49	43	61.60	2.11	3.50
Total	261	62.19	261	63.89	1.70	2.73

Table 10: AN ANALYSIS OF GAINS MADE BY STUDENTS BY SCHOOL ON A PRE AND POST TEST OF OCCUPATIONAL AND EDUCATIONAL INFORMATION (11TH GRADE)

School	Pretest Score		Post Test Score		Difference	Percentage Difference
	N	M	N	M		
Gentry	39	66.00	39	67.74	1.74	2.63
Harrison	24	66.12	24	65.50	-.62	-.93
Hope	17	58.90	17	57.35	-1.55	-2.63
Magnolia	44	65.70	17	67.40	1.70	2.60
Mountain Home	23	71.60	23	76.21	4.61	6.40
Rogers	34	63.41	34	65.41	2.00	3.46
Valley Springs	29	64.48	29	69.10	4.62	7.16
Warren						
Wynne	37	61.46	37	63.43	1.97	3.28
Total	247	64.70	247	66.51	1.80	2.78

The information presented in Tables 9 and 10 indicate that there was quite a difference among the schools in student achievement of occupation and educational information. The degree of achievement by the total number of students taking the test, pre and post, seem to indicate that this objective was not met, even though some schools made marked positive gains.

Performance Objective 2b

The students in the exemplary schools will increase their occupational concepts and awareness as indicated by:

b. Selected students' rankings of a sample of occupations on factors of
   (1) importance to society
   (2) earnings of occupations, and
   (3) student choice will show a 5 percent increase ranking of blue collar jobs;

A list of twenty occupations were ranked by students in the sixth and ninth grades of the exemplary schools in the fall of 1971 and again in the spring of 1972 according to the three categories mentioned above. The results are presented in Tables 11, 12, 13, 14, 15, and 16.

Table 11: SHOWING TWENTY OCCUPATIONS RANKED ON A PRE AND POST BASIS ACCORDING TO WHAT SIXTH GRADE STUDENTS THINK IS MOST IMPORTANT TO SOCIETY

Occupation	Rank Order Fall, 1971	Rank Order Spring, 1972	Percentage Gain of Blue-Collar Jobs*
Policeman	1	1	
Physician	2	2	
Lawyer	3	3	
Teacher	4	4	
Bank President	5	6	
Livestock Farmer	6	5	5%
Practical Nurse	7	7	
Telephone Operator	8	9	
Truck Driver	9	8	5%
Poultry Farmer	10	10	
Secretary	11	12	
Store Manager	12.5	13	
Office Machine Operator	12.5	11	7½%
Plumber	14	16	
Sales Person	15	15	
Barber or Beautician	16	14	10%
Stock Clerk	17	17	
Cabinet Maker	18	19.5	
Waiter or Waitress	19	19.5	
Janitor	20	15	25%

*For this study the following occupations are considered to be blue-collar: barber or beautician, cabinet maker, janitor, livestock farmer, plumber, policeman, poultry farmer, practical nurse, stock clerk, truck driver, waiter or waitress. Since there are 20 occupations to rank, an advance of one step

is approximately 5%. When a blue-collar occupation remained the same or lost one or more steps in the spring evaluation, the percentage is not shown.

Table 12: SHOWING TWENTY OCCUPATIONS RANKED ON A PRE AND POST BASIS ACCORDING TO WHAT SIXTH GRADE STUDENTS THINK ONE CAN MAKE THE MOST MONEY IN

Occupation	Rank Order Fall, 1971	Rank Order Spring, 1972	Percentage Gain of Blue-Collar Jobs
Lawyer	1	1	
Bank President	2	2	
Physician	3	3	
Policeman	4	4	
Truck Driver	5	5	
Teacher	6	6	
Practical Nurse	7	9	
Telephone Operator	8	10	
Livestock Farmer	9	8	5%
Office Machine Operator	10	13	
Secretary	11	7	
Store Manager	12	11	
Plumber	13	12	5%
Sales Person	14	17	
Barber or Beautician	15	14	5%
Stock Clerk	16	17	
Cabinet Maker	17	20	
Poultry Farmer	18	15	15%
Janitor	19	19	
Waiter or Waitress	20	18	10%

Table 13: SHOWING TWENTY OCCUPATIONS RANKED ON A PRE AND POST BASIS ACCORDING TO WHAT SIXTH GRADE STUDENTS THINK THEY WOULD MOST LIKE TO DO

Occupation	Rank Order Fall, 1971	Rank Order Spring, 1972	Percentage Gain of Blue-Collar Jobs
Teacher	1	2	
Lawyer	2	1	
Secretary	3	3	
Livestock Farmer	4	6	
Truck Driver	5	7	
Bank President	6	3	
Policeman	7	5	10%
Physician	8	8	
Practical Nurse	0	10	
Barber or Beautician	10	9	5%
Telephone Operator	11	11	
Waiter or Waitress	12	12	
Poultry Farmer	13	15	
Store Manager	14	13	
Sales Person	15	14	
Office Machine Operator	16	16	
Stock Clerk	17	18	
Plumber	18	17	5%
Cabinet Maker	19	20	
Janitor	20	19	5%

Table 14: SHOWING TWENTY OCCUPATIONS RANKED ON A PRE AND POST BASIS ACCORDING TO WHAT NINTH GRADE STUDENTS THINK IS MOST IMPORTANT TO SOCIETY

Occupation	Rank Order Fall, 1971	Rank Order Spring, 1972	Percentage Gain of Blue-Collar Jobs
Physician	1	1	
Policeman	2	2	
Lawyer	3	4	
Teacher	4	3	
Livestock Farmer	5	5	
Bank President	6	6	
Practical Nurse	7	7	
Poultry Farmer	8	8	
Truck Driver	9	9	
Telephone Operator	10	10	
Secretary	11	11	
Store Manager	12	12	
Office Machine Operator	13	13.5	
Barber or Beautician	14	15	
Plumber	15	13.5	
Janitor	16	16.5	
Cabinet Maker	17	18	
Sales Person	18	19	
Stock Clerk	19	16.5	12½%
Waiter or Waitress	20	20	

Table 15: SHOWING TWENTY OCCUPATIONS RANKED ON A PRE AND POST BASIS ACCORDING TO WHAT NINTH GRADE STUDENTS THINK ONE CAN MAKE THE MOST MONEY IN

Occupation	Rank Order Fall 1971	Rank Order Spring, 1972	Percentage Gain of Blue-Collar Jobs
Lawyer	1	1	
Bank President	2	3	
Physician	3	2	
Truck Driver	4	4	
Policeman	5	6	
Secretary	6	9.5	
Teacher	7	9.5	
Practica Nurse	8	8	
Livestock Farmer	9	7	10%
Office Machine Operator	10	12	
Plumber	11	5	30%
Store Manager	12	11	
Telephone Operator	13	14	
Barber or Beautician	14	16	
Sales Person	15	17	
Cabinet Maker	16	13	15%
Stock Clerk	17	18	
Poultry Farmer	18	15	15%
Janitor	19	20	
Waiter or Waitress	20	19	5%

Table 16: SHOWING TWENTY OCCUPATIONS RANKED ON A PRE AND POST BASIS ACCORDING TO WHAT NINTH GRADE STUDENTS THINK THEY WOULD MOST LIKE TO DO

Occupation	Rank Order Fall, 1971	Rank Order Spring, 1972	Percentage Gain of Blue-Collar Jobs
Lawyer	1	2	
Physician	2	4	
Secretary	3	1	
Bank President	4	6	
Truck Driver	5	7	
Livestock Farmer	6	5	5%
Teacher	7	3	
Barber or Beautician	8	10	
Practical Nurse	9	8	5%
Policeman	10	9	5%
Telephone Operator	11	12	
Store Manager	12	11	
Office Machine Operator	13	14	
Sales Person	14	13	
Waiter or Waitress	15	17	
Poultry Farmer	17	18	
Stock Clerk	19	19	
Janitor	20	20	

The information in the tables indicate that the objective was not met though several blue-collar jobs received significant gains.

Performance Objective 2c

The students in the exemplary schools will increase their occupational concepts and awareness as indicated by:

(Original) c. Seventy-five percent of selected students in the exemplary schools making a 25 percent gain on the number of occupations they can list.

(Revised) c. The selected students making a mean gain of five occupations they can list.

The original objective required that students be matched in order to tabulate the information and to analyze it. To avoid the countless hours required to alphabetize and match the pre and post papers of the students, the objective was restated in terms of a mean gain. The results are shown in the following table.

Table 17: AN ANALYSIS OF THE AMOUNT OF CHANGE IN THE NUMBERS OF OCCUPATIONS LISTED BY STUDENTS

Grade	Number of Occupations Listed		Difference
	Pretest Mean	Post Test Mean	
5	26	37	11
7	35	40	5

Table 17 shows that the objective was met in that grade five shows a mean gain of eleven occupations and grade seven shows a mean gain of five.

Tables 18 and 19 show the mean gain by schools.

Table 18: LISTINGS (5TH GRADE)

School	N	Pre-Mean Score	N	Post-Mean Score	Difference
Gentry	72	18	63	34	16
Harrison	34	50	34	67	17
Hope	55	16	55	15	-1
Magnolia	44	26	45	45	19
Mountain Home	48	20	35	29	9
Rogers	27	30	17	20	-10
Valley Springs	52	23	53	64	41
Warren					
Wynne	55	28	59	29	1
Total	387	26	361	37	11

Table 19: LISTINGS (7TH GRADE)

School	N	Pre-Mean Score	N	Post-Mean Score	Difference
Gentry	66	30	56	47	17
Harrison	51	52	50	45	-7
Hope	57	17	27	25	8
Magnolia	52	29	52	33	4
Mountain Home	35	42	35	53	11
Rogers			54	37	
Valley Springs	52	61	53	70	9
Warren					
Wynne	55	18	48	17	-1
Total	368	35	321	41	5

OBJECTIVE C - To create a favorable attitude in marginal students, slow learners, and socio-economically disadvantaged students regarding value of education and its contribution to the world of work.

Performance Objective 3a

The marginal students will display increased favorable attitudes toward school and improved self-concept toward the world of work as indicated by:

a. The selected students making a mean gain of 10 percentage points in the number of positive responses checked on the School Sentiment Index;

To determine whether this objective was achieved, a modified version of the School Sentiment Index was given to the marginal students in the fifth, seventh, and tenth grades on a pre and post basis. The test was given to the students in the fall of 1971 and again to the same students in the spring of 1972. The results are presented in Tables 20, 21 and 22.

Table 20: THE AMOUNT OF GAIN MADE IN PERCENT OF POSITIVE RESPONSES MADE BY STUDENTS IN THE EXEMPLARY SCHOOLS ON THE SCHOOL SENTIMENT INDEX (5TH GRADE)

	Mean Percentage of Postive Responses				
School	N	Pre	N	Post	Difference
Gentry	28	57.14	31	50.00	-7.14
Harrison	19	57.14	17	53.57	-3.57
Hope	54	67.85	50	71.42	3.57
Magnolia	82	67.85	72	57.14	-10.71
Mountain Home	15	57.14	51	60.67	3.57
Rogers	28	57.14	5	60.67	3.53
Valley Springs	21	57.14	20	57.14	0
Warren					
Wynne	60	71.42	40	64.28	-7.14
Total	307	61.60	286	50.43	-10.17

Table 21: THE AMOUNT OF GAIN MADE IN PERCENT OF POSITIVE RESPONSES MADE BY STUDENTS IN THE EXEMPLARY SCHOOLS ON THE SCHOOL SENTIMENT INDEX (7TH GRADE)

School	Mean Percentage of Postive Responses				Difference
	N	Pre	N	Post	
Gentry	17	53.57	19	53.57	0
Harrison	14	57.14	14	75.00	17.86
Hope	40	64.28	23	64.28	0
Magnolia	106	60.71	106	57.14	-3.57
Mountain Home	28	60.71	30	53.57	-7.14
Rogers	53	57.14	54	53.57	-3.57
Valley Springs	22	64.28	23	67.85	3.58
Warren					
Wynne	93	57.14	44	53.57	-3.57
Total	373	59.37	313	59.81	-.34

Table 22: THE AMOUNT OF GAIN MADE IN PERCENT OF POSITIVE RESPONSES MADE BY STUDENTS IN THE EXEMPLARY SCHOOLS ON THE SCHOOL SENTIMENT INDEX (10TH GRADE)

School	Mean Percentage of Positive Responses				Difference
	N	Pre	N	Post	
Gentry	15	65.00	10	65.62	.62
Harrison	12	61.25	9	60.00	-1.25
Hope	44	64.37	45	76.25	11.88
Magnolia	102	65.00	88	55.00	-10.00
Mountain Home	34	61.87	26	63.75	1.88
Rogers	46	64.37	38	61.25	-3.12
Valley Springs	20	60.62	17	61.25	.67
Warren					
Wynne	71	68.75	53	66.87	1.88
Total	344	63.90	286	63.74	-.16

The information in Tables 20, 21, and 22 indicate there is a wide difference among schools and among grades in the same school with reference to positive sentiment toward the school. When the total number of students in a grade are considered, the results are negative in each case. The fifth grade is the most negative, being 10.17 percentage points. The seventh grade is negative by .34 of a percentage point and the tenth grade by .16.

We do not know what happened. It could be that the school personnel administering the instrument had a negative attitude toward it and consciously or unconsciously influenced the students in many cases. It could be that the instrument was carelessly administered, causing the students to mark it carelessly. It could be that marginal students developed a negative sentiment toward school as the school year progressed, which would indicate that the school's program is not effective in improving sentiment toward school. It could be that the instrument, especially as modified to please some of the schools, is not as valid as it should be in measuring a student's sentiment toward the school. The evaluator points out that the seventh grade score by Harrison and the tenth grade score by Hope may indicate that there is validity to the instrument.

The evaluator also points out that all scores, both pre and post, indicate that there is considerable positive sentiment toward the school in all three grades of all the schools since there is no percentage point lower than 61.25.

All this indicates that the objective is not met due to one or a combination of the causes mentioned previously.

Performance Objective 3b

The marginal students will display increased favorable attitudes toward school and improved self-concept toward the world of work as indicated by:

b. Seventy-five percent of the selected students making a 10 percent gain on the Choosing A Job Inventory;

(Revised) b. A mean gain of three points on the Choose A Job Inventory

The original objective required that students be matched in order to tabulate the information and to analyze it. To avoid the excessive time required to alphabetize and match the pre and post papers of the students, the objective was restated in terms of a mean gain. The results are shown in the following tables.

Table 23: AN ANALYSIS OF GAIN MADE BY SCHOOL BY MARGINAL STUDENTS ON CHOOSE A JOB INVENTORY (6TH GRADE)

School	Pre		Post		Difference
	N	Mean Test Score	N	Mean Test Score	
Gentry	31	18	26	18	0
Harrison	17	19	18	18	-1
Hope	41	21	2	19	-2
Magnolia	109	19	104	20	1
Mountain Home	11	20	37	20	0
Rogers	30	20	4	19	-1
Valley Springs	21	19	17	20	1
Warren					
Wynne	135	20	111	20	0
Total	395	19	319	19	0

Table 24: AN ANALYSIS OF GAIN MADE BY SCHOOL BY MARGINAL STUDENTS ON CHOOSE A JOB INVENTORY (8TH GRADE)

School	Pre		Post		Difference
	N	Mean Test Score	N	Mean Test Score	
Gentry	37	18	24	17	-1
Harrison	14	20	21	19	-1
Hope	38	21	28	21	0
Magnolia	104	20	96	20	0
Mountain Home	39	18	52	18	0
Rogers	48	17	45	18	1
Valley Springs	22	19	18	18	-1
Warren					
Wynne	146	20	134	20	0
Total	448	19	418	19	0

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Table 25: AN ANALYSIS OF GAIN MADE BY SCHOOL BY MARGINAL STUDENTS ON CHOOSE A JOB INVENTORY (11TH GRADE)

School	Pre		Post		Difference
	N	Mean Test Score	N	Mean Test Score	
Gentry	9	17	8	17	0
Harrison	10	21			
Hope	41	24	42	22	-2
Magnolia	103	19	87	19	0
Mountain Home	27	19			
Rogers	26	20	36	20	0
Valley Springs	16	19	14	19	0
Warren					
Wynne	105	20	86	20	0
Total	310	19	273	19	0

The information in Tables 23, 24, and 25 indicate that there was no gain by students taking the Choosing A Job Inventory. Thus, the objective was not achieved.

This calls for some comment. This inventory is designed to measure the self-concept in terms of the individual's aspiration to white-collar and professional jobs. Counselors may have been working with these marginal students to influence them to be more realistic in terms of vocational choice. Perhaps the instrument would be more appropriately used if the objective had been set in negative instead of positive terms. Account will be taken of this in the following year and in the final report.

Peformance Objective 3c

The students in the exemplary schools will display increased favorable attitudes toward school and improved self-concept toward the world of work as indicated by:

c. The dropout rate for the 1971-72 school year in the exemplary schools being 2 percent less than the dropout rate in the same schools for the 1970-71 school year;

To determine whether this objective was reached, a questionnaire was submitted to the evaluator. One item pertained to the dropout rate of students in the exemplary schools grades 5-12. Partial results are presented in Table 26.

Due to ambiguous directions by the evaluator, the data received for the year 1970-71 could not be compared to those received for 1971-72. This will be corrected in the final report. Only the data for 1971-72 is presented in Table 26.

Table 26: A COMPARISON OF THE 1970-71 DROPOUT RATE OF STUDENTS BY SCHOOLS WITH THE 1971-72 DROPOUT RATE

School	1970-71 Total Enrollment	1970-71 Dropouts				1971-72 Total Enrollment	1971-72 Dropouts			
		Boys	Girls	Total	Per-cent		Boys	Girls	Total	Per-cent
Gentry						528	10	11	21	3.97
Harrison						1,653	18	12	30	1.81
Hope						1,935	22	26	48	2.48
Magnolia						2,006	42	29	71	3.53
Mountain Home						1,336	26	5	31	2.32
Rogers	(no data)					(no data)				
Valley Springs						337	5	10	15	4.45
Warren	(no data)					(no data)				
Wynne						1,956	37	63	100	5.11
Total						9,751	160	156	316	3.24

Table 26 shows the dropout rate to be 3.24 for the year 1971-72.

Performance Objective 3d

The marginal students will display increased favorable attitudes toward school and improved self-concept toward the world of work as indicated by:

d. The selected students improving their grade point average. The expected grade point average for these students during the 1971-72 school year will be .25 higher than the grade point average they earned during the 1970-71 school year. For example, if the mean grade point average for 1970-71 for all these students was 1.75, then the performance level expected for 1971-72 would be 2.00.

To determine whether this objective was achieved, a questionnaire was submitted to the evaluator. One item compared the grade point averages of marginal students for 1970-71 with the GPA of the same students for 1971-72. The results are presented in Tables 27 and 28.

Table 27: A COMPARISON OF THE 1970-71 GRADE POINT AVERAGES OF MARGINAL STUDENTS WITH 1971-72 GRADE POINT AVERAGES

School	1970-71		1971-72		Difference
	N	Mean GPA	N	Mean GPA	
Gentry			129	1.73	
Harrison	194	1.50	103	1.60*	.10
Hope					
Magnolia	792	1.58	818	1.86*	.28
Mountain Home			356	1.2	
Rogers			90	1.71	
Valley Springs	128	1.90	142	2.03*	.13
Warren					
Wynne			190	1.80	
Total	1,114	1.66	1,818	1.70	

*Mean for the three schools, with usable data for both years, for 1971-72 was 1.83.

Table 27 shows that Harrison, Magnolia, and Valley Springs submitted data for both years which is usable. Rogers was not in the program last year. The information from Hope was not usable for either 1970-71 or 1971-72. That from Mountain Home was not usable for 1970-71. Gentry and Wynne did not report on this item for 1970-71. Table 27 also shows that the gain in grade point averages for Harrison, Magnolia, and Valley Springs was .10, .28, and .13 respectively.

Table 28: CHANGES IN GRADE POINT AVERAGES OF MARGINAL STUDENTS BY GRADE LEVEL IN THE 3 SCHOOLS: HARRISON, MAGNOLIA AND VALLEY SPRINGS

Grade Level	N	Mean	Grade Level	N	Mean	Difference
5	184	1.75	6	146	2.17	.32
6	180	1.91	7	160	1.87	-.4
7	174	1.35	8	143	1.80	.45
8	166	1.52	9	139	1.82	.30
9	149	1.56	10	119	1.81	.25
10	122	1.80	11	125	1.94	.14
11	134	1.78	12	114	2.31	.53
				Mean Difference		.28

Table 28 presents the changes in the grade point averages by grades for the three schools; Harrison, Magnolia, and Valley Springs, from 1970-71 to 1971-72. This comparison involved the same students, i.e., the sixth grade of 1971-72 was compared with the fifth grade of 1970-71, and so on for all the grades through the twelfth grade for 1971-72.

The results show that the students from these three schools improved their GPA during 1971-72 by .28. Thus, these three schools reached the standard set for this objective.

Let it be remembered that this is an interim report. The director of the project has notified each of the five schools not submitting usable GPA data that they will be expected to do so for the final report.

OBJECTIVE D - To bridge the gap between education and the world of work by relating classroom instruction to an immediate job through a general cooperative education program.

Performance Objective 4a

By June 30, 1972, the nine exemplary schools will offer an effective program to bridge the gap between education and the world of work as indicated by:

a. All eight schools offering a general cooperative education program;

Table 29 shows the results of this effort on the part of the schools.

Table 29: THE EXTENT THAT GCE PROGRAMS ARE ESTABLISHED IN THE ELEMENTARY SCHOOLS

School	GCE Program Established Yes	No
Gentry	X	
Harrison	X	
Hope	X	
Magnolia	X	
Mountain Home	X	
Rogers	X	
Valley Springs	X	
Warren	X	
Wynne	X	
Total	9	

General cooperative education programs have been established in all nine schools. Thus, the objective has been met.

Performance Objective 4b

By June 30, 1972, the eight exemplary schools will offer an effective program to bridge the gap between education and the world of work as indicated by:

b. Ninety percent of the students desiring to enroll in the program in the spring of 1971 actually enrolling in the program during the 1971-72 school year;

In the spring of 1971 students in the tenth and eleventh grades were given an opportunity to express a preference for a GCE course. Table 30 shows by schools the number of students expressing a desire for a GCE course and also the number actually enrolled in the fall of 1971. The objective is not met since only 77% of those desiring to enroll were actually able to enroll.

Table 30: A COMPARISON OF THE 11TH AND 12TH GRADE STUDENTS EXPRESSING A DESIRE FOR COOPERATIVE TRAINING WITH THOSE ENROLLING IN THE PROGRAM

School	Number Expressing Desire to Enroll in Spring, 1971	Number Enrolling in Fall, 1971	Percent Enrolling
Gentry	20	32	160
Harrison	41	17	41
Hope	42	42	100
Magnolia	62	59	95
Mountain Home	51	25	49
Rogers	24	24	100
Valley Springs	22	19	86
Warren	22	28	127
Wynne	83	36	43
Total	367	282	77

Performance Objective 4c

By June 30, 1972, the eight exemplary schools will offer an effective program to bridge the gap between education and the world of work as indicated by:

c. Seventy-five percent of the students in program responding positively to all items on the General Cooperative Education Sentiment Index;

The following instrument was given to all the students taking the GCE course. Table 31 shows how the students responded to the items on the instrument.

Table 31: THE NUMBER AND PERCENT OF RESPONSES OF ALL GCE STUDENTS ON THE GCE SENTIMENT INDEX

Statement	Number and Percentage of Responses							
	Strongly Agree		Agree		Disagree		Strongly Disagree	
	N	%	N	%	N	%	N	%
Since enrolling in my GCE course I like school better.	54	29	94	51	25	14	11	6
This program makes school more meaningful to me.	32	19	89	53	32	19	14	9
I would still be in school if I could not have taken my GCE course.	75	44	51	30	22	13	21	13
I like my GCE course better than any of my other courses.	65	36	58	32	41	23	17	9
I like the GCE course because it will probably lead me to a job.	50	30	73	44	33	20	10	6
The GCE course has helped me to gain confidence in myself.	50	30	74	45	29	17	13	8
I have gained confidence in myself because I have been assigned tasks to do.	33	20	92	55	33	20	8	5
I have gained confidence in myself because of my association with people, employees and the public.	45	27	91	55	20	12	9	6
When I enrolled in the GCE course I was about to drop out of school.	11	7	8	5	24	14	123	74
I cannot see that my GCE course is any better than my other courses.	20	12	32	19	73	44	41	25
When I graduate from high school I plan to go to work immediately.	54	33	60	36	23	14	28	17
I plan to do post high school work in an area vocational-technical school or in an adult education program.	24	15	35	21	73	45	32	19
I like to work at the training station where I have been assigned.	57	35	76	46	18	11	14	8
My training station gives me experience in the type of work I like most.	44	27	57	35	45	27	19	11
I like my training station supervisor.	71	43	70	42	15	9	9	6

Sum of positive percentages is 9.63. 9.63 divided by 15 (number of statements) is 64.2.

All the statements on the Sentiment Index are answered positively, except items 3 and 10, if answered in the "strongly agree" and "agree" category. On items 3 and 10 answers in the "disagree" and "strongly disagree" category are considered positive responses. If all of the positive percentages are totaled (9.63) and divided by 15 (number of statements) the resulting average percentage is 64.2. Thus, the objective is not reached. It is shy by 10.8% of the students making positive responses.

This calls for some further interpretation. Item 3, "I would still be in school if I could not have taken my GCE Course", and Item 9, "When I enrolled in my GCE course I was about to drop out of school", one negative, the other positive, were designed to determine the influence of the GCE course in school retention. From the responses given on these two items, it seems that very few of the 184 students responding to the instrument had any idea of dropping out of school. This raises a question as to the validity of these two items. When these two are omitted, the average percentage is 71.1 instead of 64.2.

In the final report of the project the results on this form will be shown by schools.

Performance Objective 4d

By June 30, 1972, the nine exemplary schools will offer an effective program to bridge the gap between education and the world of work as indicated by:

d. Seventy-five percent of the employers of GCE students rating students positively on a rating form.

The following rating form was used by each employer to rate the student working for him. The results are shown on Table 32.

VOCATIONAL DEPARTMENT
EMPLOYEE APPRAISAL REPORT FOR COOPERATIVE EDUCATION

Name _____

Date _____

Rating (Check one in space above)

1. Industry & Effort	Attempts to AVOID WORK	Does only NECESSARY WORK	Does assigned work WITHOUT BEING URGED	Does assigned work and SEEKS ADDITIONAL TASKS
2. Cooperation	Cheerful and eager to cooperate	Cooperation not always spontaneous	Cooperates when requested	Sullen and unresponsive, refuses to cooperate
3. Stability	Flighty and impatient	Somewhat restless	Usually stable and sincere	Shows sincerity and dependability
4. Leadership	Is able to lead & direct	Takes lead occasionally	Very seldom takes lead	Follows rather than lead
5. Judgment	Acknowledged blunderer	Makes an occas- error	Can be depended upon to use good sense	Exceptionally clever in handling situations
6. Dependability	Very reliable	Trustworthy	Usually reliable	Unreliable
7. Knowledge	Lacking	Meager	Moderate	Well informed
8. Sincerity	All he says taken at face value	Usually inspires confidence	Gives impression of bull dozing	Arouses suspicion
9. Accuracy	Careless	Few errors	Very careful	Extremely careful
10. Work Ability	Shows exceptional ability	Better than average ability	Only able to do routine work	Shows little evidence of ability
11. General Evaluation	Has fine possibilities	Probably will be a valuable employee	May have some value	Not likely to prove valuable

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Table 32: THE NUMBER AND PERCENT OF VARIOUS RATINGS GIVEN TO GCE STUDENTS BY THEIR EMPLOYERS

School	Number of Students Rated	Number and Percentage of Ratings Given							
		Has Fine Possibilities		Probably Will Be Good Employee		May Have Some Value		Not Likely To Be Valuable	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
Gentry	36	5	14	25	69	4	11	2	6
Harrison	17	7	41	10	59	0	0	0	0
Hope	35	13	37	18	51	4	12	0	0
Magnolia	41	27	66	14	34	0	0	0	0
Mountain Home	20	11	55	7	35	2	10	0	0
Rogers	24	18	15	6	25	0	0	0	0
Valley Springs	11	6	55	4	36	1	9	0	0
Warren	24	10	42	13	54	1	4	0	0
Wynne	Did not send in Employee Appraisal								
Total	208	97	47	97	47	12	5	2	1

Considering both, "Has fine possibilities" and "Probably will be good employee" as positive responses, Table 32 shows that 94 percent of employer ratings were positive. Thus, the objective was reached.

OBJECTIVE E - To provide intensive occupational guidance and counseling for all students during the last years of school, and to assist in the initial placement of all students upon leaving school.

Performance Objective 5a

Students in the exemplary programs will receive intensive guidance and counseling services during the 11th and 12th grades as indicated by:

a. Seventy-five percent of the selected students responding positively to at least 10 of the 14 items on the guidance program evaluation questionnaire;

To determine whether this objective was met, the evaluator planned to have the results of a State Guidance Program Questionnaire. This was to be administered by personnel of the State Department of Education. For reasons beyond the control of the evaluator the questionnaire was not administered.

Table 33: THE NUMBER AND PERCENT OF 11TH AND 12TH GRADE STUDENTS MAKING VARIOUS RESPONSES ON THE GUIDANCE PROGRAM EVALUATION QUESTIONNAIRE

Question	Number and Percent of Responses					
	Yes Reponse		No Response		Don't Know Response	
	No.	%	No.	%	No.	%

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Performance Objective 5b

Students in the exemplary programs will receive intensive guidance and counseling services during the 11th and 12th grades as indicated by:

b. The school counselor having available follow-up information on 75 percent of the spring, 1971 graduates and dropouts;

To determine whether this objective was met, a questionnaire was submitted to the evaluator. One question pertained to the follow-up of 1971 graduates. The results are presented in Table 34:

Table 34: THE EXTENT THAT EXEMPLARY SCHOOLS HAD AVAILABLE FOLLOW-UP INFORMATION ON 1971 GRADUATES

School	Total Number of Graduates	Number and Percent of Graduates							
		Work, Married or Military		Post High School Training Other Than College		College		No Data Available	
		No.	%	No.	%	No.	%	No.	%
Gentry	46	23	50	7	15	14	30	2	5
Harrison	165	53	32	15	9	93	56	4	2
Hope	203	53	26	41	20	105	51	4	2
Magnolia	218	32	15	31	14	155	71	0	0
Mountain Home	(No data)								
Rogers	224	64	28	35	16	116	52	9	4
Valley Springs	40	21	52	3	8	16	40	0	0
Warren	(No data)								
Wynne	185	64	35	34	18	83	45	4	2
Total	1081	310	29	166	15	582	54	23	2

The information presented in Table 34 indicates that the objective was met in the seven schools providing information on this question. It shows that there was follow-up information on 1,058 of 1,081 graduates, or 98%.

Performance Objective 5c

Students in the exemplary programs will receive intensive guidance and counseling services during the 11th and 12th grades as indicated by:

c. The school having a record of at least one placement or educational referral for each twelfth grade student enrolled during the 1971-72 school year;

To determine whether this objective was met, the schools submitted a questionnaire to the evaluator, one question of which pertained to placement and educational referrals.

The results are shown for the three schools sending in usable information on Table 35.

Table 35: THE EXTENT THAT 12th GRADE STUDENTS IN EXEMPLARY SCHOOLS WERE REFERRED FOR EDUCATIONAL OR JOB PLACEMENT

School	Number of Students in Graduating Class	Given Job Placement Referrals		Results of Referrals Known		Given Educational Referrals		Results of Referrals Known	
		No.	%	No.	%	No.	%	No.	%
Gentry	5.8	31	53	31	100	32	55	32	100
Harrison	(No data)								
Hope	(No data)								
Magnolia	244	55	23	34	100	181	74	181	100
Mountain Home	(No data)								
Rogers	(No data)								
Valley Springs	31	1	3	1	100	21	68	22	100
Warren	(No data)								
Wynne	(No data)								

The information on Table 35 shows that Gentry met the standard for this objective by referring all thirty-one members of the twelfth grade class. Five students were referred for both placement and education.

Magnolia lacked six and Valley Springs lacked eight of referring all the members of each twelfth grade class.

Performance Objective 5d

Students in the exemplary programs will receive intensive guidance and counseling services during the 11th and 12th grades as indicated by:

d. The school having a follow-up record on at least 75 percent of the 12th grade students referred for jobs or educational placement.

The questionnaire to provide this information will be due in the Project Director's office October 1, 1972. (Same as for Table 35.)

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OBJECTIVE F - To provide short intensive training for seniors who have not had previous vocational training.

Performance Objective 6a

Selected senior students will respond positively to short intensive vocational training program as indicated by:

a. A minimum of fifty students receiving such training;

To determine whether this objective was met, six of the schools submitted a questionnaire to the evaluator. One item pertained to the number of students taking short intensive vocational training. The results are presented in Tables 36 and 37.

Table 36: THE NUMBER OF SENIOR STUDENTS IN EXEMPLARY SCHOOLS THAT RECEIVED SHORT INTENSIVE VOCATIONAL TRAINING

School	Number of Students Who Took Training	Number of Students Placed in Jobs in Training Area
Gentry	(No data)	
Harrison	20	Unknown
Hope	43	38
Magnolia	239	34
Mountain Home	2	2
Rogers	250	67
Valley Springs	(Not applicable)	
Warren	(No data)	
Wynne	33	
Total	587	141

Table 37: THE NUMBER OF SENIOR STUDENTS IN THE EXEMPLARY SCHOOLS THAT RECEIVED SHORT INTENSIVE VOCATIONAL TRAINING

Type of Training	Number of Students Who Took Training	Number of Students Placed in Jobs in Training Area
Various types of occupations	587	141

Tables 36 and 37 show that the objective was met in the six schools submitting data.

Performance Objective 6b

Selected senior students will respond positively to short intensive vocational training program as indicated by:

b. Seventy-five percent of students reporting favorable responses to training received.

To determine whether this objective was met, four of the six schools that submitted to the evaluator on Objective 6a, submitted data on the item pertaining to the students' evaluation of the short intensive vocational training. The results are presented in Table 38.

Table 38: THE RESPONSES OF SENIOR STUDENTS TO SHORT INTENSIVE VOCATIONAL TRAINING PROGRAMS AS JUDGED BY THEIR COUNSELORS

School	Total Number of Students Receving Training	Number and Percent of Responses to Training As Judged By Counselor							
		Very Positive		Positive		Negative		Very Negative	
		No.	%	No.	%	No.	%	No.	%
Gentry	(No data)								
Harrison	20	6	30	14	70				
Hope	(No data)								
Magnolia	239	140	59	94	39	5	2		
Mountain Home	(No data)								
Rogers	250	25	10	193	77	27	11	5	2
Valley Springs	(Does not apply)								
Warren	(No data)								
Wynne	(No data)								
Total	509	171	34	301	59	32	6	5	1

The information presented in Table 38 shows that 34% of the students taking the training rated it as "very positive" and 59% rated it as "positive". Thus, the objective was met in the schools submitting data, in that 93% of the students judged the training as positive or above.

SUMMARY

The performance objectives for this interim report were set in terms of process evaluation and product evaluation. The evaluators set standards or goals to be achieved by June of 1972. Ten of fifteen standards set for process evaluation were achieved. Five were not, one was incomplete, and one is to be completed after October 1, 1972. Two of six standards set for product evaluation were achieved, four were not, and one was incomplete. Process standards achieved were: 1b, 1c, 1d, 1e in five schools, 4a, 4d, 5b, 5c in Gentry, 6a in six schools, and 6b. Product standards achieved were 2c and 3d.

RECOMMENDATION

This report shows much good work. Even though the standards set by the evaluators were not met in all cases, it could be that they were set too high.

It is recommended that the project be funded through June 30, 1973.

LOCAL REPORTS

2453

INTERIM REPORT

Project No. 0-361-0032
Grant No. OEG-0-70-5189(361)

Pilot Occupational Education Programs for Small Rural and Suburban Arkansas Schools in Grades Five Through Twelve

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

Mabel Jordan
School District #19
P. O. Drawer 159

May 31, 1972

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Summary of Report

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B. Goals and Objectives
C. Procedures followed
D. Results and accomplishments
E. Evaluation
F. Conclusions and recommendations

Body of the Report

A. Problem areas toward which the Project was directed
B. Goals and objectives of the Project
C. Description of the general Project design and procedures followed
D. Results and accomplishments of the Project Quotes from personal notes to the co-ordinator concerning the class
E. Evaluation Design
F. Conclusions, implications and recommendations for the future

4. SUMMARY OF THE REPORT

A. Time period covered by this report:
July 1, 1971 to July 1, 1972.

B. Goals and objectives of the project.

1. To continue the pilot occupational education programs started in Gentry last year.

2. To expand and broaden the occupational concept and awareness of youth by either having semester courses or incorporating orientation into the total school curriculum.

3. To create within the student (special emphasis on marginal, slow learners and socio-economically disadvantaged) good attitudes toward education and its contribution toward the world of work.

4. To bridge the gap between education and the world of work by relating classroom instruction to a specific job. Through a General Co-operative education program to provide interested students with on-the-job-training.

5. To provide intensive occupational guidance and counseling for all students during the last years of school, and to assist in college entrance, vocational training and/or initial placement of each student upon leaving school.

6. To provide at least a short intensive training for seniors who have had no previous vocational training.

C. Procedures followed.

1. A coordinator of cooperative education was employed.

2. A vocational counselor was employed.

3. Vocational teachers were assigned classes of orientation in their area.

4. A pre-school-year clinic with all teachers in the school system present was held.

5. Vocational personnel attended all conferences and several workshops offered to enrich the total project.

6. Teachers were requested to report each quarter to counselor or coordinator so progress could be measured.

D. Results; Accomplishments.

This program of vocational education has touched the lives of each student in the school this year.

It provided opportunity for several Elementary grades to study the particular job of their parent. Other grades observed community occupations.

Junior and Senior high level have studied many occupations "new" to them. The realization that many different types of work are necessary for a society to exist was accomplished.

"Hands on" experiences was provided for grades 7-8 (Rotating class); 9-10 (Exploration classes); 11-12 G.C.E. (Classroom and training station experiences).

All seniors were provided with a study of initial job application and problems of Human Relations, especially on first jobs.

E. Evaluation:

Pre-testing and Post-testing was done. This is only a partial method of measuring.

The real measurement can only be made by changed attitudes, goals and perspectives of students as they finish their formal education and go to the world of work.

A survey of each class asking their opinion as to the value of information gained through studying occupations.

F. Conclusions and Recommendations.

All phases of the program is progressing through the 2nd year as planned.

A directed effort was made toward all objectives. Students are aware of greater interest being shown toward the individual.

The material furnished by the State has been a tremendous help this year-we were able to study many more vocations.

The small items of equipment have helped to reproduce work and make class instruction much more effective.

These classes in "Actual Experience" develope the student more than any type work. They feel important and therefore put out more effort.

Recommendations: That next year be continued and definite plans be made to continue the program as was started this past year.

That a plan be made-State wide-that local schools could follow. This would give administration a better idea of what actually takes place in the program.

That less paper work be required so more concentration could be placed on "study plans" and actual supervision.

That the counselor be allowed to work with the co-ordinator on all phases of work-(location of office and assignments made are of importance in this suggestion).

That we work toward all Juniors and Seniors having an intensive study of the world of work. (At least 3 weeks).

5. BODY OF THE REPORT:

A. Problem areas toward which the project was directed.

Vocational competence to students graduating G.H.S. Emphasis toward this started in first grade and at each level some definite effort was concentrated.

Vocaticnal training for those leaving high school before graduation-Concentration on dropout rate in grades8 through 10 has helped.

This past year we have heard from some graduates of the 1st year of the Exemplary Program. They express confidence and appreciation for training they received.

Attitudes are definitely improved toward school requirement. Teachers are more conscious of incorporating real meaning into studies.

B. Goals and objectives of the project.

To provide occupational orientation programs beginning in the Elementary grades.

Objective: (Stated on last year's report) Orientation classes were conducted or incorporated on each grade level. 1-6 Pre-test and Post-test were administered as directed by evaluation plan from State Department.

To create interest and favorable attitudes toward education as it relates to the world of work.

Objective: Students will seek guidance and direction-they will respond favorably toward learning as a preparation for a vocation and for progressing in the world of work.

To provide intensive occupational guidance and counseling for all students finishing school, and to assist in initial placement of students.

Objective: A complete record of students work, tests, apititute, etc. is on record. To assist student in making decisions, both immediate and long range. Also students are at ease when being counseled. They state problems and respond to help offered.

To provide training programs for students in their field of interest. This provides actual on-the-job-training.

Objective: To bridge the gap between school and the world of work. Students are placed on a job congruent with what tests have shown and evaluations that have already been made by previous shown abilities and desires.

C. Description of the general project design and procedures followed.

The project is designed to serve students grades 1 through 12, (originally grades 5 through 12), and on to initial employment.

The "Evaluation Design" shows the grade level and what is being accomplished. Elementary grades have been divided by vocational counselor to give job information incorporated with studies. Grades 1-3 mainly learning about their parents work-grades 4-6 mainly jobs in the community and surounding area.

Starting with grades 7 and 8 a Rotating class provides 9 weeks of occupational orientation in 3 specific areas of our high school: Business, Agriculture, and Home Making. A fourth 9 week period was a study of "other vaocations."

Grades 9 and 10 were offered exploratory type studies: Farm Mechanics, Adult Living, and Typewriting.

Grades 11 and 12 were enrolled in G.C.E. which offered on-the-job experience. Office Education or Job Training were offered as the class work to relate to their job.

Orientation was offered in accounting to students not enrolled in these classes. Business Math also incorporated units with each area studied. Shorthand classes studied units in secretarial work as presented by dictation work.

D. Results and accomplishments of the project.

It is impossible to state real results and accomplishments-this will only be seen in the improved attitudes and lives of students in years to come.

Great interest was shown at 11th and 12th levels in types of jobs available, qualifications required, advantages and disadvantages of each type student.

Changes in occupational goals were made by several students when they learned more about the occupation.

I believe the 7th and 8th Rotating class is of real benefit in our school, several students told me they wanted to quit school but their orientation teachers had all said they probably couldn't hold a job if they didn't finish high school-so they were coming back next year.

On several occassions as coordinator I would be in the class-these vocational teachers did an excellent job interesting the students in gathering information.

Again this year we notice changes for good in attitudes, values, goals and general outlook on life. Students are more willing to seek help and guidance when needed.

This program is geared to serve the individual. They are realizing their "individual worth" and responsibility to society. We have seen students in G.C.E. completely change in moral behavior, attitudes, respect for authority, dress patterns and ambitions.

Each teacher has accepted the responsibility of the project and done their part to accomplish the school goal. Each vocational teacher stressed personal improvement of the individual.

We believe, not only the marginal student but every student has benefited from the project.

Students have been reached through the work program (G.C.E.) that would never have graduated could they not work part time.

Quotes from personal notes to Coordinator at end of year.

"In looking back over the year I can see just how much that this class has helped me. I have a job and a high school diploma. Without this calss I would only have one or maybe neither. I feel the job and the credits earned in this class are

invaluable. I know what to expect and how to get along on the job I now have and how to evaluate a job before changing from one to another."

Henry

"What I like most about the class is that you learn how to get along with people, and what kind of person you can be if you want to."

Steve

"Job training is a course that I feel every student should have, it helps you to learn about many jobs you have never heard of."

David

"This course has been hard much of the time, but I have gained alot of information I didn't know. It has taught me that there is something besides money in a man's work. There is a satisfaction you get from helping someone else, and that no one lives to himself, he must always get along with others to be a success."

Wayne

"I feel that I have learned more things I will use in life than in any other class I have had. I have learned what it is like to express myself and have someone listen. I know that this class will have a big effect on my college days. I no longer hate school but have finally realized what it is all about."

Bill

"Although I learned alot about business and occupations in this class I feel that more importantly I learned alot about human relations-getting along well with others-and that this will help me in whatever I do. In class discussions I realized how other people felt and how opinions will differ. I feel that this really helped me because I find myself not being so self-centered. If I were giving advice to underclassmen, I would definitely advise them to take the class."

Karla

"I feel I have learned things in this class I will be using in life. I have learned confidence, both in myself and in others."

Vicki

"This is not like any other class. I has made me aware of the world which will very soon be confronting us. It has helped me think more of the other person, to think of my future, and to learn the correct way to do things. We have a chance to apply some things we learn in other classes also. It is a most valuable class for each student."

Sally

"I think this is a very good class. I have learned a lot about byself and others. Working with the machines has helped a lot and I have thoroughly enjoyed my office job. It will be an experience I will never forget. Thank you for taking so much time to teach each of us about the particular job we were interested in, and the outside world."

Sandra

"This class in Office and Job Education has been one of my most valuable High School courses. I have learned so much that will help me in life and in my vocation."

Ginger

"The value of Job Training to me is that it teaches us the right way to get a job and to make a living. I know some of us would not come to school if it wasn't for the fact that we could work and come to school.

Clarence

Student Population:

Grade	No. in class	Instructional Staff
Elementary	520	Counselor Each classroom teacher
7	71	Vocational Coordinator Vocational counselor
8	67	Business Instructor Agriculture Instructor Home Making Instructor
9	58	Business Instructor Agriculture Instructor
10	50	Home Making Instructor Counselor Guidance
11	54	Coordinator G.C.E. On the Job
12	55	G.C.E. Office Education Accounting (Vocational Emphasis) Shorthand (Vocational Emphasis) Vocational Counseling by Counselor and Coordinator Math Instructor

Methods, Materials, Instruments and Techniques Used:

Methods:

All classes used overhead projectors, films and speakers. Teachers used lecture type, hands on, report and project lessons.

G.C.E. class used student lead discussions on all occupations chosen to be reported.

Materials and Instruments:

World of work tapes
S R A Kit
Occupational Outlook handbook

Lead the Field-Earl Nightengale tapes
Clerical office practice books, sets and working papers.
Chronicle Occupation File (This is very good)
Memeographed and duplicated work
Projects-Some made by students, some teacher instituted.

Techniques used:

Variety seemed to be the key to holding interest. Only stayed on a particular unit as long as it proved an attention holder.

Lectures, student directed projects and units of study type lessons were used.

E. Evaluation of the Project

attached

F. Conclusions, implications, and recommendations for the future.

Working in certain areas by grade level has proved very satisfactory.

We recommend this to be continued the same.

Grades 7-8 Rotating class very good. Much interest and response by students.

We recommend 7th grade Rotation class next year.

Grades 9-10 all semester and year courses in exploratory were filled.

We recommend more courses be offered at this level.

Grades 11-12 Two classes were offered in direct concentrated vocational training. All students requesting the program were accepted. Some did Lab assignments that could no work off campus. 41 students were enrolled in class related work programs.

We recommend some type class to acquaint student with field of work who cannot find work stations.

INTERIM REPORT

Project No. 0-361-0032

Grant No. OEC-0-70-5189 (361)

Pilot Occupational Education Program for Small Rural and Suburban Arkansas School in Grades Five through Twelve

Exemplary Project in Vocational Education

Conducted Under

Part D of Public Law 90-576

Bruce Bevens, Project Coordinator

Harrison Public School District

Harrison, Arkansas

June 7, 1972

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SUMMARY OF THE REPORT

(A) Time period covered--July 1, 1971--May 26, 1971

(B) Goals and Objectives

(1) This part of the report discusses the main areas at which the Exemplary Project was aimed.

(2) The six main objectives of the Project are listed and described.

(3) The report states that these objectives are aimed at intensifying and broading the vocational aspects of education in the entire curriculum of the Harrison Public School system.

(4) The main areas at which the project was aimed were:

(a) Grades five--twelve
(b) Junior High Special Education
(c) The high Junior High drop-out rate
(d) The cooperative program in High School
(e) The elementary grades five and six.

(C) Procedures Followed

I Staff

(a) This phase of the report describes how the Exemplary Staff has been utilized during the 1971-72 school year.

(1) Coordinator and Counselor taught classes of Occupational Information in the ninth grade.

(2) Coordinator taught GCE-ICT class in eleventh and twelveth grades.

(3) Coordinator was sponsor of the VICA organization of the GCE-ICT class.

(4) Counselor and Coordinator worked cooperatively at the elementary level.

(5) Counselor and Coordinator worked with the Junior High Special Education class and potential drop-outs.

(6) Counselor performed regular testing and counseling duties for the Junior High and elementary schools.

(7) Coordinator took a special education student to and from work two days a week.

(8) Other duties of the staff was discussed.

(b) The vocational staff in the school system who worked with the exemplary program were listed.

(c) The elementary teachers in the fifth and sixth grades who used career education this year were listed.

(d) A listing of the project advisory committee was made.

II Student Population

A numerical accounting was made of the following phases of the student population.

(a) Marginal students--grades 5--11.

(b) Vocational students in all vocational classes during the 1971-72 year.

(c) Drop-outs--grades 8--12.

III Method and Materials

A. High School Level

(1) The methods and materials used for the high school phase of the project were described. This discription included books and workbooks used, as well as, the ways in which they were used.

The GCE-ICT program and the VICA organization were described.

(2) The occupations represented by the twenty GCE-ICT students were listed.

(3) Description of how the coordinator assisted the Business Education Department was made.

B. Junior High School Level

(1) The books, workbooks, and other materials used in the Occupational Information class were described. The methods through which they were used were also included.

(2) Report on teachers in Junior High using career education.

(3) Method of dissemination described.

(4) An example of work done by coordinator with one particular special education student was described.

C. Elementary School Level

(1) The elementary career education curriculem was described, as well as, the way it was presented.

(2) Elementary teachers used guest speakers, films, and hands-on-experience.

(3) A summery was made of the Elementary Career Education Workshop for all fifth and sixth grade teachers. This workshop was held April 25, 1972. Mrs. Delma Turner and Mr. Buddy Lyle of the State Department of Education were the guest speakers.

IV Results and Accomplishments

(1) The results and accomplishments of the following areas of the project are described.

(a) High School Level
(b) Junior High School Level
(c) Elementary School Level

V. Evaluation of the Project

(1) The project evaluator and his assistant are named.

(2) Objectives of the evaluation are told.

(3) The seven instruments of the evaluation are listed, according to the grade in which they were given.

VI Conclusions, Implications, and Recommendations for the Future

A. High School

Description is made of ways in which the project has been effective at the high school level, especially for the GCE-ICT class and the VICA organization. Plans for the future are included.

B. Junior High School

The Occupational Information class in the ninth grade is evaluated conserning the ways in which it has been effective.

Plans for next year are described for new methods to be used in the Occupational Information classes and for the Special Education students.

C. Elementary School

The description of the conclusion of the work being done at the elementary school level can only be made by a single term--enthusiasm.

Other plans for the elementary school level are included in this part of the report.

D. General Project

The entire project is summarized in this part of the report. The hopes, the attitudes, the work to be done, and the plans for next year are all included here.

INTERIM REPORT

Body of the Report

A. The Exemplary Project in the Harrison Public Schools was directed at the following areas:

1. The main area at which this project was aimed was grades 5-12. The purpose of the project was to provide an extensive amount of vocational training and occupational orientation or Career Education at these grade levels.

2. A second area which the project concentrated on was the Junior High School Special Education students, as the exemplary staff felt that they needed as much career education as could be provided.

3. A third area which the project concentrated on was the high drop-out rate at the Junior High School level.

The drop-out rate during the 1970-71 school year at the Junior High School level was 4%. This rate included all drop-outs in grades eight and nine who had terminated their education with no plans and no job prospects.

4. This year was the first year for the expanded GCE-ICT class in the 11th and 12th grades. Work had to be done to set up a proper curriculum for this cooperative program.

5. Revamping of the Vocational Industrial Clubs of America was necessary in order to meet the needs of the GCE-ICT class.

Goals and Objectives of the Project Objective

B. Objectives

1. To initiate pilot OE program for rural and small suburban Arkansas schools in grades five through twelve.

2. To incorporate occupational orientation into the school curriculum beginning at grade five.

3. To create a favorable attitude in marginal and disadvantaged students regarding the value of education to the world of work.

4. To bridge the gap between education and the world of work though a general cooperative education program.

5. To provide intensive occupational guidance and counseling for all students during the last year of school.

6. To provide short intensive training for seniors who have had no previous vocational training.

General Project Design

C. In establishing occupational education programs for grades five through twelve, this project has been designed for rural, small urban and urban school disturcts, especially those in depressed areas. More specifically, this project has been designed to meet the objectives listed in part (B) of this report.

Procedure

I. Staff

To accomplish the project design as stated in the preceding paragraph, the Harrison Public School System hired a General Cooperative Education Coordinator and a Vocational Counselor, who were assisted by the counselor at the High School. A secretary was also hired for the use of the coordinator and counselor.

During the 1971-72 school year the coordinator taught two classes of Occupational Information[1] at the ninth grade level. The counselor taught one class of Occupational Information. This class was a semester course and was taught both semesters. The course involved 190 ninth grade students throughout the year.

The coordinator taught and supervised the expanded GCE-ICT program at the 11th and 12th grade levels. He taught one class of 20 students during the year. He also supervised those students on their jobs.

The coordinator was the sponsor of the Vocational Industrial Clubs of America (VICA)[2] organization which included all the students of the GCE-ICT class.

Both, the counselor and coordinator, worked at the elementary level as much as possible, assisting the fifth and sixth grade teachers that were involved with teaching career education.

The coordinator and counselor both worked with the Junior High Special Education students and potential drop-outs, in an attempt to make them aware of the importance of education; whether education in general, or vocational training and education. Some of the students were assisted in finding part-time jobs by the coordinator and counselor.

The coordinator took one ninth grade special education student to work and picked him up every Monday and Thursday throughout the 1971-72 school year. This student worked as a veterinarian assistant.

The coordinator provided vocational films and speakers for this Junior High special education class made up of 7th, 8th, and 9th grade students.

The vocational counselor was involved throughout the year in extensive testing of the elementary and Junior High school students, using achievement tests and interest surveys.

The vocational counselor was involved in counseling individuals and groups concerning occupations. This was done in addition to her regular Junior High counseling duties.

1. Working with the exemplary staff were the following vocational staff.

   (a) Vocational Agriculture teacher--John Adams

   (b) Vocational Business Education teacher--Robbie Grace

(c) Home Economics teacher--Johnnie Horton

(d) Vocational Industrial Arts teacher--Jim Lee

(e) Distributive Education Coordinator--Gerald Collard

2. The following teachers worked specifically with career education in the fifth and sixth grades at Skyline Heights Elementary School.

(a) Mrs. Mary Harness--5th Grade

(b) Mr. Mike Hodges--5th Grade

(c) Mrs. Martha Ledbetter--5th Grade

(d) Mr. Ron Lee--6th Grade

(e) Mrs. Jim Woolsey--6th Grade

3. An advisory committee, comprised of five men from various phases of the working community, worked with the program during the 1971-72 school year.

(1) Eli Roomsburg--Twin Lakes Vocational School

(2) Cloyd Baltimore--Arkansas Power and Light

(3) Robert McCorkindale--City Attorney

(4) Waldo Fowler--Farmer and Soil Conservation Engineer

(5) Doug Hudson--Owner of Hudson's Supermarket

II. Student Population

(1) Marginal Students

Grade 5----------48

Grade 6----------47

Grade 7----------35

Grade 3----------30

Grade 9----------15

Grade 10----------14

Grade 11----------12

(2) Vocational Students, including the students in the Industrial Arts, Agriculture, Home Economics, Business Education, Distributive Education, and GCE-ICT programs.

(a) Occupational Information students-------190

(b) Seniors----------135

(c) Juniors----------132

(d) Sophomores----------145

(e) Freshmen----------130

(3) Drop-Outs

Grade 5----------0

Grade 6----------0

Grade 7----------0

Grade 8----------3

Grade 9----------7

Grade 10----------6

Grade 11----------6

Grade 12----------8

III Methods and Materials

High School Level

(1) A related class for the GCE-ICT students was held each day from 12:30--1:30 p.m. The class involved the students in General Occupational Information and specific material related to their own particular occupations.

The book used for the general vocational information was Student Manual for Occupational Relations, The College of Education, University of Minnesota; Minneapolis, Minnesota; 1969.

The students were members of VICA through the class. Through this organization they had various luncheons, participated in fund raising projects and held an Employer-Employee Banquet in April.

Four students from VICA attended the VICA State Leadership Conference in Hot Springs in April. The club won third place and an One-Star plaque in the Outstanding Club of the Year Contest[4].

Jackie Stewart, one of the participants, also ran for VICA State Vice-Presidency, ICT, and won the election. He will serve beginning in September. On May 8, the coordinator and Jackie attended the State VICA Officers meeting in Little Rock to get acquainted with the other new state officers. Jackie will attend the National VICA Leadership Conference in Roanoke, Virginia, in May.

Most of the GCE-ICT students participated in a program to aid the Junior High special education students[3].

The students made talks to the special education class about their occupations, and human relations in general. Several of the GCE-ICT students took the special education students individually on field trips to business and occupations that they were interested in.

The high school counselor gave a group intensive training to twenty seniors on "Applying for a Job", Employer--Employee Relations", and "How to Keep a Job". This training lasted, off and on, for about two weeks.

Almost every senior has at least one class during his high school education involving vocational orientation. This accounts for the small number attending the intensive training sessions.

The coordinator gave various talks to English classes. These talks were given to grades ten, eleven, and twelve; and concerned orientation and various aspects of occupational relations. He talked to the tenth and eleventh grade classes about taking the GCE-ICT class.

There have been approximately 40 applications for the cooperative class for next year. There will be four carry overs from the past year.

The search for training stations for these students has already begun.

(2) The coordinator had twenty working students in the General Cooperative class and they represented the following occupations:

Cosmotologist--2

Dental Assistant--1

Mechanic--1

Printing Assistants--2

Veterinary Assistant--1

Secretary--2

Shoe Sales--1

Ranching--2

Nurses Aid--2

Radio Announcer--1

Gas Station Attendant--1

Advertising--2

Construction--1

(3) The coordinator worked with the Business Education department in placing girls taking Office Practice on jobs after school. He placed three students for that department.

Junior High Level

(1) As stated previously in this report, there were three classes of Occupational Information taught in the ninth grade. There were actually six separate classes, as each course was only one semester. The courses were arranged like this so more ninth grade students would be able to take the course.

The main book used for this course was Succeding in the World of Work.

Other books and manuals used in the class are as follows:

Books

(a) Keys to Vocational Decisions, edited by Walter M. Lifton, Science Research Associates, Chicago, Illinois, 1964.

(b) Points for Decisions, T. L. Eagle and Harold J. Mahoney; Harcourt, Brace, and World, Inc., New York, New York, 1961.

Workbooks

(a) Life and You, Work and You, Success and You, and The Future and You, Palmer Publications, Easton, Pennsylvania, 1970.

(b) Suggested Teaching--Learning Approaches for Career Development in the Curriculum, D. E. Educators, University of Minnesota, Summer, 1968.

(c) Teachers Guide to Group Vocational Guidance, Bruce Shertzer, and Richard T. Knowles, Bellman Publishing Co., Cambridge, Mass., 1964.

(d) Vocational Orientation Teachers Guide, Vocational Teachers and Counselors, Ark. Dept. of Education, Vocational Orientation Division, 1971.

The occupational information on specific occupations used for the class came from various companies which offered free materials. In addition to this information, a set of briefs were purchased from the Career Development Service of Palmer Publications.

This set of briefs is divided into the following eight vocational categories with a multitude of briefs on various occupations in each category. The categories were:

(a) Business Contract

(b) Scientific Technical

(c) Artistic

(d) Health--Welfare

(e) Business Clerical

(f) Mechanical

(g) Service

(h) Outdoor

A two volume set of encyclopedia on occupations was purchased by the school library and was used in the classroom throughout the year.

Occupational Information was the main objective of the course, but attitudes and self-evaluation were as important an objective.

Films were used extensively in the Occupational Information classes.

These classes were also used for an area of extensive drug education.

In the Occupational Information classes the students had to make reports on various occupational interests and they had to interview people connected with these occupations.

These students had to interview working women and find the reasons for their working and find their opinions of women working. They also interviewed various other workers to find the educational requirements and training required for diverse jobs in the community.

(2) Various teachers at the Junior High level brought related occupational information into their specific subject areas.

(3) The coordinator and counselor entered an exhibit in the county fair in the fall on Career Education. This exhibit won a second place ribbon.

(4) The coordinator spent extensive time with one particular special education student who was interested in electricity as an occupation. The coordinator assisted the student in planning various electrical projects. The student built a radio receiver, a telegraph, and several similiar devices.

Elementary School Level

(1) The career education program has developed very well in grades five and six of Skyline Heights Elementary school. This school was selected of the four elementary schools in Harrison as a model. The main teacher concerned with this program is Mrs. Mary Harness, a fifth grade teacher. Mrs. Harness attended the Elementary Career Education Workshop for two months last summer in Little Rock.

(2) The counselor and coordinator have worked as closely as possible with these teachers throughout the year, but have allowed the teachers involved to progress much on their own. The counselor and coordinator did take five fifth grade boys, interested in carpentry, on a field trip to the building sites of several homes.

(3) The elementary teachers involved with this project have used guest speakers, hands-on-experience, and field trips extensively throughout the year.

(4) The elementary teachers involved have taken each subject area that they teach and incorporated the various occupational clusters involved with each area. This method has proven to be very effective.

(5) During the later part of April, a workshop[6] for all elementary principals and fifth and sixth grade teachers was held at the Harrison Public Schools Administration Building.

Mrs. Delma Turner and Mr. Buddy Lyle from the State Department of Education were the speakers for this all day workshop.

Mr. Lyle spoke to the group on "Career Education" and he showed a slide--cassette presentation on that subject.

Mrs. Turner gave a talk to the group concerning "Career Education in the Elementary Schools".

After lunch a discussion session was held on all variations of career education in the classroom.

Mrs. Mary Harness made a slide presentation of career education, as it has been taught in her own fifth grade class this past year.

The workshop was very informative and all those who participated were well pleased with the outcome.

The counselor and coordinator worked cooperatively on the organization of the workshop.

(6) All the students in Mrs. Mary Harness' fifth grade class took time this year to learn how to type. They used unmarked typewriters and gave up several recesses each in order to accomplish this task.

Results and Accomplishments

D. 1. The project is opening new doors at all levels of the school curriculum.

2. Enthusiasm has been the general attitude of all those participating in the exemplary project, especially at the elementary school level. The special education teachers are very enthusied about career education.

3. Having a cooperative related class for the GCE-ICT students has been quite effective this year. However, more specific related material must be developed in order to keep a continued desired effect working.

The VICA organization has been useful with the cooperative students, but more planning must be done in order for it to reach its full potential as a leadership building facility.

The book used at this level seemed adequate, but the coordinator feels that these may be one that would be even better. He will spend part of the summer deciding what book for general related material will be used for the 1972-73 school year.

4. One distinct accomplishment was made by the GCE-ICT students working with the special education students in the junior high school. This project helped both parties equally. It boosted the morale of both and gave many of the special education students a new hope and insight into the future.

5. The coordinator assisted the superintendent in compiling data to persuade the school board to authorize a special education program for the high school for the 1972-73 school year. This was approved. However, as of this writing, a teacher has not been hired for this position.

6. The number of drop-outs declined from 16 for the 1970-71 school year to 10 for the 1971-72 school year. The staff feels that this was an indirect result of the exemplary project.

Evaluation of the Project

E. The evaluation of this project was conducted during the month of May in the Harrison School System. The methods for this evaluation were the effort of the project evaluator, Dr. Dolph Camp, who was assisted by Dr. Dean Andrew, and the Arkansas Department of Vocational Education.

The evaluation had six procedure objectives, which covered the six main objectives of the Exemplary Project.

The evaluation covering this school year, 1971-72, was conducted in grades five through twelve by the Project Coordinator. There were seven instruments used in this evaluation from which results were derived. They are as follows:

I. Grade 5

(1) Intermediate School Sentiment Index

(2) List of Occupations

II. Grade 6

(1) Ranking of Occupations

(2) Choosing a Job Inventory

III. Grade 7

(1) List of Occupations

(2) Secondary School Sentiment Index

IV. Grade 8

(1) Choosing a Job Inventory

V. Grade 9

(1) Ranking of Occupations

VI. Grade 10

(1) Occupational Information Test

(2) Secondary School Sentiment Index

VII. Grade 11

(1) Occupational Information Test

(2) Choosing a Job Inventory

VIII. Grade 12 and 11

(1) GCE Sentiment Index

The results of this evaluation can be obtained from the Arkansas State Department of Vocational Education.

Conclusions, Implications, and Recommendations for the Future

F. I. High School

The high school phase of this project has been as effective as anticipated. Having a related class has done much for the morale of this program and the coordinator.

The class will be modified for next year as experience has showed that it should. More planning and organization will be utilized to make the class as beneficial as possible.

The club activities and purposes shall be modified according to the needs that were made evident this past year.

The intensive training will again be used next year as it has proven to be very informative and beneficial to those seniors who have not had any orientation in the past.

The GCE-ICT program in conjunction with the Distributive Education program has formed a most comprehensive cooperative program in the Harrison Public School System.

II. Junior High School

(1) The Occupational Information class has been a success and the exemplary staff feels that as each year goes by it will become an even more productive phase of the Junior High curriculum

We will hopefully have more guest speakers during the 1972-73 school year. Various interruptions prevented us from having as many as we would have liked to have had this year.

The book Succeeding in the World of Work will be used as a basic tool for the class again next year.

However, we hope to find various approaches whereby hands-on-experiences can be used.

(2) Even more involvement with the special education class will be effected next year.

The students will be exposed to more career education at their own level with as much hands-on-experience as possible, as the staff feels that these students can accomplish much more through this type of teaching approach.

(3) More teachers in the Junior High school will be using career education in their own subject areas, as they are being educated as to its potential and value.

III. Elementary Schools

The teachers who have taught career education extensively this year have been unbelievably enthusiastic. Thus, their enthusiasm has spread to all the fifth and sixth grade teachers, especially through the workshop that was held in April. Therefore, it is the feeling of the staff that every fifth and sixth grade teacher in all four elementary schools will be using career education in their classes. The staff will lend every assistance in order to accomplish this.

The staff feels that by using the one elementary school as a model, this phase of the program has showed many benefits.

Not only have the teachers become enthusiastic about career education, but the elementary principals as well. Because of this, we feel that we have one battle of the war already won.

IV. General Project

(1) Because more public relations and dissemination was used this year, the project has progressed more than the staff anticipated. However, even more public relations will be utilized this next year. The staff feels that the more the better.

The VICA Club will be one phase that will organize a planned program of public relations. Various members will speak to different civic organizations throughout the 1972-73 school year in order to get their backing and to create a better understanding of cooperative programs and their place in the community.

By having a State Vice-President of VICA in our system, we can obtain much good public relations.

(2) The GCE-ICT class will continue somewhat as it has this year, but with some modifications as stated earlier in this report.

(3) Three Occupational Information classes each semester will again be taught next year in the Junior High school.

(4) The elementary phase of the project will progress as much as time will allow. The staff hopes to make this part of the program a state model for all schools.

APPENDIX

E

Occupational Classes Hear Two Speakers

The ninth grade Occupational Information classes in the Harrison Junior High school have started the second semester with two speakers. The speakers were Bevan Dunlap, executive vice president of the Chamber of Commerce, and Paul Lawrence, counselor for the Employment Security office.

Mr. Dunlap talked about job opportunities in Harrison and Arkansas. He listed many occupations for men and women in the Harrison area, along with the qualifications one would need for each of these occupations. Mr. Dunlap stressed the point that young men and women need not leave Arkansas, or even Harrison, in order to find many job opportunities.

Mr. Lawrence spoke to the class about factors in choosing an occupation and information one would need to find, apply, and hold a position. He emphasized that students should study various occupations in order to choose an occupation suited to their interests, abilities, and needs.

The Occupational Information class is a semester course, which was added to the Junior High school curriculum at the beginning of the 1970-71 school year. This course was implemented through the Harrison Vocational Exemplary Project in order to broaden the occupational concept and awareness of the ninth grade students.

The Occupational Information classes are taught by Bruce Bevens, the Vocational Exemplary Co-ordinator, and Mrs. Glenna Newman, Vocational Counselor.

National VICA Week Recognized

March 5-11 is National VICA (Vocational Industrial Clubs of America) Week. VICA functions as an organization of local clubs affiliated with the national organization through a state association.

The VICA Chapter in the Harrison High School is comprised of the GCE — ICT students. These students through this vocational program go to school half day and work half day through a cooperative effort of the high school and participating employers in Harrison.

The students in the Harrison High School VICA Chapter work together in various educational and vocational activities in order to develop leadership abilities.

Among the activities engaged in by the students has been a calender-towel fund raising project and a series of programs presented to the Junior High Special Education class. They have plans for further presentations to the Special Education class and to take the special education students on field trips to various businesses in the Harrison area.

The State Association of VICA has a leadership conference each year that VICA members from all over the state attend and participate in competitive events with one another. This year's leadership conference will be April 20-21 in Hot Springs at which time several members of Harrison High School VICA Chapter will enter many of these competitive events.

The members of the Harrison High School VICA Chapter are Nancy Baughman, Roger Biggs, Diane Bradshaw, Joyce Conner, Sharon Edens, David Jones, Dennis McKinney, Paul Monday, Sheree Morris, Joe Mouncey, Doug Paddock, Debbie Rains, Mike Reddell, Jackie Rhodes, Dave Slay, Eddie Snow, Jackie Stewart, Don Trublood, Judy Tucker, and Ann Whitt. The Club sponsor is Bruce Bevens, the coordinator of the Harrison Vocational Exemplary Program.

F

Two H.H.S. Students Speak At Junior High

Doug Paddock
Jackie Stewart

On Thursday, February 10, Doug Paddock and Jackie Stewart talked to Mrs. Hall's Junior High School special Education class about their occupational experiences.

Through the General Cooperative Education - Industrial Cooperative Training (GCE-ICT) these students go to school half a day and work the rest of the day in the advertising department of Sav-a-Stop. Doug and Jackie work under Mr. Bill Dill, who has taught them many useable skills, such as how to operate an offset press, and sign press, how to run a silk-screen, and how to make window signs.

Jackie and Doug explained their duties in the advertising department to the special education students. Then they showed them the different types of signs they make and described in detail how they were made. After telling the class about the details of the job, they discussed with the class the fundamentals involved in any job which they felt would be helpful for everyone. They explained to the class how to fill out a job application and the importance of getting along with fellow employees and employers.

"This presentation was the first in a series of programs that will be given by different GCE-ICT students to this special education class," stated Bruce Bevans, the vocational coordinator for GCE-ICT program. Also, these students plan to take these special education students from Junior High on field trips and other excursions during the remainder of the year to broaden their occupational awareness and enhance their attitudes toward work in general."

This is a classroom-club activity.

G

ATTEND STATE VICA CONVENTION

From left, Debbie Rains, Jackie Stewart, Nancy Baughman and Joyce Conner.

Jackie Stewart, HHS student and member of the Harrison chapter of VICA (Vocational Industrial Clubs of America), was elected state vice president of VICA, Saturday at the VICA State Leadership Conference.

Also, the Harrison chapter won a One-Star Plaque and third place as "Outstanding VICA Chapter" of the year.

The VICA Conference, which was held in Hot Springs, is for those who are members of the National and State VICA organization. This organization is for students in high school who work in a chose occupation half a day and go to school half a day. The class that sponsors VICA is the GCE-ICT (General Cooperative Education-Industrial Cooperative Training) program. The teacher-coordinator of the program is Bruce Bevens, coordinator of the Harrison Vocational Exemplary Project.

Four students from Harrison attended the conference. They were Nancy Baughman, Joyce Conner, Debbie Rains, and Jackie Stewart. The three girls participated as Jackie Stewart's campaign managers. "I couldn't have been elected without their hard work and patience," stated Jackie.

Jackie will receive a scholarship to any Arkansas Vocational Technical School at the end of next year and he will travel to Roanoak, Va., in June to the National VICA Conference.

"The competition was tougher this year than any year before," said Bruce Bevens, the VICA sponsor.

H

FILM LIST 1971-72

1. Age of Turmoil
2. Problem of Pupil Adjustment
3. Portrait of a Disadvantaged Child
4. Cheating
5. Angry Boy
6. Attitudes and Health
7. Hooked
8. LSD--Insight or Insanity
9. LSD--25
10. Marijuana
11. You and Your Work
12. Where the Action Is
13. The Dropout
14. Acting with Maturity
15. Benefits of Looking Ahead
16. Finding the Right Job
17. Switched-on Symphony
18. Tomorrow is Now
19. I Rather Like You, Mr. Bell
20. Manner of Speaking
21. Engineering
22. Sounds and Sights of San Francisco

23. Into the World

24. Did you Hear What I Said?

25. Moments for Decision

26. The Now Colleges

27. D.E.--Tell It Like It Is

28. The Man in the Middle

29. The Navy

30. Skag

31. Weed

32. LSD

33. Uppers and Downers

34. The Men from the Boys

35. From Cow to Carton

SPEAKERS:

Mrs. Delma Turner
Specialist, Elementary Guidance
State Department of Education
Arch Ford Education Building
Little Rock, Arkansas 72201

Mr. Buddy Lyle
Specialist, Exemplary Programs
State Department of Education
Arch Ford Education Building
Little Rock, Arkansas 72201

WORKSHOP PARTICIPANTS:

Skyline Elementary	
Mr. Lee	6th Grade
Mrs. Woolsey	6th Grade
Mrs. Durham	6th Grade
Mrs. Harness	5th Grade
Mr. Hodges	5th Grade
Mrs. Ledbetter	5th Grade
Forest Heights	
Mrs. Duran	6th Grade
Mrs. Fowler	6th Grade
Mrs. Crawford	5th Grade
Mrs. Harper	5th Grade
Woodland Heights	
Mr. Anderson	6th Grade
Mrs. Wardlow	5th Grade
Eagle Heights	
Mrs. Kelley	6th Grade
Mrs. Holman	5th Grade
Principals:	
Mrs. Adair	
Mr. Duran	
Mr. Stonecipher	
Mrs. Dwyer	
Mr. Kraus	Jr. High School

CAREER EDUCATION WORKSHOP
Program

8:00-8:30	Registration. . . . . Coffee
8:30-12:00	Introduction of Speakers . . . . . Glenna Newman
	Career Education. . . .Mr. Lyle
	Career Education in the Elem. Schools. . . . .Mrs. Turner
	Slide Presentation . . Mrs. Harness (Career Education in a fifth grade classroom).
12:00-1:00	Lunch....On your own.
1:00-4:00	Group Sessions
	Discuss plans for career education in classes. Look at materials useful in the classroom.
	Culmination of activities . . . . . .Mrs. Turner and Mr. Lyle

W. H. McCutcheon, Counselor
Bruce Bevens, Exemplary Coordinator
Glenna Newman, Exemplary Vocational Counselor

Mr. Everett Kelley, Superintendent

2500

Interim Report

Project No. 0-361-0032
Grant No. OEG -0-70-5189(361)

Pilot Occupational Education Programs for Small Rural and Suburban Arkansas Schools in Grades Five Through Twelve

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

Mr. James Caudle
Hope School District 1-A
Hope, Arkansas

June 1, 1972

2501

GOALS AND OBJECTIVES

Objectives for the past year were set up to improve the existing parts of the project as well as initiating new programs. Following are the objectives of the Hope Exemplary Project as they relate to the six objectives of the State Project.

Objective I. To initiate pilot occupational information programs in grades five through twelve.

A. Introduce the world of work to fifth grade students.
B. Relate the world of work to social studies in the seventh and eighth grades.

Objective II. To broaden the occupational concept and awareness by incorporating occupational orientation with the school curriculum beginning at grade five.

A. Make fifth grade teachers more aware of the world of work and how it relates to their regular instruction.
B. Hold a twelve week orientation class in the fifth grade.
C. Use occupational information in seventh and eighth grade social studies classes so that students can take a closer look at various occupations.
D. Increase the awareness to the world of work on the part of high school teachers.
E. Provide short intensive training for seniors.

Objective III. To create a favorable attitude in marginal students, slow learners and socio-economically disadvantaged students regarding the value of education and its contribution to the world of work.

A. Provide occupational counseling to seventh and eighth grade students.
B. All seniors will participate in at least two counseling sessions.
C. Teach attitude development in cooperative education classes and the senior occupational orientation class.
D. Identify students with special problems.

Objective IV. To bridge the gap between education and the world of work by relating classroom instruction to an immediate job through a general cooperative education program.

A. General cooperative education classes will be held following guidelines set up for the class.
B. A general cooperative education club will be formed.
C. Improve use of the advisory committee.

Objective V. To provide occupational guidance and counseling for all students during the last years of school and assist in the initial placement of all students upon leaving school.

Objective VI. To provide a short intensive training session for seniors who have not had previous vocational training.

A. All seniors will participate in at least two counseling sessions. Others will receive counseling as needed or desired.
B. After graduation all seniors will be followed up to check on placement.
C. Encourage participation of all seniors in a Career Day.
D. Make available in the counselor's office, up-to-date occupational information for any senior desiring it.

Other Objectives VII.

A. Improve information dissimination through the local papers, other publications, for people seeking information and through development of a slide or movie presentation of the general cooperative education program.

B. Continue self-improvement for all staff members.

C. Conduct a mini-grant survey of high school graduates of three years and five years ago.

PROCEDURES, RESULTS AND ACCOMPLISHMENTS

The following are brief summaries of procedures used to meet the objectives and some results and accomplishments.

(IA, IIA) The counselor and coordinator made two visits to fifth grade classes. Later, the counselor went into all fifth grade classes in an attempt to make teachers and students more aware of the world of work. The teachers, however, normally left the classroom while the counselor was there.

(IB, IIC, IIIA) The counselor met with seventh and eighth grade social studies classes for a total of about three weeks. They received counseling and instruction in occupations. The two cooperative education coordinators met one day each with the social studies classes. There were about 300 students involved in these sessions. An SRA Occupational Information Kit was placed in the Junior High and made available to all students through their social studies classes. Several students have expressed an interest in continuing and intensifying this type of training in the future.

(IIB) A six week career exploration course was held in the sixth grade. The instructor developed a unit to use in this course. The coordinator and counselor provided some material and information to use in developing this unit. The students took several field trips and had visits from several resource people. In some cases, a small group of students visited an industry, institution, or business and gave a report of their visit to the other students.

Most of the students involved have been very inquisitive about the occupations explored. The instructor has been instrumental in developing this inquisitiveness by himself having an enthusiasm for teaching this type of information.

(IID) Meetings with other vocational instructors and discussions with various other teachers have served to increase the awareness of the need for career exploration in all courses. One meeting was held with all vocational teachers involved while others involved only a few each time.

(IIE, IIIB, V and VIA,C,D) Counselors provided intensive training to all students needing it. A Career Day was held and all seniors were encouraged to participate. Career information was made available to all students from the counselor's office. Trips to various businesses, industries and institutions were set up for anyone interested in going. All seniors had an opportunity to receive instruction in occupations.

Students planning to begin work immediately after graduation received special counseling in this area.

(IIID) Several students with special attitude problems were identified and given special attention. Some required only counseling. One was allowed to visit a brick masonry class at Red River Vocational-Technical School several times in hopes that this would impress on him the need for education if he did not go to college. Results were slow but some positive improvement can be seen.

(IIIC, IVA,B,C) General Cooperative Education classes were conducted according to guidelines with special emphasis on attitude development. An attempt was made to start a GCE Club but was not successful. Another attempt will be made earlier next year. The advisory committee was set up and used successfully. More use of this committee needs to be made, however.

Of the fourteen juniors taking this course last year, eleven plan to take it again next year. Forty-six more have signed up for it. Growth will be limited for now because of a lack of training stations.

(V and VIB) After counseling, seniors were referred to various colleges, vocational-technical schools or employment opportunities according to their interests and aptitudes. After graduation those seniors going to work were followed up. Placement has been successful for eighty-give to ninty percent of the referrals. A follow-up on college students will be conducted later.

(VIIA) Only a few news articles were published. The main articles, a full page picture story, was given to the newspaper but did not get published. Information was dissiminated to various people, including the State of California. A movie presentation of the General Cooperative Education Program was begun, but developed problems. It was decided to produce a slide presentation. Work has begun on this project.

(VIIB) The counselor attended several meetings with the Extern Program. The coordinator attended one night class during the fall term. The counselor and coordinator have tried to keep abreast of material and techniques by attending workshops, professional meetings and reading available literature on related subjects. Trips were taken to the Magnolia and Warren Exemplary Projects.

(VIIC) The counselor submitted a mini-grant during the fall term. It was approved and work was begun at the beginning of the Spring term. Questionnaires were mailed out to Hope High School graduates of three years ago and five years ago. Returns have come in very good and the results are being compiled at present.

The Exemplary Project has operated as expected in most instances with results being seen in nearly all phases. Progress was slow because of the insecure position the project was placed in due to the pending millage increase. Since the millage increase has passed, the programs have begun picking up momentum again. Next year should be a successful year.

It is recommended that the project might show more worthwhile achievements if continued beyond the three year limit with the lower elementary grades being included. Possibly another employee could be added to the staff to work specifically with the elementary grades, as they have problems and needs different from the higher grades.

INTERIM REPORT

Project No. 0-361-0032
Contract No. OEC-0-70-5189(361)

Pilot Occupational Education Programs for Small Rural and Suburban Arkansas Schools in Grades Five through Twelve

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

Jack Clemens
Magnolia School District 14
P. O. Box 649

June 9, 1972

2507

SUMMARY OF THE REPORT

(a). Time covered by this project—July 1, 1971—June 30, 1972.
(b). Goals and objectives of the project:

1. Acquaint as many students of the Magnolia School System with meaningful work experiences as possible.
2. Place several students in training jobs under the G. C. E. Program.
3. Contact a large per cent of the student body about occupational outlook opportunities.
4. Be available to any student who wants to have a person-to-person talk about job opportunities.
5. Distribute printed material about applying for and succeeding in jobs.
6. Construct a meaningful curriculum for the G. C. E. class hour.
7. Contact a large majority of the employers in the community and explain the G. C. E. Program.
8. Have a good G. C. E. Club with the employed students.
9. Continue a functioning advisory board that will establish good relations with community agencies—labor, news media, civic clubs, chamber of commerce, and others.
10. Continue good working relations with the NYC, Vocational Rehabilitation agencies, probation agencies, area Vocational schools, and the Employment Security Office.

(c). Procedures followed:

Students who asked to be placed on the GCE Exemplary Career Program were given printed information about the World of Work. This information consisted of the following materials: Job Hunting with your State Employment Service, How to Prepare Yourself for Job Interviews, given by the Arkansas Employment Security Division, Do's and Don'ts for GCE Students, Your Job...How to Lose it, and Nine Big Do's and Don'ts for the Job Hunter, given by the Magnolia High School. Parents of these students came to the school and engaged in a meaningful discussion of the Exemplary Program. The parents signed the forms for the exemplary program which were: Supplementary Application Form or Interview Guide. About 200 students and many parents participated.

Personnel has been available before school, during the noon hour, and by appointment for person-to-person job information discussions.

The textbooks used are as follows:

Succeeding In the World of Work, McKnight, McKnight Publishing Co., Bloomington, Ill.: Retail Merchandising, Southwestern Publishing Co., Cincinnati, Ohio. Forty 16MM films related to G. C. E. were shown.

Summary—continued:

The following materials or machines were used extensively during the year in the classroom: Display & Learning Center, Typewriters, Film equipment, cameras, Dictionaries, English 9, Math 8, English workshop, Free Film Guide, Directory of Ark. Industries, Southwest Tech. Catalog-Camden, Southern State Catalog, Occupational Outlook Handbook, Occupational Title Book, Cassett Recorder & Player, ACCO folders, Vertical file Index, Time Magazine, Arkansas Gazette, and Occupational Outlook Quarterly. These materials are used during the related occupational study by the class.

The following individualized study kits that are produced by the University of Texas Vocations Department are used in the class; Motorcycle Repairman , Building Maintenance, Automobile Mechanics, Carpentry Study Guide, Television Service, Small Engine Repair, Basic Sales Techniques, Food Store Kits, Personal Development-Girls, Personal Development-Boys, and Shoe Sales Kit.

The following speakers spoke to the club during the year. Their topic of interest to the students is listed after the speaker's name.

Mr. Maurice McKinnon - Victor Adding Machine Course
Mr. Don Marshall - Educational Media
Mr. Chapman - Electronic Tape Players
Mr. Larry Longino - Making Kodak Slides & Operating the Carousel Projector
Mr. Author - The Economy of Arkansas
Mrs. Carolyn Myers - Getting a Job & the Importance of School
Miss Pansy Puckette - Choices of an Occupation
Mr. Denny Smith - How to get more for your Money
Mr. Wayne Taylor - Vocational & Technical Education
Mrs. Jack White - Manners & how to dress for a Banquet
Mr. Archie Carraway - Christmas Today
Mr. Vernon Porter - Income Tax
Mr. Charles Schonert - The Internal Revenue
Mr. W. C. Blewster - Applying for a Job & the steps to follow
Mr. Auburn Smith - Southern State College & opportunities offered
Mr. Wallace Watts - G.A.T.B. Test & Job Training
Mr. Stricklin - Labor Problems
Mrs. Sue Hendricks - Proper ways of answering the telephone
Mrs. Florene Jordan Bailey - Discussed our library & our Public
Mr. Ware - Social Security Benefits
Mr. Ark Monroe - Insurance & values of Insurance
Mr. Ed Moody - Bell & Howell Electronic School

The employers of the students were contacted about twice each month for the purpose of evaluating the quality of their work. The students were counseled about suggestions for improvement.

The coordinator conducted an employer and disadvantaged student survey and compiled the results in a booklet from which will be distributed to all principals, counselors, vocational teachers, and administrators of the Magnolia School District. This booklet contained 31 pages that told what the major employer wanted in an employee. It told where the former disadvantaged student is today, what his employment status is, and how he or she evaluated his school experience. This was financed through a Mini Grant from the state Vocational Department. About 90 disadvantaged students and 35 employers responded to this project. These findings are very significant to the school.

The coordinator visited two schools, Warren, Arkansas and Skyline High School of Dallas, Texas. The Vocational Educational activities and Philosophies of these schools were observed closely. Both schools are doing an outstanding job in meeting the needs of their students.

Career Education at Central Elementary School primarily involved three sections of fifth grade Social Studies Students and three sections of sixth grade students. (In other words, the classes of one sixth grade teacher and the classes of one fifth grade teacher were involved.) Many activities were engaged in by these classes including field trips, skits, resource people, taped interviews with people in various occupational fields - to mention only a few. Class work centered around discussion groups, concentrated study in various areas of special interest to the students, and bulletin boards that taught important concepts about the world of work.

The teachers involved feel that the students received the course of study with enthusiasm and interest. Almost all of the students expressed a desire to continue their study in future grades. The follwoing materials were puchased for the exemplary program for use in grades 5 through 9: Occupational Outlook Reprint Series, Occupational Outlook Handboods, and Open Door Books.

The senior English classes in the Magnolia High School did a three weeks study of applying for a job. This activity consisted of writing a letter of application, preparing a personal data sheet, and filling out an application form in ink. Every student participated in a role playing project on how to apply for a job. The students became acquainted with the Occupation Outlook Handbook. The students studied the pamplet "How to apply for a Job".

The GCE Club sponsored an Employer-Employee Banquet Jan. 27 at the Student Union at Southern State College. The students paid for this with their six Dollar per year club dues. Every employer was introduced along with his employee. In addition in attendance was our advisory board, Mr. James Miller and Mr. Buddy Lyle from the State GCE, our superintendent, high school administration, and the speaker from the State FBI.

Many of the parents of the students were visited in the homes during the year.

The coordinator visited the president or general manager of nearly every major industry in the county during the year.

A carousel production of pictures of the GCE students on the job with their job supervisor and a cassett tape with the voice of the student was produced. This was shown to all of the students who signed up for next year and will also be shown to civic clubs in Magnolia.

Approximately 100 related 16MM films were shown to the class during the year. The students turned in a written evaluation of each film and these were discussed as to how they related to the students career education.

Our advisory board, Mr. W. C. Blewster, director of the Chamber of Commerce: Mr. Leon Schultz, local business-man and member of the school board; and Mr. Wendell Grissom, director of Employment Security office, functioned very well, and contributed to the class in many ways.

About 50 students came through the G. C. E. office on their way to N. Y. C. employment in the community. We worked with our local school, the county judge, the Mayor, and others in setting up a channel to send the students into the G. C. E. program after they are terminated by the N. Y. C. We are working with Vocation Rehabilitation in placing students, and helping them move up to G. C. E. We have helped about 4 boys who were on probation to secure jobs.

(d). Results: Accomplishments;

Forty one students who were enrolled in G. C. E. work graduated this year. At least seventeen have been on the High School Honor roll or merit list this year. Two were honor graduates of the Magnolia High School. Each of these graduates has acquired a saleable skill as a result of his or her work experience. Several (maybe 12%) of these students would not have graduated from high school if this program had not been available. Approximately 300 of this school system had a meaningful contact with the world of work as a career through the GCE Program this year. This program provided 25,200 pupil hours of classroom plus on the job teaching for the school system. A teacher with 100 pupils per day would provide 18,000 pupil hours in a year. Well over 100 credits were earned in the GCE Program this year. Our records show that 40% of the students were disadvantaged or handicapped.

(e). Evaluation:

The program is good; the students, parents, and employers want it.

The program will provide a way for the student to acquire a saleable skill.

The proper attitude toward work can be taught when the G.C.E. exemplary program is begun in the lower grades.

The school officials are well pleased with the program and they plan to continue it indefinitely.

(f). Conclusions and Recommendations:

About 25 very poor achievers were able to learn, and have a happy experience in the G. C. E. Several were able to make an "A" grade for the first time. About 100 students found out that they could have a good job after training and experience. Our community of employers is ready to accept this program.

The G. C. E. program will help our school, community, and economy in every way. Vocational curriculum should be increased greatly. Dignity for learning in the trades and industries should be brought about. We recommend that more financial help from the Federal Government be made available for teaching Vocational Education in every public high school.

Body of the Report

The most pressing need for the program was to inform the non-college bound seniors of the opportunities of society that await them through this program. They knew practically nothing about job opportunities in the state area vocational schools. All of our students needed to know more about the world of work and how to succeed in this world. We had these facts established through our guidances department.

The goal was to prepare students to move in the direction of their objectives.

We need to tell the students about the program, help them find out the extent of their abilities, and then to work through the employer to accomplish this.

Jack Clinnens
Signature of Project Coordinator

6-7-72
Date

Interim Report

Project No. 0-361-0032
Grant No. OEG-0-70-5189 (361)

Pilot Occupational Education Programs for Small Rural and Suburban Arkansas Schools in Grades Five through Twelve

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

Mary Alice Elam
District No. 9
Mountain Home, Arkansas

June 15, 1972

Period covered: From April 1, 1972, to June 31, 1972

Major activities and accomplishments during this period.

On April 5, the counselor and coordinator helped Jerry Taylor, seventh grade Arkansas History teacher, start a project of Career Awareness on jobs in Baxter County. An explanation of the project is given later in this report.

Mrs. Estelle Gustafson, a Mountain Home fifth grade teacher, was invited to talk about the Mountain Home grade school Exemplary Program to the school administrators of the state for their meeting in Little Rock at the Sheraton Hotel on April 7.

The coordinator was guest speaker to the Mountain Home Tau Gamma Gamma Club about the GCE Exemplary Program. She explained how career information was given in grades five through ten. Then they were told about the eleventh and twelfth grades attending school half day, working a half day, and how the class of related materials was conducted. The group was quite responsive during the question and answer part of the program.

The quarterly in-service meeting was held in Hot Springs on April 13-14. It was attended by the counselor. During that same time, the coordinator was sponsoring the Mountain Home Future Business Leaders of America group at the state convention in Hot Springs. The results of the convention is given under the club activities section.

On April 17, 18, 19, the coordinator and counselor helped with registration of high school students for the year of 1972-73. Also at that time, applications were filled out by the students planning to enroll in GCE. Fifty-one students enrolled, 28 juniors and 23 seniors. Thirty-three either have jobs or have been placed for the summer and others have been sent for interviews. Students specified interests in a number of work areas including selling, real estate, secretarial, banking, hospital, telephone company, clothing stores, Mar-Bax Shirt Factory; also, work as a mechanic, waitresses, and appliance serviceman.

Order blanks for free materials from the Dairy Products Company were distributed to the grade and junior high schools as soon as they were received from the state office. The filled-out orders were collected and mailed by the coordinator on April 21.

Roy Thomas, District Social Security Director from Batesville, talked to the GCE classes on the importance of social security to each individual. He showed a film which was made at Mountain View, Arkansas, demonstrating the different ways that social security helps people of all ages. The coordinator asked for social security application blanks in order to get social security cards for all high school students who did not have one. Forty-six applications for new cards and two for lost cards were turned in and mailed to the district office.

In a survey made through the senior English classes, the coordinator found that two senior boys had not had vocational training. She offered to teach them an intensive short course in Typing I and they accepted. The keyboard was covered and special instructions was given on letters and manuscript writing which could be used in college. Both boys are planning to attend college.

Jim Brown, Jr., of the Jim Brown Company that deals in air conditioning, heating, and sheet metal, was the speaker for the GCE classes on May 3. During the last nine weeks of class the emphasis of study was on different types of jobs. Mr. Brown was very thorough in his description, requirements, employer-employee relations, and salary of a job with his company. Several of the students named him as one of the outstanding speakers of the year.

Mr. James Dasher, Exemplary Program Specialist, and Dr. Dolph Camp made a get-acquainted visit with the coordinator and counselor on May 12.

May 12 was Senior Awards Day. The Mountain Home Woman's Club gave $100 vocational scholarships to five students. Two of them were GCE students, Bonita Wedgeworth and Gerald Perry. Bonita also received $250 from the Twin Lakes Home Builders Association. Sue Willems, another GCE student, received $250 from the Mountain Home scholarship fund and $150 from the Business and Professional Women's Club. John Gorecki, FBLA past president and state exhibit director, received $500 from the Mountain Home scholarship fund and $200 from the Elks Leadership contest.

Counselor Activities

The counselor assisted the coordinator in the GCE classes by conducting a unit on debate. The students were introduced to debate techniques and then selected their topics. They were assisted in collecting their material and in organizing their information. They performed the debates well and seemed to enjoy the whole unit.

There were two meetings to attend this quarter: the counselors' meeting in North Little Rock, April 7, and the quarterly in-service meeting in Hot Springs, April 13-14.

The counselor showed his slides and talked to ten classes this quarter. One class was at the elementary school, seven were at junior high, and two at high school. The comparative vocational approach stimulates questions about jobs, working conditions, and national economic conditions. The high school classes became very verbal about foreign aid.

This quarter has also been devoted to post testing. Most of May has been completely used for this purpose.

The counselor has spent much time this quarter helping with pre-scheduling and registering of junior high and high school students. Graduation activities and duties as student council sponsor took care of any almost spare time.

Other activities the counselor assisted with or attended were Sadie Hawkins Day and dance, FFA Rodeo, FFA Banquet, Sports Banquet, student council elections, Senior Banquet, Junior-Senior Prom, and Awards Day.

"AREAS OF STUDY" PROJECTS

General Cooperative Education

The units of study in GCE the last nine weeks were debate, social security, and an intensive study of jobs in which the students were definitely interested; also, of jobs other than what they knew about.

The counselor directed the study in debate. Subjects used for debate were Capital Punishment, Liability Insurance should be required by all, and vocational versus strictly academic high schools. The students thoroughly enjoyed the unit.

In the study of jobs, each student researched and reported on a job a week for eight weeks on the description of the job, places of employment, training and qualifications, opportunities and advancements, working conditions, and salary. Reports were made on 144 different jobs.

The coordinator asked the cooperation of the English instructors to extend credit for the work done in GCE. The students appreciated getting credit in both classes.

Agribusiness - John George, Teacher

The Mountain Home High School Future Farmers of America chapter won first place in the electrification division at the Northeast Arkansas District FFA judging contests March 17 at Arkansas State University at Jonesboro. Members of the first-place team were Larry Smith, Ronnie Osborn, and James Pruitt. In other judging events, Mountain Home placed fourth in both the dairy cattle and livestock competition and third in individual judging of dairy cattle. The same electrification team won first in the state contest held at the University of Arkansas at Fayetteville. Students from more than 150 state school participated in the program which was sponsored by the Arkansas Power & Light Company and the state department of Education.

The FFA honored parents and the outstanding members at the twenty-third annual parent and son banquet on April 6. Fourteen plaque awards were presented by local businesses which included two each for Star Greenhand and Star Chapter Farmer honors; and citizenship, leadership, farm mechanics, livestock, public speaking, farm safety, farm electric, home improvement, and dairy awards.

FFA presented Leo A. Pitchford a plaque in appreciation for his years as sponsor of the chapter. He resigned at the end of the first semester.

The FFA Rodeo, sponsored by the Saddle Club and the Mountain Home FFA chapter, was held at the arena on the county fairgrounds on April 28-29. Events included in the rodeo were bareback bronc riding, calf roping, open barrel racing, and Brahma bull riding. The new event added was a wild horse race featuring three-men teams. All high school students, ages 14-18, were eligible to participate.

Home Economics - Mauzee Pitchford, Teacher

FHA observed FHA Week by carrying out special activities and observances designed to share their experiences and achievements with family, friends, and neighbors. The theme chosen for the week was "Profiles of Youth," which focused attention on what more than half a million young men and women were doing to improve personal, family, and community living. The local chapter participated in a number of activities which included bulletin board in the lunch room, visit to the nursing home, furnishing doughnuts in Junior and Senior High teachers' lounges, cookies taken to the Baxter Bulletin Office and Radio Station KFLO, and "Be Nice to Family Day."

First and third hour Home Economics classes visited the Children's Colony at Conway April 20. They visited the class for the blind, the gym, the recreation room, and the chapel. The group also toured the infirmary. They observed a class where the students were learning numbers from one to ten and also a class where therapy was being given to a group of crippled residents. Several of the Mountain Home students had first experiences such as traveling out of their own living area and eating in a place such as the atmosphere of The Sands in Conway.

FHA students visited the Mountain Home day-care center recently. The feeling of the class was that "it's wonderful to have such a place in Mountain Home for the retarded children."

Vocational English I - Karen Jackson, Teacher

During the last nine weeks, attention was concentrated on job skills and business etiquette. Two guest speakers were used in class, Mike Hall of the Office of Economic Opportunity and Mrs. Mara Jane Fisk of the Sears Robuck Company. After their speeches, the class learned to write thank-you letters and sent their letters to the speakers.

Students looked up addresses in their job fields and wrote correct business letters asking for business information.

In a unit on business etiquette, the students read several chapters of material on behavior at work and made special reports. The class also studied Want Ads and learned to read their abbreviations. Each one selected a Want Ad from a paper and wrote an emergency situation in which they answered it either by phone, by letter, or in person. They wrote the dialogue for the situation they chose. Each one asked three individuals to use their names for references. Interviews were conducted with people of the community in various job fields and the information was given in class. The class enjoyed Scope Magazine which includes a section on job skills each week.

Industrial Arts, Electricity - Bob Cantrell, Teacher

Mr. Cantrell has been teaching the basic skills, theory, and practices in his classes. Students were introduced and familiarized with as many areas of our modern industrial complex as possible. It is hoped that the student developed new interests and possibly developed an interest into a skill to be used in later life.

Field trips were taken to Bull Shoals Dam to see the electrical workings of the dam and a tour through a new house being built to show the how and why of residential wiring. A woodworking workshop was held for a 4-H club.

Junior High - Ninth Grade - Martha Hurst, Teacher

The last units of study in the ninth grade Civics were state and local government. In these units, available jobs were stressed with the use of a "job bulletin board." One speaker was used - Dorsey Crow, probation officer in Mountain Home.

The class has enjoyed the cassette set very much. It has been used extensively to help improve the class in Civics.

Seventh Grade - Jerry Taylor, Teacher

A three-weeks project was done in the seventh grade on Occupational Opportunities in Baxter County. In the beginning, students were asked to list three choices of occupations in the order of preference. Then, interviews were conducted of parents or others employed in Baxter County to gain knowledge of job opportunities in this area. The questions used for this are shown in Appendix B. Seventy-eight types of jobs were learned about during the interviews. See Appendix B.

The Occupational Exploration Kit was used to broaden the knowledge of jobs unfamiliar to this area. Several days were spent going through, discussing, and explaining the unfamiliar jobs. Phamplets, speakers, and field trips were discussed and used in each class. Reports were assigned on the occupation that interested the individual student most. Classtime was allowed for use of occupational material. It was emphasized that the report be of personal nature expressing the students' own ideas. Any source of information was suggested including personal interviews.

At the end of the study, students were asked to list all the jobs learned about, and the most was done by David Strain who listed 168.

Both the teacher and students expressed their enjoyment in working on this unit of study.

Elementary - Sixth Grade - Jeanne Manes, Teacher

A study on Emergency Occupations lasted for two weeks in the sixth grade. Through the study of Health and the making of safety posters, several new

jobs were introduced. Background and research was done on each of the following:

Ambulance drivers	Road Crew
Rescue Units	Wrecker Service
Sanitation Department	Insurance Adjusters
Doctors	Anesthesiologists
Nurses	Lab Technicians
Firemen	Policemen

Each poster made was labeled the type person that would be used with that particular emergency.

During the last week of school, we did a round-up of all we had studied during the year that dealt with Career Awareness and also an evaluation of what we thought we would like to do when we graduate from high school.

Fifth Grade - Estelle Gustafson, Teacher

Final Report on Career Awareness - May '72

We climaxed our program with a field trip to Norfork Dam and Powerhouse and to the U. S. Fish Hatchery. In both places, competent personnel thoroughly explained the operation; the jobs necessary to carry on the work; and the requirements and responsibilities involved. Jobs in wildlife conservation, biology, clerical work, maintenance, electricity, engineering, etc., were explained and offered much as resource for future classroom activities. Children, chaperones and teachers were pleased with the trip. See Appendix B for letters and picture.

The evaluation tests for comparison of pupil attitudes in September at the beginning of our program, and now - as the term ends - has proven most interesting with lively discussions. Most students are able to justify their answers with logical reasoning.

Response to the program has been great and we look forward to an even better one next fall.

Third Grade - Connis Keeter, Teacher

OUR COMMUNITY -

A study of our neighborhood was inspired by an article in our local paper about the increase in building permits issued for new homes and commercial buildings. This was correlated with a unit from ABC Social Studies Book by Fraser-Hoy, American Book Company. Its title was "The Buildings of Riverside," but we changed it to the "Buildings in Mountain Home."

The children brought aerial photos, pictures of our square, shopping areas, map of our town and county, lake development and from our county paper they made a list of all businesses. They also cut out articles of prospective businesses.

Each child made a picture of his neighborhood and colored it. He labeled the map to show the kind of material each building was made of and what each was used for. They also drew a picture of our "square" which used to be the center of our town; also, the two new shopping centers which had been built and their relation to each other. This led to discussions of our growing and expanding area and to another unit "Getting to and from Mountain Home." There is no railroad in Mountain Home, so trucks became very important in our study. They drew and colored pictures of all the different kinds of trucks in our town. We were surprised that we could learn so much about our town even though we live in it everyday.

Yes, this has been a good year in our Third Grade. Values changed, awareness to the world around them, and all learned to work by making a plan and then carrying it out. The children decided that working together would help them at home, in school, at work, or at play.

The teacher would describe this program as surprising and very "fluid." It can flow into any subject to better project to the child "the world of work," what makes it "tick," and his place in it. The children were so enthusiastic about this community study that they are continuing their research this summer on different forms of transportation from the first Grecian Runner to the present time. They will turn in their transportation scrapbook to the teacher at the beginning of the Fall term.

Third Grade - Mrs. Martha Henley, Teacher

Mrs. Henley became interested in the Exemplary Program after the first of the year. Recently, they have been studying about "writing paragraphs" in English. Some of the suggested titles were "My Mother's Job" and "My Father's Job." See Appendix B.

Cosmopolitan Kindergarten

Kathy Lewis, who had been a GCE student aid in the Cosmopolitan Kindergarten this year, attended the seventh annual graduation on May 11. Twenty-eight students received certificates. See picture in Appendix B.

Work Study Students

The coordinator has worked with the Office of Economic Opportunity in placing eight students in jobs for the summer. Fifty-two students have participated in the work-study program this year.

Those students who have worked as voluntary aids in the school this year have had their work hours recorded on their school records. The volunteer jobs have been office work each period of the day, the school paper, and the school annual staff.

The marginal students have been determined through achievement tests, teacher referrals, and cumulative grade points. These students are receiving more attention now and are counseled concerning academic and vocational courses open to them and those available to them through Title Programs.

Graduating marginal students have been counseled about job opportunities, job training, and vocational technical school openings.

Advisory Committee Meeting

A meeting of the Advisory Committee was held May 25 for the purpose of studying the evaluation design. Some of the recommendations made for next year were

1. The Committee should receive a summary of each quarterly report.
2. Adult classes should be publicized more fully as this phase is much appreciated in the community as evidenced by enrollment of 170 this year.
3. The Exemplary Program should be continued and promoted and put into the school district budget so that its continuance may be assured.

Significant Findings and Events

SUMMARY OF YEAR 1971-1972

1. Organizational meeting of the school administration last July.
2. Advisory Committee selected - five members. First meeting August 17, 1971; second meeting, May 25, 1972.
3. Coordinator has worked with Home Economics, Agriculture, Industrial Arts, Business, GCE, Economics, Vocational English I and II. All areas have done one or more projects during the year relating to career information and education - grades three through twelve. Eighteen teachers have been involved.
4. Two adult classes: Dr. Riley, veterinarian; Frank Huckabee, attorney. Total of 170 adults and school students attended.
5. Radio interview - KTLA - enough for two nights on the "community news" spot.
6. Coordinator spoke to B&PW; Shorthand II class on "Interviews"; Tau Gamma Gamma; attended parents night at Cosmopolitan Kindergarten; attended two style shows given by Martha Exline; made three trips with Estelle Gustafson, fifth grade teacher, to speak to different groups in the state about the Mountain Home Exemplary Program in the elementary school; taught GCE classes and arranged for 20 speakers during the year and five field trips; worked with FBLA, work-study students, OEO, Social Security, and vocational intensive training for seniors; helped obtain six vocational scholarships for students.
7. Counselor has spoken about 25 times to different groups: civic, church elementary, junior high, senior high classes and clubs; showed slides of his Peace Corps work in Nepal and Phillipines; helped in GCE classes teaching units of communications, debate, parliamentary procedure; has done pre and post testing required by the state department and helped in Titles programs; directed Junior play; served as Student Council adviser, therefore, being involved in several activities in the school; counseled a big percent of the student body; pre-scheduling of junior and senior high students.
8. Both counselor and coordinator have worked diligently with the elementary and junior high students and teachers. One or both have attended all meeting or workshops: July 1-5; September 23-24; November 3; December 3-4; January 20-21; April 14-15.

9. Nine GCE Students remained on the jobs they had during the year.
10. Two students going to vocational school.
11. Two students going to college.
12. Students who worked on the GCE program earned $12,259 during the year.

Problems

Two students changed jobs. They had agreements with their employers.

Data Collection

Post tests were given.
Results received from SRA Achievement Series and
Iowa Tests of Educational Development

Dissemination

Articles about the Program placed in the Baxter Bulletin and the school newspaper. See Appendix B.

Counselor and coordinator talked to several groups this period.

Progress on Evaluation Plans and Procedures

Completed and mailed to the state office.

Other Activities - FBLA Chapter

The highlight of the year for Future Business Leaders of America members was the State Leadership Conference in Hot Springs, April 14-15, in Convention Auditorium. Approximately 1,000 FBLA'ers attended the conference and participated in the activities. The theme of the Conference was YOUTH INVOLVEMENT AND DEVELOPMENT: FOUNDATIONS FOR SUCCESS.

Thirty-three Mountain Home FBLA members attended the meeting and entered 18 of the 21 contests in competition with other members across the state. Those who won honorable mention, third, and second places were awarded certificates. First place winners received plaques. Winners in Mountain Home were

First place	Mary Beth Foley, Public Speaking
First place	Jennie Denison, Junior Stenography
Second place	John Gorecki, Chapter Activities Report
Second place	Jilleen VanderStek, Carol Miller, Most Original Project
Second place	Nancy Smith, Thrift Encouragement Project
Third place	Beth Warner, Spelling
Third place	Mountain Home Chapter Membership - 203
Honorable Mention	Nancy Smith, Senior Stenography

The Chapter placed second in Sweepstakes Award. Two awards for extra chapter activities were John Gorecki received a trophy for outstanding leadership in the March of Dimes as State Teen Action Program Chairman. The chapter was also presented a certificate of appreciation for their work in raising $2,608 in the fight against birth defects. All the chapters in the state were given the opportunity to do one of the largest services for their community and state than they could have done individually.

New state officers elected were Julie Webb, president, Springdale; Pat Morrison, Parkview, Little Rock, first vice president; Jerry Jones, second vice president, Bentonville; Joyce Miller, secretary, Flippin; Mary Pigg, treasurer, North Little Rock; Cheryl Harris, reporter, Clarksville; Brenda Shew, historian, Mountain Home; Mike Kennell, parliamentarian, Harding Academy; and Carolyn Burleson, exhibit director, Star City.

The 1972 National Leadership Conference will be held in Houston, Texas, June 15-17. A chartered bus will be used to take all newly elected state officers and their advisers, all first place contest winners, voting delegates and interested members to Houston. After the Conference, the sightseeing tour will include Corpus Christi and Brownsville, Texas; Matamoros, Monterrey, and Nuevo Laredo, Mexico; and San Antonio and Austin, Texas. Ten students and three advisers will be going from Mountain Home.

The local FBLA chapter elected its officers for the year 1972-1973 April 28. The installation ceremony was held in the school auditorium on May 9 with advisers and fellow members present. The new officers were Brenda Shew, president; Sandy Best, vice president; Georgia Casey, secretary; Peggy Jackson, treasurer; Stephanie Thomas, reporter; Linda Floyd and Randy Shaver, historians; and Cyle Covington, Student Council representative.

Staff Utilization

Mary A. Elam, Coordinator; Joe Howerton, Counselor; Glenda Owens, Secretary; Eighteen cooperating teachers.

Future Activities Planned for Next Reporting Period

Preparation for and beginning of program for the new year.

Mary A. Elam
Signature of Project Director

June 15, 1972
Date

APPENDIX A

Films and Film Strips Shown

and

Bibliography of Materials Used in the

Mountain Home Schools Exemplary Program 1971-72

Grades 5 - 12

Films

Food Color of Life
Social Security

Film Strips

Job Growth
Your First Job - Can
You Keep It

BIBLIOGRAPHY
of
Materials Used in the Mountain Home Schools
Exemplary Program
Grades 5-12

	Price
General Cooperative Education	
Kimbrell, Grady, Vineyard, Ben S. World of Work, McKnight & McKnight Publishing Company, Bloomington, Illinois, 1970 30 Books (used for class related materials)	$185.48
Individualized Study	
Thompson, Ella M., Murphy, Constance. Textbook of Basic Nursing, J. B. Lippincott Company, Philadelphia, 1966	7.41
Anderson, Maje C. Nursing Techniques, W. B. Saunders Company, Philadelphia, Pa., 1968	5.50
Motion Picture Projectionist Training Plan, Ohio State University, Columbus, Ohio	.40
Custodial Learner's Manual, Ohio State University, Columbus, Ohio, 1962	2.25
Wingate and Seneca. Retail Merchandising, Southwestern Publishing Company, Dallas, Texas, 1963	6.76
Auto Partsman Workbook, California State Department of Education, Sacramento, California, 1967	3.35
Television Repair and Service Workbook, California State Department of Education, Sacramento, California, 1956	4.85
Intensive Clerical and Civil Service Training, Southwestern Publishing Company, Dallas, Texas	2.44
Tester, Veri A. Guidelines for Successful and Effective Living, Pine Hill Press, Freeman, S. Dakota	4.00
Planning Your Future, McKnight & McKnight Publishing Company, Bloomington, Illinois	1.20
Planning Your Life's Work, McKnight & McKnight Publishing Co., Bloomington, Illinois	1.40
Agnew, Meehan, Oliverio, Secretarial Office Practice, Southwestern Publishing Company, Dallas, Texas	
Agnew, Meehan, Pasewark, Clerical Office Practice, Southwestern Publishing Company, Dallas, Texas (4 books, workbooks, and tests)	29.57
Purvis, Jud. Small Gas Engines, The Goodheart-Willcox Company, Inc., 1963	4.08
Orvetz, Sr., Julius. Plumbers and Pipe Fitters Library (3 volumes) Theodore Audel & Company, Indianapolis, Indiana, 1968	9.37
Logan, Ma. E., Moen, Helen M. Facts About Merchandise, Prentice Hall Inc., Englewood Cliffs, N. J.	5.49
Lessenberry, Crawford, Erickson. 20th Century Typewriting, Southwestern Publishing Company, Dallas Texas, 1962	
Self Study Program in Food Store Operations, The Quaker Oats Company, Chicago, Illinois	4.95
Finding and Applying for Jobs	1.54
Service Station Training Kit	19.95
World of Work Kit	250.93
Modern Consumer Education Kit	

Selling Fashion Apparel, Southwestern Publishing Company, Dallas, Texas	3.76
McFarland, Dalton E., Management, Principles and Practices, Collier McMillan, New York, N.Y, 1970.	8.96
Heiges, Schneider, Huffman, Stewart, General Recordkeeping, McGraw-Hill, New York, N.Y, 1965.	5.06
James, Barry, "Call Me Mister", Milady Publishing Corporation, Bronx, N.Y, 1969	4.96
Davis, Keith, Human Relations at Work, McGraw-Hill, New York, N.Y., 1967	8.89
Duvall, Sylvanus M., The Art and Skill of Getting Along with People, Prentice-Hall, Inc., Englewood Cliffs, N.J., 1961.	5.36
Doris, Lillian, and Miller, Besse May, Complete Secretary's Handbook, Prentice-Hall, Inc., Englewood Cliffs, N.J., 1970	5.04
Crouse, William H., Workbook for Automotive Engines, McGraw-Hill, New York, N.Y., 1966	9.73
Toboldt, William K., and Johnson, Larry, Motor Service Encyclopedia, Goodheart-Willcox Co., Inc., South Holland, Illinois	7.89
Toboldt, William K., Fix Your Chevrolet, Goodheart-Willcox Co., Inc., South Holland, Illinois, 1970	3.30

Guidance - Junior and Senior High School

SRA Guidance Series Booklets, Science Research Associates, Inc., Chicago, Illinois	40.00
Occupational Exploration Kit, Science Research Associates, Chicago, Illinois	107.00
Desk-Top Career Kit, Careers, Largo, Florida	110.00
Career Information Kit, Science Research Associates, Chicago, Illinois	305.00
Careers Research Monographs, The Institute for Research, Chicago, Illinois	96.00
The College Blue Book (ten volumes), CCM Information Corporation, New York, (a subsidiary of Crowell, Collier, and Macmillan	99.00
Dictionary of Occupational Titles (two volumes), U. S. Department of Labor, Bureau of Employment Security	9.25
Occupational Outlook Handbook, U. S. Department of Labor, Dallas, Texas	6.25
Kuder Preference Form CH, Science Research, Associates, Chicago, Illinois, (complete packer of 100 test booklets, answer sheets and profile sheets)	103.45

Elementary

Elementary School, Willa Norris, Science Research Associates, Chicago, Illinois	5.50
Assisting Vocational Development in the Elementary School, NVGA Commission, 1969	

APPENDIX B

Dissemination
High School
Junior High
Elementary

School Meet Will Open On Thursday

Marcus Halbrook, director of the state Legislative Council, and Forrest Rozzell, executive secretary of the Arkansas Education Association, will speak at the opening session of the annual two-day school administrators meeting, which will begin at 6 p.m. Thursday at the Sheraton Hotel.

Halbrook's topic will be "Court Decisions on Property Tax," and Rozzell will speak on "Possible Solutions to Property Tax Problems for Arkansas."

Tom Hicks, the state Department of Education's co-ordinator for special education, will discuss "special Education — Status and Needs" at 9 a. m. Friday. At 9:30 a.m., Lee Reaves, director of the state Educational Television Commission, will speak on "Color and Expansion Program of Educational Television."

A session on career education will conclude the meeting. Participants will be J. Marion Adams, associate director for the area vocational-technical schools with the state Department of Education; Estella Gustafson, a teacher in the Mountain Home public schools; LeRoy Pennington, co-ordinator of guidance services for the state Education Department, and R. B. Chitwood, director of administrative services for the Arkansas Education Association.

FALL COMPLETION OF NEW BUILDING

The new Vocational Arts Building is expected to be completed by fall, in time for the re-opening of school in 1972. The new building has eight large rooms. They consist of Home Economics room, three business education rooms, which will be inter-connected with each other, two shops with two classrooms, one of which will be made ready for an overflow situation. There will also be an art room.

The brown brick structure will be enclosed, with classroom and shop entrances from the center hallway.

Rather than having students or teacher travel back and forth from the junior and senior highs there will be four full time teachers here at the high school. Mrs. Borne will teach Art. Mrs. Pitchford will teach Home Economics. Mr. Cantrell will teach Industrial Arts. As of this time no agricultural teacher has been named.

$40,600 awarded to MH seniors in ceremony

Scholarships and awards totaling about $40,600 were received by Mountain Home High School graduates at a special Awards Day ceremony held last Friday in the school auditorium.

Following is a complete list of scholarships and awards:

Mountain Home Woman's Club, vocational scholarships -- Tom Acklin, Mike Burrows, Gerald Perry and Bonita Wedgeworth, $100 each.

Mountain Home Lions Club -- Bill Grant, $200.

Mountain Home Scholarship Fund (presented by the Woman's Club and the high school) -- Daniel Young, Rickey Lawless and John Gorecki, $500 each; Elise Stiles, $400; Star Black, $300; and Susan Willems and Paula Smith, $250 each.

National Merit Scholarship in the amount of $4,000, Robert Buff.

Vikkie Guffey received $300 from the Future Teachers of America chapter; Bonita Wedgeworth received $250 from the Twin Lakes Home Builders Association; Sue Willems received $150 from the Business and Professional Women's Club; and Debbie Killian received $50 from Delta Kappa Gamma.

Awards given by the Elks Lodge and the Arkansas Elks Association included Debbie Killian, $1,000; Gayle Margason, $800; John Gorecki, $200; Karen Cox, $200; and Mary Beth Foley and Tommy Nelson, $100 each.

50 sign up for program

The General Cooperative Education program at Mountain Home High School will start its third year next fall with 50 students enrolled, an increase of 30 over this year's number, Mrs. Mary Alice Elam, program coordinator, said this week.

Under the program, students attend school half a day and work half a day, receiving a wage comparable to other beginning employes and working a minimum of 15 hours per week. Students who signed up for the program for next fall have specified interest in a number of work areas, including selling, real estate, secretarial, banking, hospital, telephone company, clothing store and shirt factory employment and work as a mechanic, waitress and appliance serviceman.

Mrs. Elam said the students and employers have found the work training experience mutually rewarding.

56 Courses Offered 72-73

Pre-registration for the 1972-73 school year offered 56 courses, although some courses may be dropped if not enough students register for them or if teachers are not available.

In the Commercial Department the courses offered are: General Business, Typing I and II, Shorthand I and II, and Bookkeeping.

In the Language Arts Department courses offered are: Vocational English I and II, English I, II, III and IV, Speech, Spanish I and II, and German I and II.

Under the Mathematics Department course offerings are: Algebra I and II, General Math, Geometry, Math Analysis, and Business Math.

In the Science Department: Earth Science, Conservation, Biology, Botany-Zoology, Chemistry, Health and Physics are offered.

In the Fine Arts Department: Art I, II, and III are offered.

In the Vocational Department the courses offered are: General Agriculture, Mechanical Shop, Plant-Animal Science, Home Economics I and II, Industrial Arts I, II, and III, and GCE.

Social Studies Department provides courses in Arkansas History-World Geography, American History, American Government, Economics, World History and Psychology-Sociology.

The Music Department will offer Band and Chorus.

Under the P.E. and Safety Department courses offered will be Boys or Girls Physical Education, and Sports -- Football, Basketball, Track and Golf. Driver Education will be provided as a summer course only.

Publications by selection only will be the Annual and the Bomber News.

Some of the courses listed are by permission only. They are: Vocational English I, Earth Science, Conservation, Health and GCE.

First place finish for FFA chapter

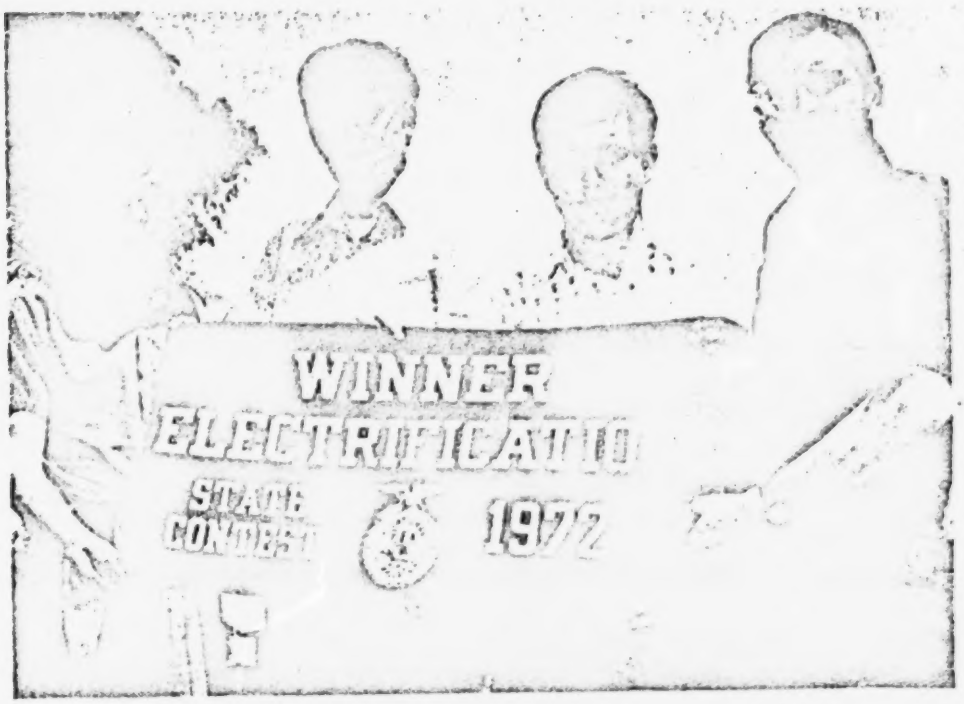
The Mountain Home High School Future Farmers of America chapter won first place in the electrification division at the Northeast Arkansas District FFA judging contests March 17, at Arkansas State University, Jonesboro.

Members of the first-place team are Larry Smith, Ronnie Osborn and James Pruitt.

In other judging events, Mountain Home placed fourth in both the dairy cattle and livestock competitions, and Bobby McFarland placed third in individual judging of dairy cattle. Wayne Fletcher and Roy Biggers are the other members of the dairy cattle team, and members of the livestock team are Howard Stinnett, Steve Hicks and Jim Turnbo.

Others participating from the local chapter were Robert Tilley, Lonnie Perry and John Powers, poultry; Frank Tilley, Charlie Willett and Milo Foster, meats; Tommy Lewis, Steve Collins and Jack Seats, dairy products; Donny Perry, Jeff Dean and Tom Coley, crops; and Wendell Bentley, Ira Taylor and Eddie Parks, land judging.

Accompanying the FFA boys to Jonesboro was the chapter sponsor and vocational agriculture instructor, John A. George. Charlie Willett is president of the chapter.



Win top FFA honors

Top honors in judging in the electrification contest at last Friday's Future Farmers of America Judging Contests held at the University of Arkansas, Fayetteville, went to, from left, James Pruitt, son of Mr. and Mrs. Howard Pruitt, and Larry Smith, son of Mr. and Mrs. Quinby Smith, all of Mountain Home, and Ronnie Osborn, son of Mr. and Mrs. Arnold Osborn of Gassville. At right is John George, vocational-agriculture teacher at Mountain Home High School and sponsor of the local FFA Club. The Mountain Home team also won first place in the Northeast District contest held in March at Jonesboro. Students from more than 150 state schools participated in the program which is sponsored by the Arkansas Power & Light Co. and the state Department of Education.

Parent & Son banquet is planned by FFA chapter

The Mountain Home High School chapter, Future Farmers of America, will honor parents and outstanding members at the 23rd annual Parent & Son banquet, to be held Thursday evening, April 6, at the high school cafeteria. Charles Willett, chapter president, will preside and serving will begin at 7:30.,

Chapter Sweetheart Connie Strain will be among the honored guests and awards will be presented by the chapter sponsor, John George. Conducting the program will be Willett, who will introduce the guests and give the closing ceremony; Larry Smith, who will give the opening prayer; Jim Turnbo, roll call; Ira Taylor, chapter speaker; and Howard Stinnett, chapter report. Members of the local Future Homemakers of America chapter will serve the banquet, under the direction of their sponsor, Mrs. Mauzee Pitchford.

Fourteen plaque awards will be presented by local businesses, and these will include two each for Star Greenhand and Star Chapter Farmer honors; and citizenship, leadership, farm mechanics. livestock, public speaking, farm safety, farm electric, home improvement, soil management and dairy awards.

Officers of the FFA Chapter are Willett, president; Bobby McFarland, vice president; Turnbo, secretary; Stinnett, treasurer; Taylor, reporter; Rickie Lawless, sentinel; Roy Biggers, student advisor; and George, vocational agriculture instructor and sponsor.

'GOOD TURN-OUT AT FFA BANQUET

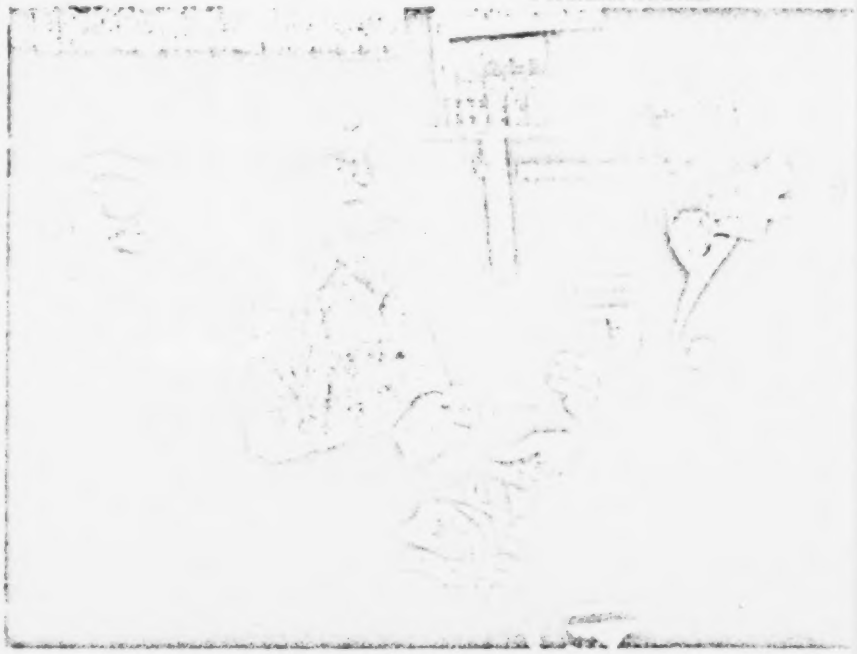
At the 23rd annual Parent and Son Banquet on April 6 the FFA boys and guests were served a meal to start the banquet. The opening prayer was given by Larry Smith. A list of the winners and donors of the plaques is:

Citizenship: Larry Sinor, by Town and Country Foods; Leadership: Charlie Willett, by Dr. Edward Riley; Farm Mechanics: Lonnie Utchman, by Dean's Feed Store; Livestock: Steve Hicks, by Morgan Brothers; Public Speaking, Ira Taylor, by Peoples Bank and Trust Co.; Star Greenhand: Ray Stone, by J. N. Turnbo; H Star Greenhand: Milo Foster, by Piggly Wiggly; Star Chapter Farmer: Howard Stinnett, by Leo Pitchford; Star Chapter Farmer: Jim Turnbo, by First National Bank; Farm Safety: James Baker, by Farm Bureau Insurance; Farm Electric: Larry Smith, by North Arkansas Electric Cooperative; Home Improvement: Tommy Lewis, by W. W. Dickerson; Soil Management: Steve Hicks, by Silo Conservation Service; Dairy: Bobby McFarland, by Foremost Dairies.

Plaque honor for Pitchford

LEO A. PITCHFORD

The FFA boys presented Mr. Leo A. Pitchford a plaque on April 26 for their appreciation for the many years as sponsor of the Mountain Home FFA Chapter. Mr. Pitchford resigned as Agri teacher and FFA sponsor at the end of first semester.



FFA AWARD WINNERS — Jim Turnbo, at left, and Howard Stinnett, center, rec congratulations from John George, agriculture instructor, after capturing the Star Ch Farmer awards presented at the Mountain Home FFA Chapter's 23rd annual Parent Son Banquet held Thursday. Other award winners were: Larry Sinor, citizenship; Ch Willett, leadership; Lonnie Utchman, farm mechanics; Ira Taylor, public speaking; Stone and Milo Foster, star greenhands; James Baker, farm safety; Larry Smith, electric; Tommy Lewis, home improvement; Bobby McFarland, dairy and Steve H livestock and soil management. Bill McFarland, a past chapter president, was speaker. Connie Strain, chapter sweetheart, was also honored at the banquet.

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Rodeo for students planned this month

The Mountain Home High School chapter of the Future Farmers of America and the local Saddle Club will sponsor a rodeo for high school students Friday and Saturday, April 28-29.

To be held at the local rodeo arena at the county fairgrounds, the rodeo will be produced by Bud Mayberry of West Plains, Mo. Events included in the rodeo will be bareback bronc riding, calf roping, open barrel racing and Brahma bull riding. In addition, a new event – a wild horse race – will be featured. The wild horse race features three-man teams.

All high school students, ages 14-18, are eligible to participate, a spokesman said, and entry fee for each event will be $5.

Admission to the rodeo, which will begin nightly at 8 o'clock, will be $1 for adults and 75 cents for children.

For more information, persons may contact Mayberry at AC 417-256-4203 or any member of the Mountain Home FFA chapter.

Registrations for events will be accepted April 28, prior to the events.

FFA rodeo this week

The FFA Rodeo will be held tomorrow and Saturday nights at the Mountain Home Saddle Club arena at the county fairgrounds. Starting time will be at 8 each evening, and admission for spectators will be $1 for adults and 75 cents for children.

Sponsored by the Saddle Club and the Mountain Home High School FFA chapter, competition in the rodeo is open to all high school students aged 14-18. The entry fee for each event will be $5. Registration will be accepted tomorrow, prior to rodeo time. Further information may be obtained by contacting the rodeo producer, Bud Mayberry of West Plains, AC 417-256-4203, or any member of the local FFA chapter.

A wild horse race has been added this year to the list of competitions. Other events will be bareback bronc riding, calf roping, open barrel racing and Brahma bull riding.

See Ira.

See Ira ride.

See Ira fall.

Ira Taylor of Mountain Home comes out of the chute during last week's FFA rodeo in good style, but seconds later, at right, he heads for a muddy landing. (See other photos on 1-C and front page.)

2535

FHA OBSERVES
FHA WEEK

March 19-25 was National FHA Week. Members of Future Homemakers of America carried out special activities and observances designed to share their experiences and achievements with family, friends and neighbors.

The theme chosen for this year's National FHA Week was "Profiles of Youth," which focused attention on what over half a million young men and women are doing to improve personal, family, and community living.

Members of the local FHA Chapter participated in a number of activities during this week. They included: Monday, a bulletin board in the lunchroom; Tuesday, a visit to the nursing home; Wednesday, doughnuts were placed in Junior and Senior High teachers' lounges; Thursday cookies were taken to the Bulletin office and KTLO; Friday was "Be Nice to Family Day."

CLASSES VISIT
CHILDREN'S COLONY

First and third hour Home Economics classes visited the Children's Colony at Conway the 20th of April.

While there they visited the class for the blind, the gym, the recreation room and the chapel. The group also toured the infirmary where the profound residents live. The group sat in on a class where the students were learning numbers from one to ten, and also a class where therapy treatment was being given to a group of crippled residents.

Woodworking workshop is held

The Lucky Clover 4-H Club held a woodworking workshop Saturday at the Mountain Home Junior High School with members of the Buford Whizzers 4-H Club also attending.

Bob Cantrell, industrial arts teacher at the school, instructed the group in drawing patterns, use of the plane, handsaw, vise and electric overhead press drill, and stressed the importance of replacing tools when they are not in use.

Other adults present were Mrs. Marcelene Evans of the Buford Whizzers and Mrs. Margaret Green of the Lucky Clover Club, project leaders.

-- Observe safety regulations and rules of courtesy while boating, fishing or skiing.

FBLA Grows

The Future Business Leaders of America membership has grown from 3,442 last year to 4,017 for this year. Fifteen new or reactivated chapters have been created.

Many chapters strived to increase its membership for this year. Membership campaigns were held at different schools. These campaigns included: hanging posters in the hall, making announcements at school and having cookouts to encourage students to join.

FBLA'ers also encouraged some of their friends to join by telling them the main purposes which are to promote careers in business, develop leadership, contribute service to schools and communities, participate in contests and to make accomplishments in FBLA.

FBLA would like to welcome its new members and urge others to join FBLA in developing business leadership.

Future Business Leaders Of America
Arkansas State Chapter

Bald Knob High School, 55; Batesville High School, 65; Bay High School, 29; Beebe High School, 48; Bentonville High School, 43;

Berryville High School, 54;

McCrory High School, 20; McGehee High School, 74; McRae High School, 27; Metropolitan High School, 58; Monette High School, 43;

Monticello High School, 37; Mountain Home High School, 203; Mountain View High School, 36; Mulberry High School, 17; Nettleton High School, 101;

North Little Rock High School, 86; North Little Rock Northeast High School, 58; Oak Grove High School, 11; Paragould High School, 34; Parkview High School, 241;

Pleasant Plains High School, 11; Prescott High School, 16; Rivercrest High School, 14; Russellville High School, 25; Searcy High School, 36;

Smackover High School, 17; Springdale High School, 46; Stanford High School, 41; Star City High School, 22; Stuttgart High School, 36; Sylvan Hills High School, 53;

Trumann High School, 40; Tuckerman High School, 41; Valley Springs High School, 20; Viola High School, 18; Watson Chapel High School, 35;

Westside Consolidated High Schools, 105; Wilbur D. Mills High School, 119; Wheatley High School, 28; Yellville-Summit High School, 52. Members in the State Chapter now totals 4,017.

Blytheville High School, 21; Brookland High School, 44; Cabot High School, 37; Camden High School, 63;

Carthage High School, 11; Central High School, 78; Clarksville High School, 61; Corning High School, 35; Cotter High School, 24;

Cotton Plant High School, 17; Crossett High School, 73; Danville High School, 11; Dardanelle High School, 14; Delaplaine High School, 24;

DeQueen High School, 23; Des Arc High School, 25; Dechs Central High School, 23; DeWitt High School, 33; Drew Central High School, 63;

Dumas High School, 25; El Dorado High School, 73; Flippin High School, 42; Foreman High School, 16; Fort Smith North Side High School, 31;

Fountain Hill High School, 16; Greene County Tec High School 66; Green Forest High School 61; Grubbs High School, 29; Hall High School, 84;

Harding Academy High School, 47; Harrisburg High School, 47; Harrison High School, 77; Hartford High School, 35; Hazen High School 26;

Hope High School, 45; Jonesboro High School, 42; Lake City High School, 34; Lepanto High School, 25; Lincoln High School, 34;

Lonoke High School, 47; Magnet Cove High School, 31; Marvell High School, 20; Maynard High School, 23; McClellan High School, 210;

Shew runs for state historian

Brenda Shew, historian for our local FBLA chapter has announced her candidacy for State Historian in the Arkansas FBLA chapter. Brenda will make her bid for the state office at the State Leadership Conference April 14-15. Her campaign theme is "Shoo Shew In." If Brenda is elected she will be responsible for preparing a scrapbook which will display the many activities and projects of Arkansas FBLA.

Nine FBLA members to vie for honors

Nine members of the Mountain Home chapter, Future Business Leaders of America, will compete for state honors at the FBLA state leadership convention this week at Hot Springs.

Entrants in various contests are: Mr. FBLA, John Gorecki; Miss FBLA, Billie Manes; spelling relay, Beth Warner, Star Black and Sandi McPherson; public speaking, Mary Beth Foley; junior clerk-typist, Norma Peterson; senior clerk-typist, Deb Adams; junior stenographer, Jennie Denison, and senior stenographer, Nancy Smith.

Materials entered by the club include best chapter activities report, gold seal chapter award of merit, most original project report, largest chapter membership, scrapbook, best chapter exhibit, and thrift encouragement project report.

Four on FBLA spelling team

The FBLA Spelling Team for the 1972 State Convention is, Beth Warner, Star Black, Pam Fate, and Sheery Biddee, alternate. The team was chosen in a local spelling bee conducted by Miss Osbron, an FBLA sponsor.

An oral spelling contest is one of the events at the State Convention. Contestants will spell according to standard spelling bee rules and compete with students from each FBLA club participating in the state convention.

This year the FBLA state convention will be in Hot Springs, April 14 and 15.

Gorecki, Manes Mr., Miss FBLA

Billie Manes and John Gorecki were chosen to represent the MHHS Chapter of Future Business Leaders at the State Convention in Hot Springs April 14 and 15 as Mr. and Miss FBLA.

Gorecki and Manes were named after interviews by Mrs. Douglas, Personnel department manager at Mar-Bax shirt factory in Gassville, and Mr. Thomson, personnel manager at Baxter Laboratories.

If they pass several tests at the state convention the two will be interviewed again.

Winners in State Mr. and Miss FBLAA will compete with other state members at national convention.

John Gorecki

Exhibit Director Reviews Work

I have enjoyed serving you as State Exhibit Director most of all because through the state exhibit I could tell everyone how the youth of Arkansas are preparing today, to become the leaders of tomorrow.

This year has been filled with many new experiences and happy faces. The moments of serving the youth of Arkansas are rich in my memories, especially the ones as State TAP Chairman for the March of Dimes. I can still remember the warm smile and pleasing personality of Carmen Donesa, the 1972 National Poster Child. When I met her in New Orleans last November it gave me a deep sense of pride to know that Arkansas' FBLA Chapter was going to help children like Carmen through their endeavors in the March of Dimes. Our hard work this past year has helped many children set and attain goals for themselves, just as we have.

The next four years hold many mysteries for me. I plan to attend Arkansas State University and major in Business Administration and Pre Law. Here I hope—someday to reach the office of National Phi Beta Lambda President before entering Law School.

FBLA has left many lasting impressions which will help me greatly in the business world. I'd like to thank the many people who have helped and guided me on the right road to success. And I would like to encourage all of you to "Find the way with FBLA."

FUTURE BUSINESS LEADERS OF AMERICA

NINETEENTH ANNUAL
STATE LEADERSHIP CONFERENCE
April 14-15, 1972

8:00 - 11:00 Registration	Convention Hall Lobby
9:00 - 12:00 Arranging Exhibits	Convention Hall Lobby
10:00 - 12:00 Mary Alice Elam Award, (General Test)	Area 5
11:00 - 11:30 Briefing Session for Advisers in Charge of Contest	Area 4

FIRST GENERAL SESSION

12:30 - 2:00
Steve Douglas, State President, Presiding

Invocation	Barbara Richards, State 2nd Vice President Metropolitan Chapter
Presentation of Colors	Navy Jr. ROTC Hot Springs, High School
Pledge to the Flag	Evelyn Leon, State Reporter Wheatly Chapter
FBLA Pledge	Debbie Russell, State Historian Clarksville Chapter
Roll Call and Seating of Delegates	John Gorecki State Exhibit Director, Mountain Home Chapter
Rules of Conduct	Rodger Barrow, State 1st Vice President Greene County Tech Chapter
Welcome and Introduction of Speaker	Steve Douglas State President, Mills Chapter
Guest Speaker	Honorable Dale Bumpers Governor, State of Arkansas
Minutes of '71 State Conference Approved	Cathy Fears State Secretary, Stanford Chapter
Treasurer's Report Approved	[illegible] State Treasurer, Bay Chapter
Report of Nominations	Rick Carter, State Parliamentarian Pattison Chapter
Campaign Speeches (2 min.)	Candidates and Campaign Managers
Announcements	Steve Douglas

Miss FBLA (Written)	2:00	Area 4
Mr. FBLA (Written)	2:00	Area 4
Parliamentary Porcedure (Written)	2:00	Area 4
Junior Accounting	2:00	Area 5
Clerical	2:00	Room 3
Data Processing	2:00	Area 5
Junior Clerk-Typist (First Group)	2:00	Area 5
Senior Clerk-Typist	3:30	Room 3
Junior Clerk Typist (Second Group)	5:10	Room 3
Parliameneary Procedure	7:30	Area 5

STATE CONTESTS
Friday, April 14

EVENING ENTERTAINMENT
10:00 - 1:00

FBLA Dance	Larry Lawrence WMPS, Memphis, Tennessee

STATE CONTESTS (Continued)
Saturday, April 15

Junior Stenographer (First Group)	8:00	Room 3
Junior Stenographer (Second Group)	9:20	Room 3
Senior Stenographer	10:45	Room 3
Spelling Relay (Open)	10:00	Stage
Public Speaking (Open)	10:00	Room 1
Miss FBLA (Interviews)	10:00	Room 2A
Mr. FBLA (Interviews)	10:00	Room 2B

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SECOND GENERAL SESSION
Saturday

1:30 - 3:30

Steve Douglas, State President, Presiding

Greetings from VICA	Larry Allen National President, Searcy, Arkansas
Introduction of Speaker	Rodger Barrow
Guest Speaker "I believe in FBLA"	Miss Connie Faulkner Washington D.C.
Report of State Newspaper	Evelyn Leon
Presentation of New Constitution	Rodger Barrow Chairman Constitution Committee
Election of State Officers	State Officers
Announcements	Steve Douglas

3:30

Advisors Workshop	Mrs. Tommie Butler Mrs. Evangline Cothren Mrs. Mary Alice Elam

3:30

Rehearsal for Awards Presentation and installation of New Officers
State Offcers and Newly Elected Officers

INFORMAL BUFFET
4:30 - 6:00
Area 4

7:00

Awards Assembly	Convention Auditorium

9:30

Meeting of New State Officers, Their Advisers, First Place Contest Winners, others who plan to attend National Leadership Conference	Convention Auditorium

FBLA PLEDGE

I do solemnly promise to uphold the aims and responsibilities of the Future Business Leaders of America and as an active member, I shall strive to develop the qualities necessary in becoming a Business Leader.

RULES OF CONDUCT FOR MEMBERS OF FBLA

I will be honest and sincere in all of my business dealings

I will willingly accept responsibilities and duties assigned to me.

I will approach each task with confidence in my ability to perform my work at a high standard.

I will exercise initiative and responsibility and will cooperate with my employer and fellow workers.

I will seek to profit by my mistakes and take suggestions and criticisms directed toward the improvement of my self and my work

I will, to the best of my ability, abide by the rules and regulations of my employer.

I will respect my employer and fellow workers and be considerate of them

I will dress and act in a manner that will bring respect to me and to my employer.

I will use my time to the best advantage of my employer.

I will seek to improve my community by contribiting my efforts and my resources to its worthwhile projects.

2541

State post to Brenda Shew

Thirty-three FBLA members participated in the 10th annual State Leadership Conference at Hot Springs April 14-15. The local chapter's candidate for State Historian Brenda Shew ran unopposed.

Mountain Home entered 18 of the 21 contests in competition against other members across the state. Those who won Honorable Mention, third and second places were awarded certificates and first place winners received plaques. These students are: first place, Mary Beth Foley, Public Speaking, whose topic was "FBLA, A Favorable Proprietorship"; Jennie Denison in Junior Stenography, 120 words per minute; second place in the Chapter Activities Reported by John Gorecki; Most Original Project compiled by Jilleen VanderStek, Carol Miller and John Gorecki; and the Thrift Encouragement Project reported by Nancy Smith. Third place to Beth Warner, in spelling; to MH for the Largest Chapter Membership of 203. Honorable Mention to Nancy Smith in Senior Stenography. The club placed second in the State Sweepstakes award, 4 points behind the winner Little Rock Parkview.

Two awards for extra club activities were: John Gorecki received a trophy for outstanding leadership in the March of Dimes as State Teen Action Program Chairman. The chapter was also presented a certificate of appreciation for their hard work in raising $2,608.27 in the fight against birth defects.

The Mary Alice Elam Award was presented by Mrs. Elam to the winner Ellen Van Arsdale of Clarksville for being the outstanding FBLA member of the year.

FBLA Names New Officers, State Winners

Julie Webb of Springdale was elected president for 1972-73 of the Arkansas Chapter of the Future Business Leaders of America at its 19th annual state leadership conference in Hot Springs last week end.

Other officers are Pat Morrison of Parkview High School, first vice president; Jerry Jones of Bentonville, second vice president; Joyce Miller of Flippin, secretary; Mary Pigg of North Little Rock, treasurer; Cheryl Harris of Clarksville, reporter; Brenda Shaw of Mountain Home, historian; Mike Kennell of Harding Academy, parliamentorian, and Carolyn Burleson of Star City, exhibit director.

Ellen Van Arsdale of Clarksville won the Mary Alice Elam Award as the outstanding business student of the year. Mrs. Evangeline Cothren, business instructor at Greene County Tech, received the Freedom Foundation Valley Forge Teachers' Medal. It was presented by Arkansas Supreme Court Justice Frank Holt.

The Parkview chapter won the sweepstakes contest. Bob Schwarz, president of the chapter, accepted the trophy for the school. The chapter won four first-place awards including a plaque designating it the best chapter in the state.

Three Little Rock students won special honors at the conference. Cathy Rister of Central High was named Miss FBLA, Don Fortenberry of Hall High was named Mr. FBLA and Jeff Stires of Parkview placed first in the data processing contest.

More than 900 students from 52 chapters in Arkansas attended the two-day meeting.

NAT'L FBLA SEE HOUSTON AND OLD MEXICO

Houston, Texas, will be the site of the 1972 FBLA National Leadership Conference. The three day convention, June 15, 16 and 17, along with an added trip to Mexico City, will be a first for many. The 34 Mountain Home students will fly to and from both places.

The annual trip will start from Little Rock with a plane flight to Houston. There will be a layover there for three day to attend the conference. The added trip to Mexico City features three or four days of recreation and sightseeing. More definite plans will be made after the State Conference in April.

FBLA INSTALLS NEW OFFICERS for 1972-73

The Mountain Home High School chapter, Future Business Leaders of America held an installation ceremony Tuesday at the school auditorium with sponsors and fellow members present.

The newly installed officers are Brenda Shew, president; Sandy Best, vice president; Georgia Casey, secretary; Peggy Jackson, treasurer; Stephanie Thomas, reporter; Linda Floyd and Randy Shaver, historian, and Cyle Covington, Student Council representative.

Bulletin — Devil

State honors for FBLA members

Members of the Mountain Home High School's chapter of Future Business Leaders of America participated last Saturday in the state FBLA annual convention at Hot Springs. Among those who attended were, from left, John Gorecki who received a trophy in recognition of his work as state TAP (Teen Action Program) chairman for the March of Dimes; Brenda Shew who was elected to the office of state historian; Mary Beth Foley who won first place in the public speaking competition; Jennie Dennison who won first place in the junior stenographer contest; Jilleen VanderStek who, with Carol Miller, were chairm of the second-place original project; Beth Warner, who w third place in the spelling competition; and Miss Miller. T local club won second place in the sweepstakes awards, and the money management project, and the activities report. T club won third place in the largest chapter membership cont Accompanying the 33 students from here who attended w Miss Pat Osborn, commercial teacher; Mrs. Mary Alice Ela advisor; and Mrs. Glenda Owens.

7th Grade
Taylors

What is your job ?

Do your like your work ?

What are your particular duties ?

Where is your job ?

Do your travel as a part of your job ?

What are the educational requirements of your job ?

What materials and equipment do you use on your job ?

What days do you work ? What shift ? What hours ?

Is your job indoors or outdoors ?

How many breaks do you get ? How long ?

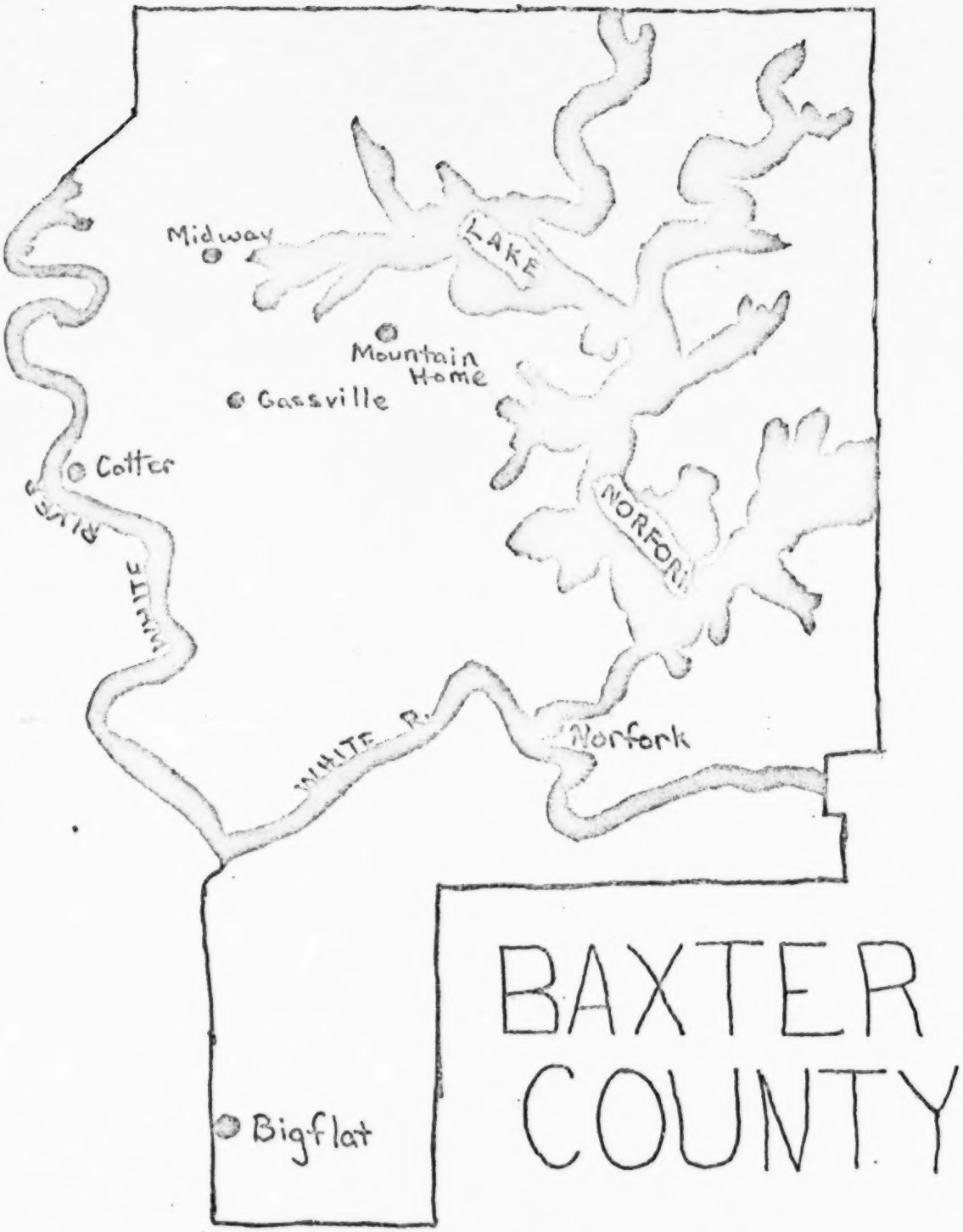
Are you self-employed ?

Do you meet people on your job ?

What vacations and fringe benefits do you get ?

What risks are involved in your job ?

Job Interview Sheet that students used



BAXTER COUNTY

2543

BY KATHY WILLEMS

MAJOR EMPLOYERS

Mar-Bax Shirt Factory
Baxter Laboratory
Baxter County Courthouse
Meyer Laboratory
Telephone Company
Ark. Hwy. Department
North Ark. Electric
Corps of Engineers
Ark. Game & Fish Comm.
Chamber of Commerce
School Systems
Resort Industry
Ark. Power & Light
Federal Building

OTHER EMPLOYERS

Accountants
Office Suppliers
Advertising
Air Conditioning
Heating
Aircraft
Antiques
Attorneys
Automobile Dealers
Automobile Repairing
Banks
Beauty Salons
Boat Dealers
Contractors
Churches
Dairies
Dentists
Department Stores
Docks

Druggists
Farmers
Fire Department
Fishing Bait & Tackle
Florists
Furniture
Gift Shops
Grocers
Hospitals
Insurance
Livestock
Lumber
Mobile Homes
Physicians
Plumbing
Printing
Real Estate
Restaurants
Service Stations

(continued)

OTHER EMPLOYERS

Sporting Goods
Television Dealers
Television Service
Tire Dealers
Trailer Renting
Water Well Drilling
Travel Agents
Truck Dealers
Veterinarians
Appliances
Water Softeners

List of People Interviewed in Baxter County

1. housewife 1
2. ~~[illegible]~~ truck driver
3. medical doctor hospital
4. ~~[illegible]~~
5. shirt factory worker IIII
6. construction worker IIII
7. salesman
8. fireman 1
9. ~~[illegible]~~ carpenter II
10. ~~[illegible]~~ oil co. mgr.
11. sales lady III
12. theater projectionist
13. resort mgr IIII
14. restraunt mgr.
15. attorney
16. licensed nurse
17. heating and air cond. co.
18. mobile home dealers.
19. automobile mechanic 1
20. Baxter Lab IIIIIIIIIIIIIIIIIIIII
21. nurse's aid III
22. ~~[illegible]~~
23. overhead door business
24. restraunt workers IIII
25. forest ranger
26. ~~[illegible]~~
27. service station worker III
28. printer
29. ass. at animal hos.
30. taxidermist
31. gift + yarn shop
32. state ferry 1
33. hairdresser 1
34. selling musical equip.
35. secretary IIII
36. mixologist
37. garbage pickup
38. cook 1
39. juvenile officer
40. investments
41. florist 1
42. Foremost Dairy
43. carpet store II
44. plumbing 1
45. real estate II
46. Contractor IIII
47. insurance 1
48. barber

49. baker
50. King sand + gravel
51. telephone 11
52. furniture store
53. poodle salon
54. Cranfield Marina
55. Charney Snow Clinic
56. Hiland Dairy
57. accounting
58. bookkeeping
59. Harp's Market
60. hospital
61. electrician
62. Sterling's
63. wallpapering
64. house painter
65. M + M Concrete Co.
66. Carp's Market
67. Coast to Coast mgr.
68. nursing home
69. backhoe + dozer
70. Corp engineers
71. Avon
72. Health Spa
73. ceramics
74. boat dock
75. teacher
76. landscaping
77. M + M storage
78. Chiles Road mi
79.
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HIGH SCHOOL TEACHING

By David M. Strain

Excellent! Very neatly typed for a 7th grader!

I plan to enter teaching as a proffession. I hope to teach English and (or) French. I hope to attain my Doctor of Education degree in order to qualify for higher paying jobs.

Teaching is one of the few jobs that does not require a Masters or Doctors degree. A Bachelors degree is enough to qualify for a teaching certificate in most states.

It is recommended that a person take subjects such as English and History, and major in the field he plans to teach.

Degrees in the field of Education include; Bachelor of Arts (B.A.), Bachelor of Arts in Education (B.A. in Ed.), Bachelor of Education (B.Ed.), Bachelor of Music Education (B.M.E.),Bachelor of Science (B.S.), Bachelor of Science in Education (B.S.Ed.), Bachelor of Science in Elementary Education(B.S. in Elem. Ed.), Bachelor of Science in Home Economice (B.S. in H.E.), Doctor of Music (Mus.D.), Master of Arts in Education,(M.A.inEd.), Master of Arts in Teaching (M.A.T.), Master of Education (M.Ed.),Master of Fine Arts (M.F.A.), Master of Music (M.Mus.), Master of Music Education (M.M.ED.), Master of Religious Education (M.R.E.), Master of Science (M.S.), Master of Science in Education (M.S. in Ed.), Doctor of Science (D.S.) and Doctor of Education (D.Ed.). As you can see there is quite a variety of degrees for a future teacher to choose from.

One of the best ways in my opinion to prepare for teaching is to take a variety of courses in high school until you decide upon the field you will teach.

One of the best ways to start off on the right foot in the field of Education is a group called the Future Teachers of America(F.T.A.). Many schools have an annual " turn-about day" or"student teacher Day". Many times students choose not to teach, or choose a different field to teach in after such days.

Salaries for teachers are low compared to other fields, but the benefits derived from teaching are not. For instance, two presidential candidates are former teachers,(George McGovern and Hubert Humphrey).However, there are some teaching jobs especially in large cities that offer high-paying jobs. City school superintendents are among the highest paid people in the country. The average salary in 1964 was about $6500. In cities salaries may reach over $8000 a year. School superintendents get about $10,000.

Guidance Counseling is an important facet of a teachers job. If employed as a counselor, or if a counselor is not available a teacher must serve as a friend.. People with higher degrees,usually Masters and Doctors degrees are employed as counselors. Counselors also sometimes act as so called "future-planners." Many schools have an occupational library and a college interest library in the charge of the counselor. Many times counselors plan schedules for students for a new year, but the greatest role in counseling is just to be a good friend.

Dealing more specifically with my chosen field, I hope to teach five alasses of English and one class of French.

The greatest role in English is to teach proper grammer,punctuation and diagramming. On the ohher hand, in literature students would read books and make book reports.

In French, however, the main responsibility is to teach the language. Students would not have learned improper usage of the language so teaching French would be easier than teaching English. A study of French classics such as Hugo's The Hunckback of Notre Dame, and Les Misérables or Stendhal's Le Rouge et le Noir (The Red and the Black) are also proper.

Other duties of an English teacher would be to assist in the library club,teach a homeroom, sponsor a club, work on the school paper,work on the annual, and take turns at hall, lunchline, and campus duty.

This is a re-cap of the duties , responsibilities , and qualifications for being a teacher and I feel enen more strongly about becoming one.

English '88

Mr. Taylor:

In the original enclosed written text, there were 5½ pages. However when I typed it, I came up with only a little over three. So really I have a six page report.

DMS

BIBLIOGRAPHY

1 Mountain Home Student Handbook

2 World Book Encyclopedia Vol. D

3 " " " " T

4 " " " " E

5 " " " " R

6 " " " " F

7 Science Research Associates Occupational Library

8 Metropolitan Life Insurance Company Career Booklet

9 Current Events Newsmagazine

5th Grade
Gustafson

Our Field Trip

On April 25, 1972, our class went on a field trip. First we loaded the bus and sang on the way. Then we went to the fish hatchery. We talked to a biologist there.

Later we had lunch. Then we walked across the dam and then inside. We talked to a supervisor. He showed us around inside the dam.

Everybody thinks this "career awareness" program is just great. I sure think it's great!

Max

5th Grade
Instefson

Our Field Trip

- Gary Spector

On our field trip we toured the Norfork National Fish Hatchery, and The Norfork Dam Power Plant. Our leader was Mrs. Stewart.

The first place we went was the fish hatchery. The guide that showed us through told us many things about from the hatching to transporting them to rivers. He said that before they take them outside they have to be at least two inches long. They supply trout for Arkansas, Louisiana, Oklahoma, part of Missouri, and Texas. We were able to see the fish being pumped into a tanker truck. The largest trout would have weighed about eight pounds. He told us the requirements for a worker there. The Norfork Fish Hatchery is the largest in the United States.

The next place we went was hiking around and walking across the dam. We saw many interesting things including the locks on the dam. Then we hiked up the hill and ate lunch.

The next and last place we went was the Norfork Dam Power Plant. The guide showed us a variety of things including the water hammer, the electric generators, the control room and many other interesting things. The Power Plant provide electricity for many homes. In the Main Office we were 100 ft. below lake level. I had a very nice time.

3rd Grade - Henley

Jeff

My Fathers Job

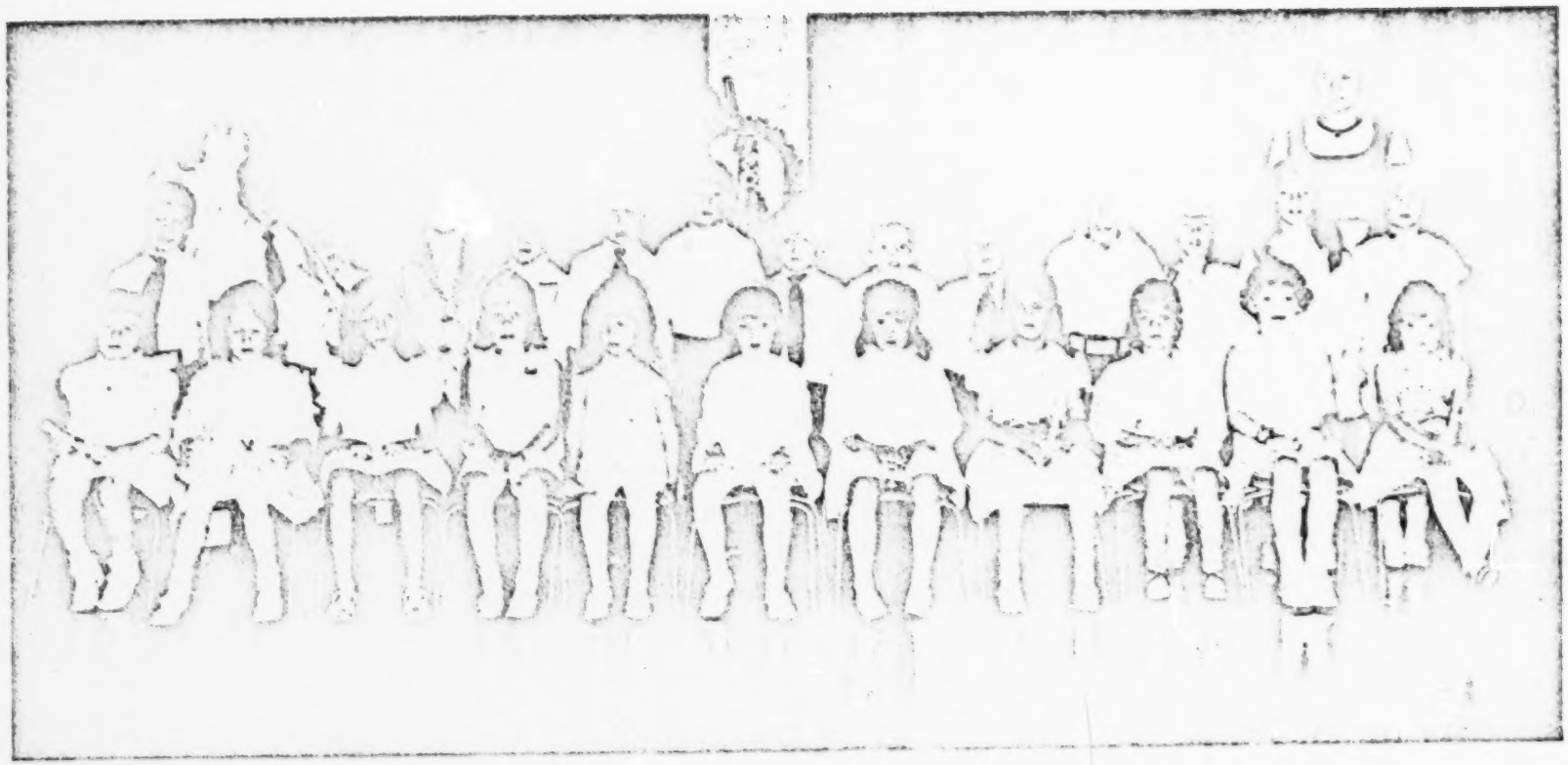
My father is a mailman. He [illegible] people mail. He [illegible] to work at 5:30 a.m. and comes home at 2:00 or 5:00 p.m. He get 800 dollars a month. He has to count the mailboxes once a year. One time he took me with him. We counted 199 boxes. He counted 358 boxes. All we counted 557 boxes.

About a month ago he was riding & he saw a little boy crying. He said, "I don't know but I know where he lives." My daddy took him home. His mama was worried but not mad. She said, "This is the first time he has run away." She gave Daddy a $15 reward.

3rd Grade - Hurley

Bill Wilkinson

My fathers job is plumbing.
He is a good plumber.
He puts in pipes and
water heaters too. He has
a friend that digs ditches
for him. If there
were not any plumbers we
would not have any water
or any hot water. Or
ullrs or pipes or sinks.



Kindergarten kids receive diplomas

Members of the Cosmopolitan Community Kindergarten receiving diplomas at the seventh annual graduation May 11 are front row, from left, JoEllen Whitfield, Debra Williams, Lilli Roden, Kayren Thomas, Mary Margaret Crain, Jennifer Gloer, Shawn Deal, Seleana Etteldorf, Melody Measells, Leean Pitchford and Michelle Kinder; and second row, from left, Randy Butler, John Snyder, Brent House, Jerry McDonald, John Rennick, Kevin Hooper, Bill Kerr, Michael Adkins, Bruce Wilson, Kurt Morgan, Sammy Clark, Pamela Geyer, Jill Kunath and Annette Simpson. In the back row are Mrs. Donald Kellams, at left, teacher, and Miss Kathy Lewis, helper. GOE

--Photo by Ray Grass

2559

Interim Report

Project No. 0-361-0032
CONTRACT No. OEC-0-70-5189(361)

Pilot Occupational Education Programs for Small Rural and Suburban Arkansas Schools in Grades Five Through Twelve

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

Haryle Greene, Coordinator
Rogers Public Schools
220 South 5th Street
Rogers, Arkansas

June 13, 1972

2560

4. SUMMARY OF THE REPORT

A. Time period covered by the report:
August 1, 1971 to June 1, 1972

B. Goals and objectives:

1. To initiate pilot occupational education programs for rural and small suburban Arkansas schools in grades five through twelve.

2. To broaden the occupational concept and awareness of youth by incorporating occupational orientation into the school curriculum beginning at grade five.

3. To create a favorable attitude in marginal students, slow learners, and socio-economically disadvantaged students regarding the value of education.and its contribution to to the world of work.

4. To bridge the gap between education and the world of work by relating classroom instruction to an immediate job through a general cooperative education program.

5. To provide intensive occupational guidance and counseling for all students during the last years of school and to assist in the initial placement of all students upon leaving school.

6. To provide short intensive training for seniors who have had no previous vocational training.

C. Proceedures followed:

The objectives of this project are being achieved by (1) the hiring of a teacher-coordinator to work with the GCE program and to help coordinate the work involved in this project, (2) the hiring of a vocational counselor to work with teachers and students directly involved in the project. The coordinator and counselor have attended in-service training sessions sponsored by the State Department of Education. The elementary teachers involved in the project attended in-service sessions which were geared to the interests of elementary teachers. This proved to be of benefit to our teachers.

A major portion of the focus of the Rogers Project has been aimed at the marginal students, as these students were being sorely neglected in our attempt to keep pace with our rapid growth. The counselor worked directly with these students in grades seven through ten.

D. Results; Accomplishments:

Career awareness is an area of study that will benefit all students.

Elementary students who are introduced to the world of work at an early age will be in a better position to make career choices later in life. The elementary students involved in this project this past year have demonstrated a marked increase in their awareness and interest in the world of work.

The week of intensive occupational training for seniors showed some interesting results. A general orientation to the world of work was presented and it was interesting to note that some students realized for the first time that they were not prepared to enter the work force upon high school completion. Some didn't realize that it was their responsibility to secure a social security number. Many students had never seen a job application form. This proved to be a week well spent.

Students in the general cooperative program have shown a most favorable response to the program. The instruction they received in the classroom and on the job was well received because they could put into use what they had learned. Many of the part time jobs held by students will result in full time jobs now that they have graduated. All work experience received this past year will provide a good background of job experience that will be of value to these students for years to come.

The marginal students with their history of academic failure or near-failure have reacted most positively to the idea of career awareness. They see this as an area in which they are really interested and which is meaningful to them as individuals, a concept very new to some of them in relation to school.

E. Evaluation:

Evaluation of this project is a continuous process. Some of the evaluation proceedures, pre-test and

post-test, are easily measured. Some of the objectives of this project will be more difficult to measure accurately; but some improvements in students lives have already been recognized, especially in attitudes and social values.

F. Conclusions and recommendations:

Our first year in the Exemplary Project has been one of trial and error and much insight. We have found that, in Rogers, it is better to select a small group to concentrate on and then, as success comes, to widen our scope, than to spread our efforts thin and really not accomplish a great deal.

For next year, we plan to continue intensive work with those groups that have been a part of our work this year. Early in the year we also plan to work with additional teachers throughout the system to broaden our reach.

5. BODY OF THE REPORT

A. The main problem area toward which this project was directed was the lack of career orientation available to all students in grades five through twelve. Rogers has been primarily a college-oriented system with little emphasis being placed on the marginal student. Our drop-out rate was increasing, especially among the marginal students between grades eight and ten. Even among those who were graduating from high school, there were many who had no idea what they wanted to do or what they were capable of doing.

There was obviously a need to make education more relevant, not only to the marginal student, but to all students. We believe that career education is the key.

B. Goals and objectives of the project:

1. To initiate pilot occuational education programs for rural and small suburban Arkansas schools in grades five through twelve.

2. To broaden the occupational concept and awareness of youth by incorporating occupational orientation into the school curriculum beginning at grade five.

3. To create a favorable attitude in marginal students, slow learners, and socio-economically disadvantaged students regarding the value of education and its contribution to the world of work.

4. To bridge the gap between education and the world of work by relating classroom instruction to an immediate job through a general cooperative education program.

5. To provide intensive occupational guidance and counseling for all students during the last years of school and to assist in the initial placement of all students upon leaving school.

6. To provide short intensive training for seniors who have had no previous vocational training.

C. Description of the general project design and the procedures followed:

This project was designed to provide career information progressing from general to specific in grades five through twelve for rural and small suburban school districts. Specific goals and objectives of this project are listed in part (b) above.

Procedures: In the fifth and sixth grades, it was decided that a change was necessary in our original local plan. Originally we had planned to work through the centralized libraries to provide books relating to various occupations. We felt that the impact of this approach would not be as significant as if we chose one fifth grade class and one sixth grade class and provided direct career-related instruction to these classes.

One classroom teacher was utilized at both levels with each class being made up of 30 students. The Counselor worked with both classes and participated in a field trip with each. The methods used included classroom instruction and discussion, field trips, speakers, and small group activities.

The evaluation instruments given as pre- and post-tests to the fifth grade were Listing of Occupations and the School Sentiment Index-Intermediate Level.

The evaluation instruments given as pre-and post-tests to the sixth grade were Ranking of Occupations and Choosing a Job Inventory.

In the seventh and eighth grades, three sections each of marginal students were the primary targets of the project. There were five teachers involved in working with the 60 seventh graders and 60 eighth graders. All five teachers routinely used occupational information in their classroom discussions to make subject matter more meaningful. The teachers used field trips, outside speakers and films to relate class work to the world of work.

Although we are not able as yet to begin an orientation class for all eighth graders, one eighth grade social studies teacher used a number of chapters out of the Vocational Orientation book developed by the Arkansas Department of Education. The Kuder Interest Inventory was given to these students prior to beginning the orientation units.

The Evaluation instruments given to the seventh grade students were Listing of Occupations and the School Sentiment Index-Intermediate Level.

The Evaluation instrument given to the eighth graders was the Choosing a Job Inventory.

At the ninth and tenth grade levels, the primary emphasis was with marginal students in their Civics classes. An entire quarter was devoted to the study of occupations. One teacher was involved, making use of speakers, library material, occupational materials in the Counselor's office, interviews, and finally reports.

Three other teachers were also involved in using occupational information related to their subject matter on a more limited basis. They used speakers, films, and printed materials.

Approximately 175 students in the ninth and tenth grades were exposed to career information, some of them in more than one class.

The Evaluation instrument given to the ninth grade was Ranking of Occupations.

The Evaluation instruments given to the tenth grade were the Educational and Occupational Information

Test and the School Sentiment Index-Secondary Level.

In the eleventh and twelfth grades, there were four teachers involved in teaching occupational material related to their subject matter areas in addition to the two work experience classes (GCE and COE).

The Counselor spent one week with all seniors during their regular English classes in a short, intensive occupational orientation unit. The Kuder Interest Inventory was administered at the beginning of the week. For another year, a different test might be chosen as it seemed that the Kuder was somewhat elementary for this group but nevertheless provided a good beginnig point in discussing careers. Three speakers were brought in during the week, all of whom contributed much in the way of useful, thought provoking information.

Some 100 eleventh grade students were exposed to career information in their classes while all 250 seniors were involved in the project for a minimum of one week.

Evaluation instruments given to the eleventh grade were the Educational and Occupational Information Test and Choosing a Job Inventory. The twelfth grade completed a short theme on evaluation of the week devoted to occupational information.

The two work experience programs, GCE and COE, which are available to seniors only, each involved 24 students. Outside speakers, field trips, films, cassette tapes and other occupational materials were used. The GCE Sentiment Index was given to the GCE class for evaluation.

D. Results and accomplishments of the subject:

The elementary students who were involved in this project were enthusiastic in their study of occupations. Results of the pre-test and post-test which they completed indicate that they have broadened their career awareness. Teachers involved in the project have expressed their continued support of the program and plan to further expand career awareness activities next year.

The GCE program has helped neet the needs of 24

students in some very meaningful ways. Response of students and employers to the program has been most encouraging, and this has helped secure further acceptance of the program by all involved. It is evident that the GCE program will remain a part of our high school curriculuim long after this exemplory project is formally completed.

All seniors participated in a week of intensive occupational orientation. Perhaps this was a bit repetitive for some students, but many students who wouldn't have been reached any other way were given guidance and advice which has proven to be valuable to them.

E. Evaluation:

The evaluation of this project was conducted primarily by means of pre- and post- testing specified groups in grades five through twelve. The final evaluation will be completed by Dr. Dolph Camp.

The results of this evaluation can be obtained through the Arkansas State Department of Vocational Education.

F. Conclusions, implications, and recommendations for the future:

This is the first year of our involvement in the exemplary project and because we are a large school we still have several people who are not fully aware of what we are trying to do. However, our involvement in this project has made school administrators and most teachers more aware of the need for career awareness education in the curriculum of all schools. Interest in this project has had somewhat of a snow-balling effect. As the school year progressed, more and more teachers became interested and many have expressed their intentions of devoting more time to the study of careers next year. Teachers at all levels have shown an increased interest in career education.

The coordinator and counselor plan to continue promoting the program and encourage more and more teachers to incorporate career education into their lesson plans. We feel that we are more knowledgeable of what the project involves and should be able to give better assistance to all teachers involved.

Hayle Greene
Project Coordinator

June 14, 1972
Date

INTERIM REPORT

Project No. 0-316-0032
Contract No. OEC-0-70-5189(361)

Pilot Occupational Education Programs for Small Rural and Suburban Arkansas Schools in Grades Five Through Twelve

Exemplary Project in Vocational Education
Conducted under
Part D of Public Law 90-576

Kenneth Young
Coordinator of Exemplary Program
Valley Springs School District
Valley Springs, Arkansas 72682

June 15, 1972

Signed _____
Coordinator

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The period covered by this report is From July 1, 1971 to June 30, 1972.

The goals and objectives of the project are:

(1) To provide for broad occupational orientation at the elementary and secondary levels so as to increase student awareness of the range of options open to them in the world of work.

(2) To provide for work experience, cooperative education and similar programs, making possible a wide variety of offerings in many occupational areas.

(3) To provide for students not previously enrolled in vocational programs to recieve specific training in job entry skills just prior to the time that they leave the school.

(4) To provide for intensive occupational guidance and counseling during the last years of school and for initial placement of all students at the completion of their schooling.

(5) To provide for the grantee or contractor to carry the program on with support from regular funding sources after the termination of Federal assistance under Part D of P.L. 90-576.

The procedure followed in implementation of the project was to first submit a plan and to get approval from the Department of Education. Upon approval the school board employed a counselor and a coordinator. Working with the faculty and the entire community, the coordinator and counselor begin to work toward the objectives as set forth in the project. This involved the establishing of an advisory council, numerous meetings with faculty members who were to be working directly with the students, making contacts with people of business and industry who were to employ and assist in training of students, setting up office headquarter, scheduling of classes, providing classroom facilities, obtaining and organizing instructional materials and attending numerous workshop in order to become more familiar with the program in its entirety.

The results of the program at the end of two years are becoming evident in the way of increased career awareness on the part of students; better attitudes toward school, community, and the world of work; and the actual results obtained by graduating seniors in that they are now efficient workers on the job where they were trained, It is anticipated that more pronounced results and accumplishments will be a reality in the years ahead as students in the grade school graduate and become a part of the world of work.

We are participating in an evaluation design that has now begin to show measurable results relative to the program that are very favorable.

The program has been well received by students, parents, faculty members, and the entire community. It is our recommendation that the program continue as in the past two years with modifications as new innovations come along that prove to be sound

The problem area toward which the project was directed is the non-college bound youth and more particular to youths with academic, socio-economic, or other handicaps.

Highest priority is placed upon the overall effort to "...reduce the continuing high level of youth unemployment by developing means for giving the same kind of attention as is now given to the college preparation needs of the two out of three young persons who end their education at or before completion of the secondary level." The effort should discover "...new ways to create a bridge between school and earning a living for young people who are still in school, who have left school either by graduation or by dropping out, or who are in post-secondary programs of vocational preparation."*

The goals and objectives of the project are:

(1) To provide for broad occupational orientation at the elementary and secondary levels so as to increase student awareness of the range of options open to them in the world of work.

(2) To provide for work experience, cooperative education and similar programs, making possible a wide variety of offerings in many occupational areas.

(3) To provide for students not previously enrolled in vocational programs to receive specific training in job entry skills just prior to the time that they leave the school.

(4) To provide for intensive occupational guidance and counseling during the last years of school and for initial placement of all students at the completion of their schooling.

(5) To provide for the grantee or contractor to carry the program on with support from regular funding sources after the termination of the Federal assistance under Part D of P.L. 90-576.

The general project was designed to give students a better understanding of the world of work and to better prepare the students to enter this world of work upon completion of their schooling. To accomplish the purposes of this design we continued with a general cooperative program for junior and senior students. In this program the students were in school until 1:00 p.m. each day. The rest of the day was spent in working on a job related to their occupational objectives.

One period a day was spent in a general cooperative class in which they studied materials related to their occupational objectives.

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* Bottoms, Gene, A Guide For The Development, Implementation, and Administration of Exemplary Programs and Projects In Vocational Education, p. 2.

Much improvement was made in the teaching of career education in the fifth and sixth grades this year. The teachers were given an outline as to what they would teach. Occupations were divided into 18 clusters and fifth and sixth grade teachers spent one month on each cluster. No time periods were set aside for occupational information, but was brought into the existing curriculum whenever appropriate. Clusters studied were:

Fifth grade	sixth grade
1. Art, Music, and Writing	1. Entertainment
2. Clerical work	2. Business Relation
3. Photography and Communications	3. Law and Law Enforcement
4. Merchandising	4. Math and Science
5. Elemental work	5. Crafts
6. Medicine and Health	6. Personal Service
7. Transportation	7. Machine work
8. Investigating, Inspecting, and Testing	8. Farming, Fishing, and Foresty
9. Engineering	9. Education and Social work

Believing that education becomes more meaningful when students can see workers preforming we arranged field trips with each cluster. Fifth graders visited the Times Printing Office, the First National Bank, the Boone County Hospital, the State Highway Department, the Boone County Telephone Company, Sav-A-Stop Inc., the Boone County Airport, and the Coca-Cola Bottling Company.

The sixth graders visited KHOZ, the Boone County Court House, the Harrison Police Department, Kohn experimental station, the Harrison Manufacturing Company, the Holiday Inn, Levi-Struss Company, and the Twin Lakes Vocational School. Other materials and methods used to teach occupational imformation were film strips and cassettes, reports by students, bulletin boards, and guest speakers. Over $500 worth of books were purchased during the year for the elementary Library.

The seventh grade occupational information class was much improved this year. Every seventh grader was required to take the course as apposed to only marginal students last year. It alternated with music every other day and was taught the entire year.

The methods used in teaching this class was that of an assigned report each six weeks to be given in a 5 minute talk before the class. Students had an outline for taking notes on all reports given. A question and answer session followed each report. Also the Vocational Orientation guide as prepared by the State Department was used along with films and guest speakers. Major emphasis was placed on personality development as it relates to that of becoming successful in the world of work.

We added our eighth grade "Hands on Experience Class" this year. They rotated each six weeks through three different areas of instruction, Home Ecomonics, Agriculture, and Business Education. In each area they were given information concerning occupations in that field, and were given a chance to participate in Hands-on-Experiences with the various machines and techniques required in that field. Both students and faculty were enthusiastic about this class and nearly all wanted to keep it in our curriculum.

Valley Springs is a small rural school with a total enrollment of 590 of which there is an enrollment in grades 7-12 of 240 students. Over 95% of the students are transported and 40 to 50% of our students are marginal students. We are only eight miles from Harrison, which is a community of around 8,000. Harrison provides most of our job training opportunities.

We have an instructional staff in grades 7-12 of 13 teachers, including our G.C.E. coordinator, a counselor, a commercial teacher, a home ecomonics teacher, and an agriculture teacher.

Individual counseling was again provided to each student. All the occupational material available to the counselor was presented to the students. Included were the Occupational Outlook Handbook, the D.O.T., an S.R.A. Occupational Kit, and various selection from the Library. Nearly all students seemed to grasp the importance of planning for a career much better than last year.

The Large-Thorndike Intelligence Test were again administered this year to determine capabilities. The Kuder Interest Surveys were again used to determine areas of interest and the I.O.W.A. Test of Basic Skills and the I.O.W.A. test of Educational Development were still used to measure aptitude.

Follow-up work on last years graduates was done by the counselor and plans are being made to do the same on this years graduates.

The eleventh and twelth grades in the program seemed to have a much improved attitude toward school which was evidenced by fewer truencies and improved grades. None of these students were drop-outs this year. Since school was out many of the students have accepted parmanant employment with the employers they trained under.

The elementary students and teachers were enthusiastic about the program as all the teachers expressed hope that the program would be continued and improved next year.

Through the efforts of the coordinator and the counselor a line of communication between the school and the business community was established, which had not existed previously. Hopefully this will pave the way for better acceptance of the schools' programs by the community.

At this point in the implementation of the program we have concluded that the possibilities are unlimited in being able to assist our people in bridging the gap between formal education and the world of work. We anticipate even greater improvement in attitudes and appreciations on the part of individuals as the program reaches into the 3rd, and 4th years. We feel that a greater degree of success can be obtained by beginning with the students in the early formative years. Therefore, more positive results should be evidenced once we begin to work with what is now 5th and 6th grade students in the General Cooperative Education or work experience programs as juniors and seniors in high school.

We were pleased with the enthusiam shown by both students and teachers in the elementary program and we think that the acqusition of more materials and a better understanding of all concerned about what we are trying to accomplish will help us plan a greatly improved program for elementary school next year

Our recommendations for the future would include the implementation of new ideas along with that which has proven sound and workable in the past. Certainly as materials become available and innovative ideas are tried improvements are sure to become reality.

We think we've made a tremendous amount of progress in our program this year and are planning on using the same format for next year with the addition of offering career education in the primary grades.

INTERIM REPORT

Project No. 0-361-0032
Contract No. OEC-0-70-5189(361)

Pilot Occupational Education Programs for Small Rural and Suburban Arkansas Schools in Grades Five Through Twelve

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

R. Larry Reaves
Warren School District #1
308 West Pine Street
Warren, Arkansas 71671

June 9, 1972

TIME PERIOD COVERED: July 1, 1971, through June 30, 1972

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INTERIM REPORT
Exemplary Project
Warren Public Schools

PROBLEM AREA TOWARD WHICH THE PROJECT IS DIRECTED

It is becoming more and more evident to modern day educators that the artificial separation that has existed between general and vocational education programs for many years must be eliminated. The need for occupational orientation to be integrated into the mainstream of the educational systems of the public schools has become so evident not only in the Warren Public School System, but others as well, that it can no longer be ignored.

The manpower revolution involving new methods, techniques, machinery, and the creation of new jobs demanding higher skilled workers accompanied by the deletion of many unskilled jobs emphasized the need for a closer look at career development by our educational institutions.

It is apparent not only from numerous studies made, but from general observation as well, that individuals begin forming attitudes regarding certain occupations early in life. It is important that youth are made aware of the ever-widening range of occupations and that a realistic perception of these occupations be developed in order that these youth may make an exploration of themselves in regard to a wide range of occupations. Youth must of necessity be oriented to the fact that work is an integral part of life and a major ingredient of happiness.

After creating an awareness of the world of work, it is important that someone help the student see the occupational relevancy of subject matter being studied. It is believed that as the student sees that English, math, social studies, and science contribute to his ultimate world of work, education will become a more practical and meaningful goal. Therefore, the need is that all of the student's education become vocational in nature through correlation of the general and vocational aspects of the local educational curriculum.

Career development should be viewed as a pyramid offering a broad base of exploratory experiences for the world of work at the elementary and junior high school levels if present conditions of occupational illiteracy and unemployability are to be overcome.

At the junior high school level, some youngsters do not have the tolerance or ego-strength to proceed through a series of experiences that are meaningless to them personally.

Interest is awakened in the ninth, tenth, or eleventh grades for some when they can get their hands on the tangible and concrete. This factor determines the need for the provision of experiences which are timely and immediate to the questions many young people are asking themselves during the periods of their educational processes which are sometimes meaningless to them.

Another phase of the problem is that according to statistics appearing in the Arkansas Counselgram published during the 1970-71 school year, today's high schools work toward preparing 80% of our young people for admission to a four year college program when only 32% of the students actually enter and half of those fail to graduate. Indications are that the majority of our high schools at present are geared to serve a minority of 16% of our young people approaching the labor market.

Basically, Arkansas is a rural state consisting of many small trade centers. Students attending school in these small trade centers, such as Warren, are receiving basic academic education with some receiving training through traditional vocational programs such as home economics, vocational agriculture, and business education. One of the major resources in these communities is agriculture, but mechanization has created a manpower surplus in production agriculture. Due to mechanization and in some communities, due to change from an agricultural to a related agricultural or non-agricultural base, it is essential that present programs in vocational education be implemented and/or expanded to include occupational orientation beginning early in the student's school career and continuing to graduation, with guidance and counseling services provided to compliment each phase of the orientation process. The ideal capstone of this orientation and counseling should be a vocational program of the purest sense which obviously points to a general type cooperative education program designed to meet the needs of students in small communities. A program of this nature provides a means whereby all previous orientation and exploration activities may be culminated in actual work experience in their chosen occupation coupled with intensive job-related instruction in school.

The Warren area consists largely of socio-economically depressed people who are either unemployed or under-employed with a high per cent of school dropouts and a low income index which naturally results in an inadequate tax base on which to finance adequate school programs. Too often such situations as this are permitted to perpetuate themselves. There is a desperate need to strengthen training and job adjustment programs for these disadvantaged youth as well as for many "regular" students. Opportunities are available to many of these youth if they are made knowledgeable of them and properly equipped with entry-level skills.

GOALS AND OBJECTIVES OF THE EXEMPLARY PROJECT

A detailed outline of the goals and objectives of the Arkansas Exemplary Project is contained in the "Evaluation Design" developed by Dr. Dolph Camp, the Evaluation Specialist. Listed below are the six major objectives of the project:

Performance Objective #1. To initiate pilot occupational information programs in grades five through twelve by June 30, 1972.

Performance Objective #2. To broaden the occupational concept and awareness by incorporating occupational orientation into the school curriculum beginning at grade five.

Performance Objective #3. To create a favorable attitude in the marginal students, slow learners, and socio-economically disadvantaged students regarding the value of education and its contribution to the world of work.

Performance Objective #4. To bridge the gap between education and the world of work by relating classroom instruction to an immediate job through a general cooperative education program by June 30, 1972.

Performance Objective #5. To provide intensive occupational guidance and counseling for all students during the last years of school, and to assist in the initial placement of all students upon leaving school.

Performance Objective #6. To provide a short intensive training course for seniors who have not had previous vocational training.

DESCRIPTION OF THE GENERAL PROJECT DESIGN

Proposal. The exemplary project as originally proposed is designed to initiate a comprehensive occupational education program beginning the fifth grade and continuing through the twelfth grade with a number of designated features as outlined in the "Goals and Objectives of the Project" and further broken down in the "Evaluation Design." The primary aim is to broaden the occupational concept and awareness of the individual student through more intensified occupational guidance and counseling provided by a person employed as a vocational counselor. Marginal students, slow learners, and socio-economically disadvantaged students comprise the prime target group. The orientation phase is designed to culminate in a program directed toward preparing the graduating senior for the giant step into the world of work through either escalated guidance and counseling or involvement in a cooperative education program.

Administration of the Program. The program administrative plan involves a project coordinator working under the direction of the superintendent of schools and the local board of education. The project coordinator works closely with various other school personnel willing to cooperate in the fulfillment of the objectives of the project including a vocational counselor who is assigned to the program. However, it might be worthy of note at this point that the program was forced to operate this year without the assistance of a vocational counselor after the resignation of Mr. J. Wilson in June of 1971 who served in this position the first year of the project.

The Occupational Education Advisory Committee, composed of nine influential representatives of the business and industrial community and including one representative of education, serves as a consultant and advisory body to the school board, superintendent, and the project coordinator.

The OEAC committee is designed to function primarily in the areas of public relations, student standards and recruitment, student selection, manpower needs and training facilities surveys, students' problems, program facilities and aids, curriculum development, post-secondary education, adult education, occupational orientation, promotion of club activities, arrangement of field trips, and legislation. The committee also serves to evaluate and approve, or reject, training stations and training plans for cooperative education students, and to act in any other capacity that can be related to the exemplary and cooperative programs at hand.

Dissemination Activities. The 1971-72 school year began for the Exemplary Program with the recruitment of applicants for the cooperative education program. Though applications are taken in the spring in preparation for the coming school year, many of the students fail to apply until the last minute before school starts in the fall. Both radio and the local newspaper were utilized to a large extent in publicizing the general cooperative education program and what it offers both the student and the businessman. The school paper and bulletin were also utilized in disseminating this information.

Shortly after school began the Pine Bluff Commercial, a Southeast Arkansas newspaper, ran a half page feature article on the General Cooperative Education phase of the Exemplary Program including pictures. This proved to be good publicity for the program since this newspaper has a rather large circulation.

Later on in the year the Warren paper published weekly and entitled The Eagle Democrat with a circulation of over four thousand in this area ran a full page article including pictures of the cooperative education program and the students.

A number of other articles appeared in the Warren paper and the high school paper, The Tall Timber Times, throughout the school year publicizing such things as GCE Club activities, Career Day, adult education courses, the Hire-A-Youth Program sponsored jointly with the Warren Chamber of Commerce, and other such activities of the Exemplary Program of general interest to the public. Clippings of these events have been included in the Quarterly Reports submitted to the Arkansas State Department of Education.

Physical Facilities. Again this year physical facilities have been short of ideal, but have been tolerable. Having not had a counselor in the program this year, the small office used jointly by the counselor and coordinator last year has been adequate for the use of only one person this year.

Classroom facilities for the General Cooperative Education related class have improved over last year primarily due to the removal of a number of sewing machines and the fact that the class was permitted to remain in the same room the entire year without having to alternate with other classrooms as was necessary last year.

The primary handicap is not being able to converse or counsel with students privately in a comfortable atmosphere. The office and classroom are not only on different floors of the building, but are at extreme opposite ends as well. The office does not facilitate working adequately with individual students due to the crowded conditions.

Office furniture, equipment, and supplies have been adequate. The office does include a telephone and a small air conditioner for use in the summer. However, in the winter the only heat available is that radiated from two central heating units located in one side of the room which serve to supply other areas of the building with no duct serving the office space.

Other Project Participants. Others involved in the activities of the Exemplary Project this year naturally include the members of the Occupational Education Advisory Committee and the twenty-five employers in the community who sponsored cooperative education students. Others closely involved were the librarian who worked diligently on the Career Center which will be explained later in the report and the two English teachers who utilized the Career Center with their classes. The vocational teachers participated indirectly by presenting occupational information in their respective courses at my request and through information made available through the exemplary materials files.

Due to the lack of a vocational counselor in the project this year, work was mostly confined to grades 9 through 12. Very little interest or cooperation was shown by the existing counselor in the high school.

Student Population. Due to the lack of a counselor in the project this year, statistics concerning marginal and regular students are not available on grade five. The other figures represented below are based upon the figures derived in the school year 1970-71:

Grade Level	Total Students	Regular	Marginal	Percent Marginal
5	147	—	—	—
6	197	107	90	46
7	225	114	111	49
8	181	103	78	43
9	176	90	86	44
10	176	76	100	57
11	172	75	97	55
12	157	90	67	43

Student Population Chart
(School Year 1971-72)

Adult Education. A two-part course in Automotive Tune-up and Air Conditioning was sponsored in cooperation with the Pines Vocational Technical School of Pine Bluff who furnished the instructor. The tune-up phase of the adult course ran for thirty-eight hours and the air conditioning phase ran for twelve hours each meeting on Tuesday and Thursday nights from 7:00 and 10:00 p.m. The facilities of the Blankinship Motor Company automotive shop were used during the courses. Response to the courses was fair from the attendance standpoint. Those attending did so regularly and seemed to have profited from the courses. The courses were supplementary in nature and appealed mostly to the younger mechanics of the area.

Testing and Counseling. Since the project was unable to secure a vocational counselor to work in the project this year, no testing or counseling was done in accordance with the evaluation design of the project. As coordinator of the Exemplary Program which includes the General Cooperative Education Program, I was not able to carry on all the activities of the project adequately. I concentrated most of my efforts on the cooperative education program and the accumulation of career materials for the career center in the library which will be described later. I cooperated with the local Chamber of Commerce on several career education projects, also.

MAJOR ACTIVITIES AND ACCOMPLISHMENTS OF THE YEAR

I as coordinator of the project attended several workshops and seminars throughout the year which were very profitable to me in developing a greater knowledge of career education.

I attended summer school at the University of Arkansas in Fayetteville and participated in the Arkansas Extern Program throughout the spring and fall semesters for the development of local leaders in vocational education.

I worked with the GCE Club throughout the year. The club developed a constitution, purchased an American Flag for the classroom, made a large emblem to hang on the wall of the classroom, sponsored the Second Annual Employer-Employee Appreciation Banquet, and held an outing including a catfish supper for fellowship among the club members. Of course, the club consists of all students enrolled in cooperative education.

Representatives from the various vocational and technical schools of our area were encouraged to come speak to the juniors and seniors on several occasions. I worked with them in arranging the sessions which served as good occupational orientation since the meetings involved two slide series depicting the occupational opportunities available in our area. Several occupational brochures were passed out, also.

Two trips were made on buses to transport interested students to the Pines Vocational Technical School in Pine Bluff and the Southwest Technical Institute in East Camden. The response was good to the trips which served as a very affective means of impressing occupational opportunities and the need for training on the minds of the students.

In an attempt to gain greater approval for the objectives of the exemplary project and career education in general, I spoke to the Warren Rotary club at a noon lucheon on the subject of career education and its application to our schools.

The exemplary program cooperated with the Bradley County Chamber of Commerce on two large projects this year. One was a program which I was able to work with them in planning called "HAY" which stands for "Hire-A-Youth" and acted as a means of improving channels of communication between those who needed work done and the young people in the community who were eager to do the work. The other project was that of a Career Day in which representatives of approximately twenty-seven different occupations and professions came to the school for a half day and met according to a schedule with the students interested in their type of work. The gymnasium was used to provide representatives of seventeen different colleges, private business schools, and the area vocational and technical schools as well as the military services with a means of talking on an informal basis with interested students.

I have been able to work very closely with the other five vocational instructors in the school system this year in incorporating career education into their courses. Naturally one of the objectives of the exemplary project is to attempt to break down the barrier between the so-called academic and vocational course work, but it seems inevitable that in the beginning the vocational programs must be brought in view of the academic teachers so that each may begin to recognize their commonalities.

I was fortunate this year to be able to work very closely with the librarian which I might add is new in the school system this year. We were able to designate a portion of the shelf space as a Career Center which serves to house occupational information in the form of books, pamphlets and brochures. All of the material is made available to both the faculty and the student body of the high school. We hope to organize this facility to the point that it may become the base for other Career Centers in the other schools in our system.

A number of students were observed to have browsed through the materials while in the library and many of them checked out materials for closer scrutiny. A sincere attempt is being made to make the area attractive and appealing to the students to encourage voluntary use of the materials.

Six English classes and three vocational classes did occupational research in the center this spring. The students seemed to respond well to researching occupations of their choosing over the routine or normal topics chosen each year for research.

The center involves two high cases and two low cases in a corner of the library near the check out counter. The shelves were bordered with bright orange corrugated paper and the background was lined with a bright torques paper to make the area stand out. A bulletin board was constructed just above the low cases on which displays can be erected to draw attention to various occupational clusters and the materials included in the center representing the job families.

Additional pamphlets and booklets were filed according to a system based upon the Occupational Outlook Handbook published by the Government Printing Office. This system of filing was developed so that information readily found in the Occupational Outlook Handbook can also be found easily in the file cabinet.

Over four hundred form letters were mailed out to various businesses, industries, unions, societies, and associations in an attempt to secure as much occupational literature as possible to make available to the students either on a free-loan or take basis.

All of the career books found on the shelves of the library plus approximately thirty-six new books that were bought with exemplary funds were placed in the Career Center. Many of the books on the shelves were as much as eight years old and had never been checked out by a student primarily because they were "lost" on the stacks. Now all career materials are together in an attractive case and students are beginning to pay much closer attention to them.

General Cooperative Education. The cooperative program established under the exemplary project serves the eleventh and twelfth students offering them two credits in vocational education. The program truly serves as the icing on the cake for the career program by permitting them to gain first hand knowledge and experience in the occupation of their choice.

This years program involved a total of thirty students employed in twenty-five different training stations all approved by the advisory committee. The training involved approximately twenty-one different occupational areas.

Two students enrolled in the program moved away during the school year and one dropped out of school. One student that moved was able to enroll in another cooperative education program and continue his training in a similar occupation. The student that dropped out of school continued to work in his training station.

CONCLUSION

The Warren Exemplary Project experienced a severe setback through the loss of the vocational counselor and the fact that another qualified individual was not located who was interested in the position, but all is not lost in that a well qualified individual has now been employed effective August 15 of this year.

It is my sincere feeling that the year was not in any manner in vain and that we will be able to pick up this fall and continue on with the specific fulfillment of the objectives of the program. A great deal of groundwork has now been laid which should permit the new counselor move forward with greater strides in the area of occupational awareness on the elementary level where the program is now lacking.

R. Larry Reaves Coordinator

6-13-72

INTERIM REPORT

Project No. 0-361-0032
Grant No. OEG-0-70-5189(361)

Pilot Occupational Education Programs for Small Rural and Suburban Arkansas Schools in Grades Five Through Twelve

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

(Bart Pullen)
(Wynne Public School)
(P.O. Box 69
Wynne, Arkansas 72396)

(6/02/72)

2586

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(A). Time period covered by the report - July 1, 1971 to June 30, 1972.

(B). Goals and objectives of the project:

The following outline was presented to the Director of Exemplary Programs to serve as projected plans for 1971-72 by using the Exemplary Project Objectives as headline topics.

OBJECTIVE - A. Pilot occupational information programs in grades 5-12.

I. Occupational information in grades 7, 8, or 9

A. 9th Grade Agriculture Orientation

a. Units prepared by job clusters

b. Films

c. Tapes

d. Field Trips

e. Resource People

B. 10th Grade Exploratory Agriculture

a. Same as above

b. For agriculture and Agriculture related.

C. Home Economics

a. Presented more on the 8th grade level

b. High School, just a brief awareness, but no details

D. Industrial Arts

a. Presented to 8th grade Orientation

b. Presented to 9th grade Industrial Arts I, Presented to 10th Grade Industrial Arts II.

c. Not taught from viewpoint of saleable skill.

E. Journalism Teacher hopes to work with me in use of 35 MM Camera to let her students do a project involving the world of work.

F. Economics Teacher plans to teach either a job paper, or other related job facts, 2nd semester.

G. Counseling

a. Senior High School Counselor using tapes and individual counseling.

b. Senior Exemplary Counselor working with Co-op students on an individual bases, and with all students when given a chance.

OBJECTIVE - B. The beginning of an occupational information in Grade 5

A. Involvement of students.

B. Grass Root Attitudes

C. The worth of the individual

D. Resource People

E. Field Trips

F. Films and Tapes

G. Evaluation Designed for Pre- and Post Test

OBJECTIVE - C. Favorable attitude in marginal students, slow learners, and socio-economically disadvantaged students regarding value of education and its contribution to the world of work.

I. Evaluation design furnished from State Department.

II. Pre and Post Testing done either through English or Social Studies Department.

III. Information presented in each grade level should show a change in awareness as presented by Pre and Post Test.

IV. Testing done when required will come through either the Social Studies or English Department.

OBJECTIVE - D. G.C.E. Program

A. Initial Application

B. Screening out possible bad or not qualifying students

C. Seek new stations

D. Place 40 students

E. Evaluation of students and training stations

F. Coordinator making speeches at various organizations

G. Covering of General and Specific material

OBJECTIVE-E. Objectives of Intensified Guidance and Counseling

Group Instructional Activities

a. Orientation for all students

1. Individuals in need of counseling can be discovered.

2. The demand for counseling services can be increased.

3. Rapport for subsequent counseling can be established.

4. Information of common interest and value can be imparted economically.

5. A more effective means of imparting certain kinds of information can be used.

6. A more effective means of obtaining certain information about individuals can be worked out.

7. Self-evaluation can be fostered.

8. Positive personal attitudes and traits can be developed.

9. Experience of a number of individuals can be pooled for the benefit of each member in the group.

OBJECTIVE-F. Intensified Counseling for All Seniors Who Have Had No Previous Occupational Guidance.

1. The students will be taken out of study hall for counseling.

2. All students will participate in career activities.

3. Every senior must turn in to the counselor's office, a senior plan sheet.

(C). Procedures followed.

I. The following design was drawn up by the fifth grade teacher as a format for an occupational awareness inventory.

1. What is a job?

2. What kind of jobs have you done? Today?

3. Why do people work?

4. What job openings are available in this area? In what area are the openings available?

5. What are several ways of finding a job to suit you?

6. What are several ways of applying for a job?

7. What are some jobs boys and girls might do to learn job skills, grow in independence, and make some money?

8. What are four jobs you would like to know more about?

9. What kind of training is necessary for the first choice?

10. What are several jobs you feel are not for you?

11. What kind of worker would you look for if you were hiring and paying for a job to be done?

12. What are some reasons people become unhappy at their work?

13. What are some reasons employers are sometimes unhappy and lets a worker go?

14. What is the age requirment for the job of your choice?

15. Why is school important to you in finding or qualifying for a job?

16. How can you learn more about jobs you are interested in?

17. What person do you admire most? What occupation were or are they engaged in? (The person may be living or dead).

18. Had you rather work alone or with someone else?

19. Do you have any handicaps?

20. What are your strengths and weakness?

	Strong	Average	Weak
A. Follow instructions	_____	_____	_____
B. Health	_____	_____	_____
C. Arithmetic	_____	_____	_____

	Strong	Average	Weak
D. Language usage	____	____	____
E. Spelling	____	____	____
F. Getting along with others	____	____	____
G. Staying with a job till it is finished.	____	____	____
H. Neatness	____	____	____
I. Accuracy	____	____	____
J. Memory	____	____	____
K. Promptness	____	____	____
1. Ability to work with hands	____	____	____

II. The following field trips were also taken in the fifth grade:

A. Radio Station

B. Wynne Water Works

C. Lab at local doctor's office

These trips were usually taken in small groups with reports being made to the class the following day. There were usually a few pictures taken on these field trips.

D. Guest speakers.

1. Mayor

2. Fireman

III. The Wynne junior high school contains around (800) students in grades 6-8.

This spring new filmstrips and tapes were purchased for the counselor's office. There are (11) filmstrips and (37) cassette tapes in her office.; On an average, the occupational filmstrips are used about three hours a day while the tapes are used about one hour a day. The students view or listen in groups or individually on their own. The counselor maintains a file on each student and tries to conference individually with each student at least one time a year in grades 7 and 8 concerning an occupational future choice. According to the counselor the student in this age groups is not interested in his future career in the world of work. Their ambitions and dreams involve choices that they can not reach.

Some individual teachers too present some information on jobs as teaching units. These are usually no longer than a couple of days. The units may or may not contain information from the counselor's office, individual reports, or resource people.

IV. The General Coop program began with 38 students this fall. During the year we lost six students, five of the six were having problems at home with either one or both parents. The sixth one did up and drop out because of his dislike for one particular teacher. There was one girl that was kept in the General Coop class but was taken off her job and placed in a full day of classes. This was due to her mother's dissatisfaction with the hours at the training station. This particular store didn't turn out to be as good a spot as it started out to be. There were three students that started at this station but only one finished. They were changed mainly because of economics.

Several occupational films were shown to the General Coop class. These films included the following subjects: Mechanics, dietics, medicine, and paper industry.

D. Results; Accomplishments.

The elementary, junior high and senior high librarians have new filmstrips and books purchased for career education.

The General Coop program was better understood this year by the town people and the school. The problems that came up this year were fewer and easier to handle. At the end of school there were 22 seniors and 10 juniors. There were 27 boys and 5 girls. One employer who was employing three seniors planned to employ two of them full time. There were six seniors that had been carried over into the second year of the project. All six have an excellent chance of staying at their training station. The coordinator was called upon to speak at three civic clubs. There were 11 new training stations this year. We had 29 people to start an adult typing class and 20 to finish. There were over 100 students who applied for General Coop for the coming year. We held two advisory committee meetings. The fifth grade got off the ground with the use of occupational units, resource people, and field trips.

The ninth grade orientation program was presented from job clusters. The teacher purchased a set of Succeeding in the World of Work. The following occupational units were covered during a period of eighteen weeks: farm mechanics, grocery store, welding, electricity, plumbing, sheet metal, painting, concrete, and hand and machine wood working. During the presentation of these units

twenty filmstrips were used.

E. Evaluation.

The evaluation of the project was carried on by Mr. Jack Shaw. He had excellent rapport from the three schools where teachers allowed him to carry on the pre and post testing of the evaluation design.

F. Conclusions and Recommendations.

This has been our second year on the Exemplary project. We have been better organized this year. Our fifth grade program is progressing very well. The problems that we had on the General Coop during the previous year were not as hard to handle when they happened again this year. The libraries in the Intermediate, Junior High and Senior High School have been updated with the addition of occupational filmstrips, cassette tapes, and books. The program is being better understood by the community and the student body.

After serving as coordinator for two years on the project, I have resigned. My replacement has been hired. At our last advisory committee meeting, it was decided to meet this summer with the new coordinator.

Bart Pullen

Coordinator

6/5/72

Date

VT 018 721
MCCALEB, OMER K.
PROJECT VIGOR: VOCATIONAL CLUSTER EDUCATION, INTEGRATED AND ARTICULATED GRADES 1 THROUGH 14 WITH GUIDANCE SERVICES, OCCUPATIONAL EXPLORATION AND WORK EXPERIENCE RELEVANT TO GENERAL EDUCATION. SECOND INTERIM REPORT.

DAVID DOUGLAS PUBLIC SCHOOLS, PORTLAND, OREG.
BUREAU OF ADULT, VOCATIONAL, AND TECHNICAL EDUCATION (DHEW/OE), WASHINGTON, D.C.
MF AVAILABLE IN VT-ERIC SET.
OEC-0-70-5187 (361)
PUB DATE - 15JUN72 95P.

DESCRIPTORS - PILOT PROJECTS; *VOCATIONAL EDUCATION; CAREER EDUCATION; *VOCATIONAL DEVELOPMENT; *OCCUPATIONAL GUIDANCE; *OCCUPATIONAL CLUSTERS; *OCCUPATIONAL CHOICE; MIDDLE SCHOOLS; ELEMENTARY GRADES
IDENTIFIERS - OREGON; *PROJECT VIGOR
ABSTRACT - SUMMARIZED ARE THE DEVELOPMENTAL EFFORTS AND ACCOMPLISHMENTS OF PROJECT VIGOR. AIMED AT CHANGING THE CONVENTIONAL ACADEMICALLY ORIENTED GENERAL EDUCATION SCHOOL SYSTEM INTO ONE WHOSE CURRICULUM REFLECTS THE NEEDS OF ALL STUDENTS, VIGOR WAS CONDUCTED IN THE DAVID DOUGLAS SCHOOL DISTRICT AND INVOLVED SOME 5,801 ELEMENTARY AND MIDDLE SCHOOL STUDENTS. VISIBLE ALMOST TOTALLY IN THE PROGRAM WAS THE INSTITUTION OF CLUSTER COURSES AS A MEANS OF PROVIDING CAREER EDUCATION EXPOSURE TO PUPILS. FINDINGS AND CONCLUSIONS INCLUDED: (1) THERE IS NOW A GREATER AWARENESS OF CAREER EDUCATION AS PART OF THE GENERAL CURRICULUM, AND (2) IMPLEMENTATION OF A PLAN TO INVOLVE DISTRICT TEACHERS IN CAREER CURRICULUM PLANNING HAS RESULTED IN A GREAT AMOUNT OF INDEPENDENT RESEARCH EFFORTS OF VARIOUS TEACHERS. GENERALLY, THE PROJECT WAS SUCCESSFUL IN THAT IT PRODUCED CHANGES IN STUDENT BEHAVIOR. (AUTHOR/SN)

VT 018 721

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SECOND INTERIM REPORT

Project No. 0-361-0055
Contract No. OEG-0-70-5187(361)

PROJECT VIGOR: Vocational Cluster Education, Integrated and Articulated Grades 1 through 14 with Guidance Services, Occupational Exploration and Work Experience Relevant to General Education

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

Omer K. McCaleb
David Douglas Public Schools
1500 S. E. 130th Avenue
Portland, Oregon 97233

June 15, 1972

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The Project reported herein was performed pursuant to a contract with the Bureau of Adult, Vocational, and Technical Education, Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

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SUMMARY

A. Time Period Covered

The second interim report for Project VIGOR covers a period from July 1, 1971, to June 30, 1972.

B. Goals and Objectives of Project VIGOR

Through Project VIGOR the David Douglas Public School System is addressing itself to the objective of changing a conventional academically oriented general education school system into one whose curriculum reflects the needs of all students regardless of the level of entry into their chosen vocation. Simply stated, the Project goals for career education in the David Douglas District are as follows:

PRIMARY - Every child will see the world of work as a part of his developing self and will learn some career classifications (jobs) by name.

INTERMEDIATE - Every child will be able to identify the relationship between his school courses and the world of work and will learn to group employment classification into job families. Every child will see the world of work as a significant part of his developing self and will learn the names of many jobs.

MIDDLE - Every student will be able to relate a knowledge of his own characteristics to known occupational requirements and will be able to locate detailed information about specific job requirements.

JUNIOR - Every student will explore chosen occupations and select courses supportive to his broad career field choice. Each student will demonstrate a knowledge of the relationship between his developing education and his emerging vocational being.

SENIOR - Every student will elect a combination of courses specifically designed to meet needs of students having chosen his career area. Every cluster student seeking entry level skills will develop those qualities necessary to obtain employment in his chosen occupational area.

POST HIGH SCHOOL - The school will provide follow-up contact service for former Douglas students and placement assistance, where possible, for youth of this community. Compatibility of programs for students advancing from David Douglas to an institution of higher education will be maintained.

Each of the goals applies to all successive grade levels and is intended to be sufficiently flexible to apply to students' individual characteristics and levels of maturation.

The Project is intended to introduce significant concepts of career education at all grade levels within an existing public school system without traumatically upsetting those existing teaching/learning processes which have already been established as basic to general education.

We see career education as a framework for building tomorrow's society today as an answer to the question, "What is school all about?"

We have defined career education as that portion of general education which is purposefully designed to provide an environment for developing attitudes by which an individual approaches decisions concerning services which he will exchange for the goods and services that he will receive from his community; and vocational education as that part of education which prepares a person for a given area of employment. Insomuch as our entire school curriculum is relevant to general education, it must also specifically and deliberately provide such environment as best meets the developmental needs of each individual in terms of career education goals.

C. Procedures Followed

A major impetus to curriculum change for 1971-72 has been the implementation of programs designed through a number of individual curriculum studies conducted by David Douglas staff.

Reports from the special curriculum studies in career education will be located in Appendix D.

Each participant in the curriculum project was supported in the implementation of his project. Principals of the David Douglas schools have been most influential in precipitating classroom activity in career awareness and exploration.

The assignment of an elementary specialist, Mr. Jerald Spires, has proven a valuable resource to the one through six grade teachers. Presentations by Mr. Spires to every one through six teacher in the District helped staff utilize the Career Awareness "Teachers' Guide to Ideas" prepared by Mr. Spires and Mr. Edward McMahon as a curriculum project.

The addition of Mr. Gerald Olson to the staff as Exploratory Work Experience Coordinator has provided the middle school teachers with a much needed resource person. Mr. Olson has worked with principals, teachers, and the business community in helping establish "on-the-job" experiences for eighth grade students. (See Appendix B)

Project VIGOR has had two major directions of thrust. The first and most visible of which is the institution of cluster courses as defined in the Oregon Board's Plan for Career Education entitled The Oregon Way. These cluster courses have been taken into the high school system within their most closely related existing high school departments; for

example, the model office, or the clerical cluster, is a functioning part of the business education department of the high school. Additional schedule changes make possible the attendant work experience programs accompanying the cluster courses.

Departments which have been most noticeably affected by the institution of cluster courses so far have included business education, homemaking, industrial education, and science.

During the early stages of Project VIGOR we expect to see some reduction of the size of classes in other courses related to the clusters, followed later by an increase in the enrollment of those courses within a department which are supportive and pre-requisite to admission of students to the clusters. Eventually we would expect to see a general increase in enrollment in those departments which are identified as having several of the vocational clusters, as the effect of counseling and orientation procedures at the middle school level begin to become evident in more extensive student planning for their high school courses.

Mr. Spires, Mr. Olson, Mr. Gaumer, and Mrs. Easton maintain contact with administrators from the elementary, middle, high school, and post secondary areas respectively. Articulation between grade levels and departments is seen as imperative to continuous growth of the career education concepts.

Many of the buildings are developing career interest programs which are elective on the part of students but which offer a broad range of exposure to several aspects of career fields, including an opportunity for hands-on experiences with the various media available for awareness and exploratory activities on the part of primary and intermediate students. Leadership in these programs is generally assumed by a school counselor. The middle school, or seventh and eighth grade, programs have thus far focused on exploratory experiences for students relative to themselves as people developing a greater understanding of their own capacities, interests, skills, motivation, abilities, and job requirements in various occupational fields.

College courses in exploratory education have been offered to all interested staff members, with a major emphasis being placed on the language arts-social studies block teachers who are taking responsibility for presenting a course to all students in occupational exploration and self-understanding. These, too, are under the general supervision of the counselors in those buildings.

D. Results and Accomplishments

The accomplishments of Project VIGOR occur largely in terms of an awareness of career education as a part of the general curriculum. This awareness has been stimulated within the community by news releases and

activities of the advisory committees. The professional staff has been oriented by district in-service workshops, faculty meetings, individual contacts, and special projects described throughout the body of this report.

There were 142 students enrolled in vocational cluster courses during the 1970-71 school year, with 534 students registered in cluster courses for the 1971-72 school year, and 606 pre-registered for 1972-73.

Middle school programs in self awareness and occupational exploration have involved 1529 students, and all of the 4272 elementary students have had some exposure to career awareness.

Advisory committees have involved seventy-seven lay community members, twenty-eight certificated staff members, and ten students. These committees have been a first step toward community involvement other than school board and budget committee for this District. The committees have proven such a valuable addition to the planning and implementation of Project VIGOR that serious consideration is being given to formation of additional committees for various departments and grade levels throughout the School District.

Implementation of a plan to involve district teachers in career curriculum planning through bids submitted for projects of their own design has stimulated a great deal of activity in independent research and planning since school closed June 11, 1971. (See Appendix D for these reports)

E. Evaluation

Evaluation is an ongoing operation within the Project and a responsibility of the Project administration. Third party evaluation is the contracted responsibility of the Oregon Board of Education Research Coordination Unit.

Appendix E is the proposal submitted by O.B.E. R.C.U. for evaluating Project VIGOR for the fiscal year July 1, 1971-June 30, 1972. This appendix is included to give you an overview of the services performed by the third party evaluator.

F. Conclusions

Project VIGOR is a guidance-oriented curriculum project whose visibility exists through changes in student behavior. We are trying to change the entire curriculum in those ways which will make most likely those student experiences which result in a total alumni capable of engaging effectively with the world of work on a continuing basis.

In terms of the above-stated objective, the Director of Project VIGOR considers the second project year successful.

Course content, teaching methodology, staffing patterns, personnel interaction, materials and equipment are coordinated into a total school curriculum which might pass as "conventional" until examined in terms of post high school results.

Implications of this Project should favor an educational design appropriate for implementation by any other school system with similar aspirations for its graduates without imposing an expensive or disruptive reorganization program.

A review of Project movement to date together with considerations from site visitations reviewed in the body of this report has directed the Project management toward additional and altered activities for goal achievement.

Assignment of support personnel will center on the buildings being served with central office activities taking a secondary priority. Individual school principals will assume a more direct administrative role in career education programs than they have to date.

End of Summary of the Report

A. PROJECT VIGOR PROBLEM AREA

It is a fact that large sums of money are being spent in public school systems which provide quality education experiences for only one-half of our students. The emphasis on the teaching of skills and knowledges which prepare students for continued academic study only is having a tragic effect on student attendance, motivation to succeed in school, students dropping out of school, and their insertion into the work force without salable skills or viable work attitudes. With this serious lack of commitment to their present education it is small wonder they have developed a resistance to post high school training.

In his study of Perceptions of Non-College-Bound Vocationally-Oriented High School Graduates, Betz coordinated in-depth structured interviews of 309 high school graduates judged to be "non-college bound" exploring perceptions of their (1) educational experiences, (2) vocational experiences, (3) self-concepts and (4) family relationships. Interview data was compiled two years after high school graduation from subjects residing in urban "rurban", and rural environments in four mid-central states. Content analysis of written reports of subjects' perceptions resulted in four major conclusions: (1) employment bound, non-college oriented students perceive the school, the counselors and other personnel within the school as "favoring" the college bound student, (2) counselors were not perceived as being "helpful" in assisting employment bound youth to satisfactory vocational decisions, (3) subjects were unable to articulate "meaningful" concepts of self, and (4) generally, they did not perceive parents as being at all "helpful in resolving personal, educational, and vocational problems.[1]

Such students react to this irrelevancy by "dropping out" or by being a "drop in", a student moving aimlessly through a general curriculum with little motivation or purpose.

The problem is more specifically addressed in the following:

--The American society is undergoing such dramatic changes that we have a new environment in which we must live and work.

--The accelerating rate of social and technological change challenges the effectiveness of our traditional social arrangements and institutions, including--if not in particular--our system of public education.

--Education and work are now directly related for virtually all individuals, not just those who seek higher education and careers in the professions.

--Manpower training needs in a technological society can be met only through education.

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[1] Perceptions of Non-College-Bound Vocationally-Oriented High School Graduates, by Robert L. Betz, and others, Western Michigan University, Kalamazoo, Publishing Date 1968, 17 p.

--If education is to be made relevant to the lives of all it claims to serve, occupational education must become an integral part of total education.

--In such a setting, the American education system must provide:

*education that is socially and economically relevant to the needs of the individual and to the manpower requirements of the nation;

*occupational education for youth who will be entering the labor force and for adults who seek to improve their occupational competencies or learn new skills;

*a broad scope of occupational education accessible to all students in all grades and in a variety of educational settings;

*quality instructional programs which are suited to the occupational goals of people, and to occupational requirements;

*comprehensive curriculums which relate both general and occupational education to the occupational objectives of students;

*maximum utilization of all personnel--administrative, supervisory, teacher education, research, and guidance--in the achievement of occupational education objectives;

*systematic and continuing evaluation of occupational education to assure its relevance to a dynamic and changing world of work;

*continuous guidance of students to provide for proper placement in occupational education programs.[1]

If we have accurately read the conditions and syptoms of our times and if we are current in our thinking, the need to offer vocational education in our secondary schools appears obvious. At least it is obvious to the Federal Government (355 million dollars, 1968-69), to the Governor of the State, to the State Superintendent of Instruction, and to the majority of the educators in the David Douglas School District.

Vocational Education is not a bandwagon--it is an opportunity--educationally the need for this extension of our curriculum is well documented. The most powerful issue in learning is the student self-concept--the way in which he sees himself as a person and as a student. Herein lies potential answers to the eternal questions of motivation, self-discipline, goal setting, self-actualization. We know a great deal about the self-concept; we've done less to improve it.

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1 The Challenge of Change, The Role of Occupational Education in Oregon; State Advisory Council for Vocational Education, 1968, p. 4,5

A person's self-concept is basically developed in three areas:

a. Modeling - those adult figures (parents, teachers, etc.) whom the youngster admires or after whom he would like to pattern himself.

b. Interaction with environment - the day-by-day experiences, the successes and failures a student has that help him mold an image of himself, either positive or negative.

c. Coping Skills - the degree of understanding the youngster has of his ability to cope with society and to become a successful, contributing member of his community.

It is in this last area that the school should play the most important role. A student needs to see the real application that his education has to his future--whether it will better enable him to cope with that future. The knowledge that he possesses skills which will be needed and sought after, even paid for by the community, can be a powerful influence on the student's concept of himself and his ultimate success.

We would present the case that as long as the school curriculum remains oriented to the written word and the college bound student, transfer of learning is discouraged.

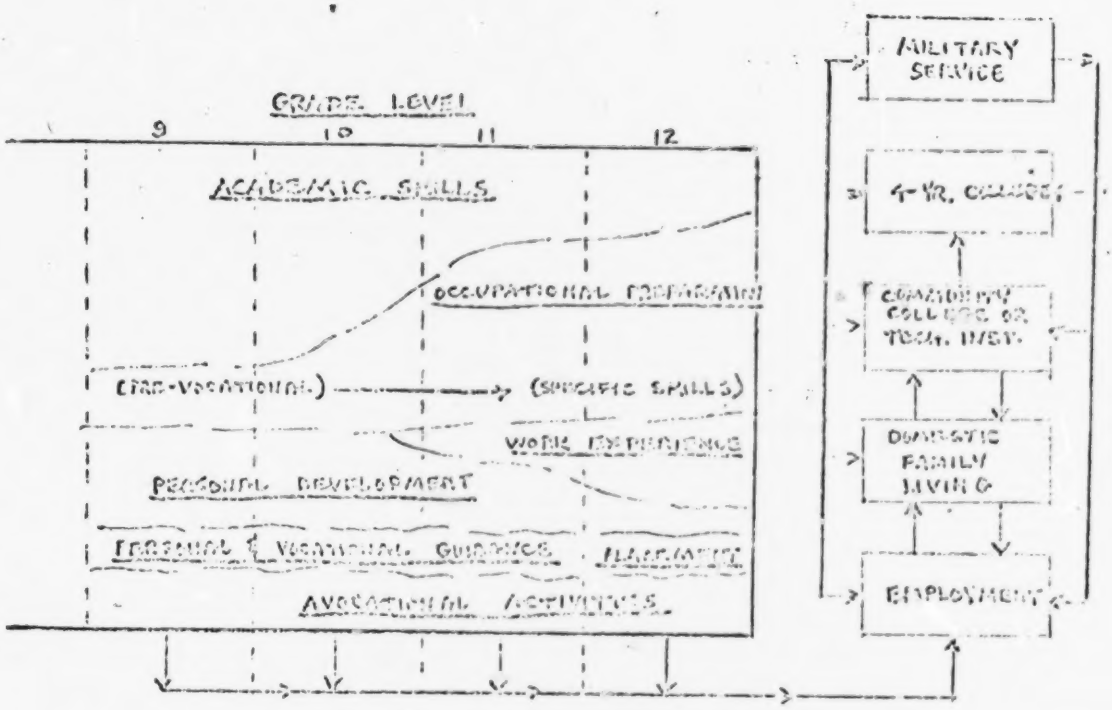
The ultimate dream of providing education for all of the children of all the people can be realized. The question has been asked, "Should the comprehensive high school offer vocational education?" An answer might be another question, "Is a school comprehensive unless it offers vocational education?"

Most experts have come to agree with a position taken at David Douglas years ago--education is total for the total person and no separation of vocational education from the general curriculum can be tolerated. General curricular offerings such as math, science, and English should be taught as they relate to the vocational goals of the student.

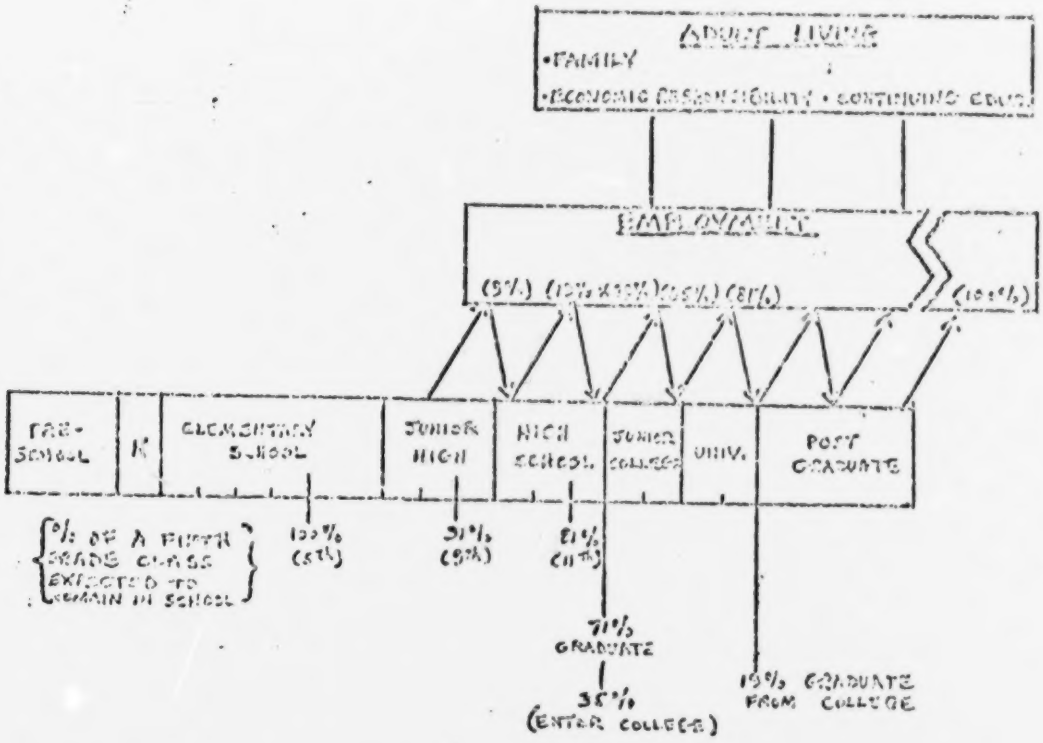
The comprehensive high school can provide only one door of entry and five of exit. All students matriculate from the elementary program, but some slip out other doors at the opposite end. Four-year college preparation, community college or techincal training, immediate job placement, military service, or domestic home life are the only acceptable paths after graduation. To drop out before then or to aimlessly move through unproductive programs can no longer be accepted by the community.

These doorways, however, should not hold individual levels of status--each is a positive goal for young people and the total curriculum should prepare young people for them. A program for any youngster ought to be as

follows:



On a national level student matriculation parallels the following chart:*



*Designing an Organic Curriculum, Robert M. Morgan and David S. Bushness, Bureau of Research, U.S. Office of Education, November, 1966

From these figures the role of the comprehensive school becomes more clear. If only 19% of the total student population is to complete a four-year college program, the school program must be broad enough to provide a relevant experience for all other students.

Student motivation at the present time is an abstract thing. We ask them to take math, science, social studies, and English with the promise that it will be beneficial in their future. For the college-bound student these skills and concepts will be used and he knows it.

Motivation, the understanding of the effect of today's experience on his future, is easy for him. But what of the student who cannot see the relationship of these courses to his interest and future in auto mechanics, food processing, horticulture, and secretarial service? For him there must be vocational relevance; the relevance that the general curriculum has to the vocational goals of youngsters.

The total thrust of this program is to make public education central to a student movement from formal education to earning a living.

The school now becomes a center of involvement with public agencies committed to manpower placement, development and training. These relationships will effect the conditions and learning experiences in all aspects of a student's educational program.

This thrust will tell students and parents in no uncertain terms that occupational aspirations are not only appropriate but necessary and that opportunities are present. We agree that, "at the very heart of our problem is a national attitude that says vocational education is designed for somebody else's children. This attitude is shared by businessmen, labor leaders, administrators, teachers, parents, students. We are all guilty. We have promoted the idea that the only good education is an education capped by four years of college. This idea, transmitted by our values, our aspirations and our silent support, is snobbish, undemocratic, and a revelation of why schools fail so many students."[1]

Such a program must consider students of all backgrounds, abilities, aspirations, race heritage, and physical characteristics. It must anticipate their needs and provide reasonable individual experience. This can only be accomplished through coordination of all agencies and resources supported by strong guidance practices.

Project VIGOR emphasizes the concurrent development and implementation of several innovations. The innovative and exemplary thrust is demonstrated in the way several concepts are implemented in the framework of existing public schools.

All of the materials and programs to be implemented have been developed over an extensive period of time, and have been tested. An intricate network of Federal, state and local funds resulted in authentic research and

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[1] First Annual Report of the National Advisory Council on Vocational Education.

development. Our efforts will provide an interrelated program demonstrating a model worthy of consideration by every other public school system in the country.

The components of the program are organized in units of 10. Sub activities can be noted in concurrent tasks. (Example, Component 10 is Vocational Exploration and tasks within the component are 12 In-service, 14 Materials, 17 Curriculum, etc.)

Though some of the components by name have been employed across the country for years (Example, work experience) current directions and research in these fields have been noted in the development of this project.

Component 10 - Vocational Exploration

A course in vocational exploration is being taught to all 7th and 8th grade students -- a model for such a course is SUTOE: Self Understanding Through Occupational Exploration. "SUTOE" is a course developed under the leadership of the Community Colleges and Vocational Education Division and Guidance Services Section, Oregon Board of Education, in cooperation with the Division of Continuing Education and local school districts. SUTOE provides a broad scale classroom approach to assisting students with educational and career planning via self appraisal and examination of jobs in relation to the data-people-things conceptual framework of the D.O.T. (Dictionary of Occupational Titles). Occupational, general education, and guidance programs are linked together in this effort to enable students to take greater advantage of available opportunities and to ascertain and reach career goals. The course consists of ten units, each of which has several identified behavioral objectives. A wide variety of in-class and out-of-class suggestions for implementation are offered under each objective.

The SUTOE course forms the backbone of the educational exploration program but other materials and programs are being employed.

A special exploratory work experience program has been funded through exemplary monies allocated by the U.S. Office of Education, Department of Health, Education and Welfare, to the Oregon Board of Education for exemplary projects. An outline of that program will be found in Appendix B.

Underlying basic assumptions for vocational exploration are:

"1. All students should have an opportunity to explore the broad total of the world of work.

2. All students should have opportunity to develop a self concept.

3. All students should have experiences in meaningful decision making and in accepting responsibility for their own decisions.

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1 Varenhorst, Barbara R., Innovative Tool for Group Counseling, The Life Career Game, The School Counselor, 1968, p. 15.

4. The junior high school years are a time of high potential for developing an awareness of relevant factors to be considered in decision making.

5. Career choice and its implementation is a developmental process.

6. A challenging experience-centered course that stimulates creative individualism is valid for junior high school students in that they become more aware of both strengths and weaknesses, and reflect more positive interests.

7. A program that provides opportunity for acquiring self-understanding and knowledge of the world of work, in combination, will contribute much toward helping youth prepare for their place in a complex socio-economic world of reality.

8. More adequate educational goals and tentative career choices may be established by students, as a result of the experiences provided through an organized classroom approach."[1]

Such assumptions are supported by the Final Report of the Education Improvement Advisory Commission, State of Oregon, 1966, which stated: "Groups and individual guidance about occupations should begin during the junior high school years to facilitate wise occupational choice by assuring that every youngster becomes familiar with the different types of work that exist."[2] Draper, Feldman, and Venn* also support this philosophy.[3,4,5]

We are in substantial support of further findings of Mrs. Nancy Sloan under contract CG 4000002 with the U.S. Office of Education, entitled Orientation Approaches to Increase Student Awareness of Occupational Options, wherein it is stated:

Why is Such Orientation Needed?

1. A desired orientation shows how work reflects one's integration into the community. Children need to understand how adults achieve a place in society and develop a life style.

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1 Teacher's Guide to: Self Understanding Through Occupational Exploration (SUTOE) State Department of Education, Division of Community Colleges and Vocational Education.

2 Final Report of the Education Improvement Advisory Commission, State of Oregon, 1966, p. 61.

3 Draper, Dale C., editor of NASSP Publication, Educating for Work, and Staff Member of San Francisco State College.

4 Feldman, Marvin J., Program Officer of the Ford Foundation and author of Making Education Relevant.

5 Venn, Grant, editor of Man, Education, and Work and Associate Commissioner of Adult and Vocational Education, U.S. Office of Education.

2. Through occupational orientation, children develop a personal sense of their present and future worth. They become aware of the complexities and possibilities within the world.

3. An occupational orientation program can help a student perceive himself and the options open to him more accurately. Career choice involves an appraisal of self matched to knowledge about occupations. Research shows that the most realistic career choices are made by those with the greatest exposure to valid information about work and the greatest opportunity for self evaluation.

4. Our present culture deprives most youth of prevocational experiences, yet class-associated attitudes about work and careers are acquiring in early years. Attitudes and concepts are influenced by family, teachers, and other role models. Such concepts may be based upon lack of experience, partial information, or misinformation.

5. Well-planned occupational services in the elementary school broadens the range of possible choices at all stages. Students are asked to choose courses of study or make other educational decisions before most of them are aware of the career opportunities available.

6. A background of accurate information and an awareness of options helps avoid an occupational choice made because of immediate circumstances. The decision-making becomes a process in which some career areas are rejected as others are selected as possibilities.

7. Research indicates that the aspiration of a student often differs from the career he actually expects to choose. A wide range of careers may be acceptable and satisfying to him, but he does not consider them as his aspirations.

An occupational outlook program which begins in the early years and continues through high school affords the individual opportunity to appraise himself, to recognize the many career choices available, and to understand the process and end-result of occupational decision-making.[1]

We are especially sensitive to the findings of Robert L. Darcy under a grant from the U.S. Office who reported on An Experimental Junior High School Course in Occupational Opportunities and Labor Market Processes, Final Report. We quote from his conclusion: ". . . Students enrolled in the experimental course reflected more interest in school and a lower dropout rate."[2]

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[1] Orientation Approaches to Increase Student Awareness of Occupational Options, U.S. Office of Education, Mrs. Nancy Sloan, CG400002.

[2] ED 022056 Darcy, Robert L., An Experimental Junior High School Course in Occupational Opportunities and Labor Market Processes. Final Report, Ohio University, Athens Center for Economic Education.

In a speech given to the Ohio School Counselors Association, January of 1969, Dr. Richard C. Nelson emphasizes the need to"open new vistas to children through career explorations" and more reasons for offering such experiences are offered as well as nine additional points as to how this exploration should be conducted. In summary they are:

1. Exploring careers help children develop a personal sense of present and future worth.

2. Exploring careers helps children to develop a feeling of place their society.

3. Exploring careers helps children see how adults achieve the place they have.

4. Exploring careers injects the elementary school into a meaningful on-going process.

5. Exploring careers helps children see the value and significance of all honest work.

6. Exploring careers helps children develop enthusiasm about the whole prospect of work as a way of life.

7. Exploring careers helps counteract the physical and/or psychological absence of male working role models upon attitudes toward work.

8. Exploring careers helps children develop a concept of life as a reality extending through several interrelated-and-interdependent phases.

9. Exploring careers with elementary school children is consistent with good learning theory.

Exploration is successful when:

1. Effective career exploration is action oriented.

2. Effective career exploration emerges from questions important to children.

3. Effective career exploration at the elementary school level stresses wide-ranging exploration and minimizes choice making.

4. Effective career exploration is not given letter grades on report cards and evaluation is kept to an absolute minimum.

5. Effective career exploration starts with the jobs and positions held by parents of the children involved.

6. Effective career exploration expands outward from parents' jobs and from other jobs in the immediate vicinity to include jobs of relevance in the city, state, and nation.

7. Effective career exploration brings children into meaningful contact with a variety of workers at their jobs.

8. Effective career exploration relies more on occupational briefs prepared by children than upon commercial materials.

9. Effective career exploration is not overweighted in favor of amassing and digesting occupational information.[1]

Component 20 - Guidance

Guidance has always been an integral part of any vocational program. Project VIGOR emphasizes the articulation of guidance efforts, grades 1-14. Vocational exploration at the early years, the follow-up program, provision of vocational information, in-service of teachers and counselors, and group and individual efforts with students will all have guidance implications and characteristics.

We have reviewed the summary and most of the research cited in Intensive High School Occupational Guidance Approaches for Initial Work and Technical School Placement, compiled by Juliet V. Miller, under contract to the U.S. Office of Education and find that the Summary of Guidance Services needed for youths speak directly to much of our program. For instance:

1. "These youth need early vocational exploration experiences which will help them understand themselves and the world of work" is a direct reference to our Component 10-Vocational Exploration, previously reviewed.

2. "These youth need the opportunity to test occupational realities before they make occupational decisions. Programs should be developed which enable the student to engage in real or simulated work experience" speaks directly to our Component 50 - Work Experience.

3. "The total school experience of these students needs to be made more occupationally relevant. One guidance function can be to provide feedback to other members of the school staff which can facilitate curriculum revision" will be the direct thrust of Component 30 - General Curriculum (and its vocational relevancy).[2]

We are cognizant of the report of Task Force II, Articulation and Coordination of Occupational Preparatory Curriculum From the High School Through the Community College, a study done in this state as a part of the Occupational Preparatory Curriculum Articulation -- Coordination Project undertaken by the Oregon Board of Education, Oregon State Systems of Higher Education, Oregon Department of Employment, and others.

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1 Nelson, Dr. Richard C., Opening New Vistas to Children Through Career Exploration, Purdue University.

2 Intensive High School Occupational Guidance Approaches for Initial Work and Technical School Placement, U.S. Office of Education, Juliet V. Miller, CG400003.

Guidance considerations are described as follows:

"Students, educational administrators and teachers must realize that occupational education is not a one-shot preparatory route, but a life-long process."

"Counseling personnel must be aware and make it their mission to prepare young people to cope with the profound changes they are certain to encounter during their lifetime."

Those in guidance and counseling must consider where we are not and what short run changes are needed to equip our young people to cope with the world in which they will live. But anything they attempt as a present solution should not detract from the infinitely more difficult and more basic task of designing new programs which will transform our schools into institutions capable of preparing students to live in a complex technological society. And, while they are at it, they should not lose sight of the fact that technology will bring with it more leisure, therefore guidance must:

1. Prepare young people to use this leisure wisely and creatively, and

2. Apply influence on those concerned specifically with curriculum articulation to produce a well-rounded program which orients the student for the work world, balanced with readiness to enjoy or wisely utilize leisure time or pursue avocational interests.

Also, in considering the design of a sound program of vocational education, they need to think about some interrelated problems:

1. How can we make sure that every student receives the basic education necessary for occupational preparation?

2. How can we provide each youngster with the information and experiences that he needs in order to make intelligent decisions about his life's work?

3. How can we provide occupational education that is appropriate to the needs, interests, and abilities of young people so that we can enter gainful employment, progress on the job, and cope with changing technology effectively?[1]

A counselor needs to be aware of his own bias and/or limitations of experience which affect the impressions or climate he may create in the guidance program.

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[1] Articulation and Coordination of Occupational Preparatory Curriculum From High School Through the Community College. Report of Task Force II, 1969, Dale Parnell, Superintendent of Public Instruction, Oregon Board of Education, Salem, Oregon.

Component 30 - General Curriculum

An innovation with great promise has to do with this component.

Each department of the central "general" curriculum, that is, math, science, social studies, English, will design and write experiences which make these courses "vocationally relevant". After specific in-service experiences (presentations by articulate leaders in the business and labor fields, exploratory visits to industrial complexes, interviews with ex-students, review of literature, and material available), courses, which through their selection of materials and experiences will relate to vocational applications, will be written. These courses will stress relationships to the world of work; relationships to student identified vocational goals; relationships to the skills taught in the vocational cluster and related courses; and relationships to the civic and national role both labor and industry play.

Two such courses have already been developed at David Douglas High School. The district felt so strongly about the potential of this relevancy that it supported in-service and staff development of Project Math, a math class for ninth and tenth graders, and English for Vocations, an elective English course for eleventh and twelfth graders (all 11th and 12th English selections are elective semester courses, although the equivalent of two full years must be completed).

Project Math - This course was first initiated with Title I ESEA funds and is made up of packages or 'projects'. Each project has as its content vocational experiences of interest to the students selecting them. Each also demands utilization of all of the math concepts taught in more traditional courses. After three years, all evaluations are positive. Student achievement is up, transfer of concepts to other problem solving areas is up, student attendance is up, and students are moving to other math electives, whereby previously they dropped further math study.

English for Vocations - Concern as to whether students would elect this course was quickly dispelled on the first year it was offered. The basic thrust is to develop language skills (clarity in writing, reading for retention and detail, speaking positively with clarity, and listening for instruction) as they relate to vocational interests and requirements. It provides for student use of language in interviews, technical writing, technical reading and others. Emphasis is on such skills as directness, brevity and coherence. Consultants from the Oregon Board of Education provide valuable assistance to our staff in all disciplines.

Both courses, and other being developed in other disciplines, maintain standards of accountability as determined by student performance. The concepts and tool skills are of such breadth so as to allow a student the opportunity to move into and out of these experiences and still have many doors open to him as a graduate. The fact is, relevancy of such experiences will retain students in the academic sequences for a longer period whereas presently too many students complete their one year requirement in these areas and then move away from further study.

Every teacher in the district has participated in the preparation of a list of vocational applications for specific concepts presented within that teacher's discipline and grade level. These applications are designed to demonstrate the relevancy of each subject to the student's future life of work without interrupting the instructional format which is most comfortable to the teacher.

The second portion of this component is the organization of elective courses in the areas of home economics, industrial education, business education and others. Such courses would be analyzed as they relate to vocational cluster curriculum and will be recommended to students in patterns which relate to their cluster interest. Each of these courses will relate to more than one cluster and are not to be confused in any way with "tracks". We are proposing a guidance strategy which will allow for a smooth transition from general to specific vocational training. Students will be encouraged to move into and out of such patterns as their interests and goals change. We agree with the program recommendations of the First Annual Report of the National Advisory Council on Vocational Education which says: "Within high schools the student should have multiple choices. A separate vocational school or a distinct vocational track should be exceptions, not rules, in a technical and changing society. Communication and computation skill become relevant in a context that relates them to an employment objective. All students must be allowed to move into and out of vocational-technical programs and to select mixtures of vocational, technical and academic courses."[1]

Component 40 - Vocational Clusters

A vocational cluster is a family of occupations composed of recognized job titles which are logically related because they include identical or similar teachable skills and knowledge requirements. A cluster is general enough to allow maximum flexibility of choice as far as future preparation or job commitment is concerned. It avoids the training of a student for narrow work specialty. It provides the student with the opportunity to identify a general area of interest, a family of job skills, if you will, and then to relate his general curriculum choices (math, science, English, etc.) to this interest. Motivation through perceived relevance is our goal here.

It is this cluster experience which will form the background or base for specific training at the community college, military, or industrial level. That, plus the relevancy of the general curriculum, should alter extensively the involvement of up to 60% of our student body.

More simply summarized, the cluster concept will, then, develop in the student entry level competencies in a related variety of jobs and provide flexibility in terms of occupational, educational, and geographic mobility.

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[1] First Annual Report of the National Advisory Council on Vocational Education.

To have an impact on the total student population every cluster which can be offered and supported by student interest is being provided. Priorities on cluster offerings are determined by employment opportunities in the local community. An understanding of the economic conditions and employment mobility of the community is essential.

Experience in a single cluster is reserved until the 11th and 12th grade years. This experience consists of two or three hour laboratory exposure each day during these two years, supplemented by involvement in related work experience in the community.

Well before the specific cluster experience each student has extensive exposure to occupational exploration through a unit of instruction which is a part of the language arts-social studies course in the middle schools at the 7th and 8th grade levels. During the 9th and 10th grade years selections from the general curriculum can be almost totally related to the anticipated cluster choice.

While the term cluster is not new to vocational education the program implemented here is the product of extensive development in the State of Oregon. An intricate network of involvement of Federal finances, State Department of Vocational Education, the Oregon Board of Education, Oregon State University, the University of Oregon, community colleges, the State Advisory Council for Vocational Education, various committees from business and industry, lay persons, secondary school personnel and the Department of Employment have developed this concept to a point of implementation.

The Oregon Statewide Study of Systematic Vocational Education Planning, Implementation, Evaluation, a study completed by the Bureau of Educational Research and Bureau of Business and Economic Research, University of Oregon, under contract with the Division of Vocational Education, Oregon State Department of Education completed the basic study in 1965. This study was funded by the Vocational Education Act.

Sophisticated data collection devices were developed and a projection of major occupational groups for the State during years 1965-70 was developed. An analysis of the Oregon economy was completed and the vocational cluster concept was clarified. Steps to development were:

1. A committee of three members appointed from the staff of the Division of Community Colleges and Vocational Education was assigned the tasks of defining the characteristics and minimal requirements for designation of a cluster and making a tentative identification of the clusters to be included. Working from generally accepted occupational data and applying the best available information, i.e., The Dictionary of Occupational Titles and occupational information developed by the State Department of Employment, the committee identified twelve tentative clusters.*

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* Minimum numerical requirements adopted by the committee for inclusion of a tentative cluster were present employment in Oregon of 10,000 workers and a forecast need for 2,000 workers by 1970.

2. The tentative clusters were then submitted to supervisors within the Division of Community Colleges and Vocational Education and other consultants for further anaylysis and recommendations. Neither the procedures used nor the clusters developed received unanimous approval; there was, however, consensus that the clusters identified should be accepted and incorporated in the Guide.

3. Following identification of the occupational clusters to be included, the immediate problem became development of illustrative curriculum content for each. This task involved, as did the cluster identification, analysis of occupations to determine required skills and knowledge. In this state, however, the occupations concentrated upon were the key ones selected for inclusion in each of the clusters.

The procedures followed in content development were:

1. Determination of the skills and knowledges required in the key occupations in each cluster. These were developed for the most part from analyses made by specialists from the Oregon State Department of Employment.

2. Identification of teachable elements inherent in the skills and knowledges determined through analysis of the key occupations.

3. Organization of the identified elements into proposed courses in sample curriculum patterns. This phase of the development was accomplished by small work-groups composed primarily of state staff personnel and other vocational educators. In addition, reactions and recommendations concerning the proposed courses and curriculums were obtained from industrial and labor representatives, as well as from instructors in related subject areas.[1]

Component 50 - Work Experience

Work experience programs of differing thrusts are known over this country. We relate our work experience program to the cluster interest and preparation of our 11th and 12th graders. This on-the-job experience, in addition to the laboratory, in-school experience, makes a total contribution to student vocational preparation. In addition to cluster related experiences our work experience coordinators place school dropouts, or potential dropouts, in short term, highly concentrated vocational training. The community college and existing night school programs assist in this effort.

[1] Guide to Structure and Articulation of Occupational Education Programs, State Department of Education, Division of Community Colleges and Vocational Education, Salem, Oregon, 1968.

We continuously expand our existing program of job placement and cultivate our relationship with other youth-oriented programs (i.e. Job Corps, Neighborhood Youth Corps, etc.).

A summary or work experience programs include:

A. Kinds

1. Exploratory Work Experience Education - an extension of the classroom for credit, not to exceed two semesters.

2. General Work Experience Education - provides students with a maturing experience through part-time employment, either during or after school.

3. Cooperative Work Experience Education - employs students within the occupation for which their school courses are preparing them. Students receive either pay or credit or both.

B. Common Characteristics

1. Usually open to juniors and seniors in occupations approved by the school.

2. Supplemental vocational information is offered by the school in related classes or laboratories.

3. Employment is in conformity with local, state and Federal laws, avoiding exploitation.

4. Instructor coordination time is available in both areas with extended contracts for summer.

5. Enrolled students have a declared occupational goal, receive credit, and may be dismissed early in the day.

C. Starting a Program

1. Factors to consider:
   a. Compatibility of existing school philosophy and work experience programs, including attitudes of students, administration, and faculty.
   b. Comparison of community need, employer attitude, and availability of training stations.
   c. Financial arrangement.

2. Steps to take:
   a. Determine supervisory, clerical, and instructional personnel.
   b. Relate instructional orientation to skills, knowledge, and understanding.

c. Establish an advisory committee with stated objectives and understanding.
d. Develop operational plan.
e. Present to Division of Vocational Education.

D. Responsibilities of School Coordinator

1. Location of work stations.

2. Training agreement - student, school, community, and employer.

3. Student selection, interest, and evaluation.

4. Starting and termination procedures.

5. Instigation and maintenance of good public relations.

E. Employer Responsibility

1. Provide necessary training.

2. Provide necessary supervision.

3. Provision for mobility from within.

4. Evaluation and understanding of student.

F. Legal Responsibilities

1. Conformity with Federal, State and local laws -- in both letter and spirit.

2. Maintain insurance protection and a legal reference file.

Our review of the literature relating to work experience has brought to our attention the problem inherent in such a program. Material and procedures developed by the Los Angeles City Schools and reviewed on Eric microfiche have drawn our interest, especially in the areas of staff responsibility and procedure.

Component 60 -- Articulation

While in most vocational programs articulation would be a process and not a separate component, it is so crucial to our design that we will give it specific program development. The key to this entire project rests not entirely in the component programs but in the fashion in which they are related one to another and from one institution to the next. The fact that each program will have effect on all students enrolled and that directions for future planning will be clear, is the strongest portion of our approach.

Articulation will mean that all parties involved(elementary, middle,

and high schools, community college, lay advisory personnel, public agencies) will develop components with the benefit of cooperation, advice, resources and representation of each of the other groups.

The Oregon Board of Education developed two task forces to determine ways that Oregon can reach the largest possible number of students with meaningful occupational preparation. The Report of Task Force II resulted in the report, High School - Community College Curriculum Articulation. This report emphasizes the need for articulated vocational education and suggests models in each of the cluster areas. The task force also designated roles for the secondary and community college programs and pinpointed ways in which program consistencies can be accomplished. Their final recommendations are listed here and the result of each action is available to us as we develop our program, grades 1 through 14.

1. An articulation committee be established in each community college district.

   a. Members of the district articulation committees include:
      (1) Representation from each secondary school district within the community college district.
      (2) Representation from the respective community college.

   b. When more than one community college is readily available to students (such as in the Portland Metropolitan Area), provision should be made for:
      (1) A committee which encompasses all community colleges and secondary school districts, or
      (2) Coordination of a separate committee as established in 1.a above.

   c. A priority function of the articulation committee of each community college district be to develop and execute:
      (1) A plan of articulation of secondary and community college curricula.
      (2) A plan for educational placement of occupational students in the community college.

2. A statewide articulation-allocation committee be established.

   a. Members of the statewide articulation-allocation committee include:
      (1) Representation of one person from each community college.
      (2) Representation of one person from the secondary school districts within each community college district.
      (3) Representation from the Oregon Board of Education.

   b. Community college and secondary representatives of the statewide articulation-allocation committee be members of their respective community college articulation committees.

3. The Oregon Board of Education established a statewide data collecting, recording, and disseminating system for both secondary and post-secondary schools.

   a. The existing Oregon Board of Education titled reports be retained, but revised to coincide with the system devised.

   b. The data be comparable to that of other agencies concerned with the needs of and training for the world of work.

   c. Within this statewide system, there be defined "A vocational student" which is common for all secondary programs and which is compatible with the definition used at the community college level.

4. The cluster approach, developed in the Oregon Board of Education's Guide to Structure and Articulation of Occupational Education Programs, 1968, be implemented by the Oregon Board of Education as the basis for articulation of Oregon's curriculum in secondary schools.

5. Oregon State University develop and implement programs of preservice and in-service teacher education in all the cluster areas defined in the above-mentioned "guide" as one part of a comprehensive plan for preparing occupational education personnel.

6. Oregon Board of Education and Oregon State University establish seminars and workshops to familiarize counselors with the world of work and occupational programs in the secondary schools and community colleges of Oregon.[1]

We will consider all of these recommendations and apply products of statewide programs. In our program no decision which affects direction of the program is made without representation from all levels and institutions involved. The implementation and results of all components will be shared, grades 1 through 14.

Component 70 - Follow-up Evaluation

The final component has two functions: A follow-up study of graduates and the evaluation of the entire program.

A follow-up clerk, Mrs. Jana Jennings, has been employed to coordinate the research and development of a program which will provide data to staff and aministration at any level of the school program. A survey of staff needs, and a research of functional programs is underway at this time.

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[1] Articulation and Coordination of Occupational Preparatory Curriculums from High School Through Community College. "Report of Task Force II", Dale Parnell, Superintendent of Public Instruction, Oregon Board of Education.

Evaluation procedure is designed and accomplished cooperatively by a third party, Oregon Board of Education, Research Coordination Unit.

B. GOALS AND OBJECTIVES OF PROJECT VIGOR

The general objective of Project VIGOR is:

To develop a comprehensive career education program for grades 1 through 14.

Specific objectives are for students to:

1. Demonstrate characteristics of a viable work attitude.

2. Identify themselves and their personal characteristics in relationship to their future as wage earners.

3. Use resources of vocational information constantly in the process of vocational goal setting.

4. Recognize the relevancy of general curriculum experiences (English, math, science, social studies) to future employment.

5. Demonstrate skills and knowledges accrued from courses which relate to vocational education at later grades.

6. Demonstrate skills and knowledges demanded for entry employment in jobs which have common characteristics and which belong to a family of vocations. (Vocational clusters)

7. Transfer general curriculum tool skills (reading, writing, computation, scientific concepts, etc.) because of a recognition of their relevancy to vocational experiences.

8. Elect further vocational training after high school.

9. Perform satisfactorily in the community, under school supervision, work experience assignments related to classroom instruction.

10. Complete at least four years of high school by not dropping out.

Task objectives necessary for program implementation are:

1. To provide awareness and exploratory opportunities, and demonstrate school's relativity to life programs for students in grades 1 through 6.

2. To provide a specific class experience, grades 7 through 9, enrolling all students which will clarify the role of the worker, employer, government and community in the world of work and which will present sources of vocational information.

3. To provide an integrated career guidance program, grades 1 through 14.

4. To provide specific courses in the general curriculum which emphasize their relevancy to future vocations and job needs by identifying activities and materials which emanate from student vocational goals and objectives.

5. To organize patterns of related courses which if elected by students will provide basic understanding and skills necessary for more specific vocational training.

6. To develop program, staff, training models, facilities for vocational cluster experiences by the end of three years for approximately 800 eleventh and twelfth graders each year.

7. To articulate all program components through the community college level.

8. To provide meaningful on-the-job work experiences which relate to vocational interests and training for approximately 800 high school students.

9. To create, design, and implement a follow-up study of high school graduates for continued program improvement and expansion as well as evaluative data.

GOALS OF PROJECT VIGOR AS ADOPTED BY DAVID DOUGLAS SCHOOL DISTRICT - FEBRUARY 9, 1971

PRIMARY - Every child will see the world of work as a part of his developing self and will learn some career classifications (jobs) by name.

INTERMEDIATE - Every child will be able to identify the relationship between his school courses and the world of work and will learn to group employment classification into job families. Every child will see the world of work as a significant part of his developing self and will learn the names of many jobs.

MIDDLE - Every student will be able to relate a knowledge of his own characteristics to known occupational requirements and will be able to locate detailed information about specific job requirements. Every student will be able to identify the relationship between his school courses and the world of work and will learn to group employment classification into job families. Every student will see the world of work as a significant part of his developing self and will learn the characteristics of many jobs.

JUNIOR - Every student will explore chosen occupations and select courses supportive to his broad career field choice. Each student will demonstrate a knowledge of the relationship between his developing education and his emerging vocational being. Every student will be able to relate a knowledge of his own characteristics to known occupational requirements and will be able to locate detailed information about specific job requirements. Every student will be able to identify the relationship between his school courses and the world of work and will learn to group employment classification into job families. Every student will see the world of work as a real part of his developing self and will be able to list many jobs by name.

SENIOR - Every student will elect a combination of courses specifically designed to meet needs of students having chosen his career area. Every cluster student seeking entry level skills will develop those qualities necessary to obtain employment in his chosen occupational area. Every student will explore chosen occupations and select courses supportive to his broad career field choice. Each student will demonstrate a knowledge of the relationship between his developing education and his emerging vocational being. Every student will be able to relate a knowledge of his own characteristics to known occupational requirements and will be able to locate detailed information about specific job requirements. Every student will be able to identify the relationship between his school courses and the world of work and will learn to group employment classification into job families. Every student will see employment as a real part of his developing self and will be able to describe many jobs within his chosen career area.

POST HIGH SCHOOL - The school will provide follow-up contact service for former Douglas students and placement assistance, where possible, for youth of this community. Compatibility of programs for students advancing from David Douglas to an institution of higher education will be maintained.

Career Concepts from the Philosophy of Project VIGOR

David Douglas School District 40

Career education is that portion of general education which is purposefully designed to provide an environment for developing attitudes by which an individual approaches decisions concerning services which he will exchange for the goods and services that he will receive from his community.

Concepts included within the philosophy of career education are:

(1) All people contribute something to other people in exchange for their psychological and physiological requirements.

(2) The organization of learning (called teaching) about that adult portion of life called vocation (job, work, profession, employment) belongs in all areas and groupings of education (as do other concepts of general education such as responsibility, reasoning, and self-direction).

(3) Career education must prepare an individual to deal psychologically with both anticipated and unexpected changes in environmental requirements.

(4) Vocational selection is an individual right (as is religion, marriage, or recreation).

(5) Level of position (skilled, technical, managerial, professional) within a vocational area (medical, mechanical, educational, food service, etc.) is determined by competency and desire based on education, experience, and effort.

(6) Vocational education (that part of education which prepares a person for a given area of employment; i.e. apprenticeship, school of education, trade school, law school, medical school) is offered by society to help an individual meet his vocational ambitions.

(7) Vocational education should be available in terms of the needs of society (people) which is composed of individuals whose readiness for some aspect of vocational education may range from childhood to senior citizen.

(8) Career education fits into the affective (attitude) domain - vocational education deals largely with the cognitive (knowledge) and psychomotor (physical) domains.

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C. GENERAL PROJECT DESIGN

Oregon's fifth largest school system, David Douglas is organized on a 6-2-2-2 basis, with eleven elementary schools, two middle schools, and a campus-style high school. There are approximately 6,000 students in grades 1 through 8 and 3,000 high school students. The certified staff numbers 457, with 300 additional employees. The curriculum has been traditionally college-oriented.

Project VIGOR is an implementation of an educational philosophy calling for those changes in instruction which will best prepare all students for decision-making in terms of life work.

Procedure followed. Curriculum work was done on a contractual basis with individual teachers and with groups of teachers.

This contract took the form of the teacher or group identifying an end product or group of products (a certain number of learning packages, a survey, a handbook, etc.).

The requests, twenty-two in number, were studied by a steering committee and recommendations as to amounts of money to pay for each were made. Those individuals and groups that contracted with Project VIGOR agreed to field test their project during school year 1971-72 in their own classrooms.

Progress reports on those classroom trials are in Appendix D.

Component 00 - Awareness

Grades one through six form a foundation for the later exploratory and skill development activities. The career aspects of curriculum are intended to help children become aware of the many opportunities afforded by life and provide some realistic models for decision making concerning those alternatives.

Each of the ten elementary schools enjoys autonomy in implementation of District career education goals. Some of the projects from each building are reported in Appendix C.

Component 10 - Exploration

Occupational exploration has its formal center at the middle school level. During the 1970-71 school year all 7th and 8th grade language arts-social studies teachers received instruction on the Oregon Board of Education's SUTOE course, and a nine-week unit was field tested at the Gilbert Middle School. All 8th grade students have received SUTOE instruction during the 1971-72 school year, and all 7th and 8th graders will receive instruction the following year. Multnomah County career education and testing specialists have assisted with the development and evaluation of this program.

A special exploratory work experience program has been introduced during the 1971-72 year and will extend into the summer. See Appendix B.

Component 20 - Guidance

Guidance is regarded as the central nervous system of career education, with all counselors becoming increasingly aware of their unique role with respect to student preparation for the world of work. Oregon Board of Education Guidance Specialists are providing leadership in the evaluation of this expanded guidance concept.

Component 30 - General Curriculum

The Project is operating in grades 1 through 14, including awareness, orientation, instruction, exploration, preparation, placement, and follow-up.

Awareness of people on jobs is a major thrust of the primary grades. The students are encouraged to look at adults as people who have jobs to do in society and are helped in forming understandings of the functions of these jobs. (See Appendix C for career awareness programs.)

A concerted effort to help students see the relationship of their school courses and the jobs which they will one day have is begun in the primary grades and carried all through school. Projects at all grade levels are being tested in terms of relating course work to the world of work.

Component 40 - Cluster Curriculum

The Project started the 1970-71 school year by adding four cluster courses to the 11th and 12th grade selections. Four additional courses were added for the 1971-72 school year, with four new cluster classes planned for the 1972-73 school year. This will give us a total of twelve cluster classes for the District Project.

CLUSTER COURSE ENROLLMENT AT DAVID DOUGLAS HIGH SCHOOL

Course Title	Department	1970-71	1971-72	1972-73	Increase/ Decrease
Child Services	Home Economics	13	85	107	+22
Food Service	Home Economics	13	50	110	+60
Clerical	Business Ed.	58	62	35	-27
Industrial Mechanics	Industrial Ed.	58	194	56	-138
Health Services	Science	--	25	64	+39
Industrial Electronics	Industrial Ed.	--	27	22	-5
Diversified Occupations	Business Ed.	--	73	70	-3
Industrial Metals	Industrial Ed.	--	18	25	+7
Accounting	Business Ed.	--	--	14	New
Construction	Industrial Ed.	--	--	64	New
Secretarial	Business Ed.	--	--	18	New
Horticulture	Science	--	--	21	New
		====	====	====	====
	TOTALS	142	534	606	+72

These twelve clusters form the heart of vocational education within Project VIGOR and provide at least job entry level skills for each enrolled student.

Additional vocational training is offered to students in business education classes that are not classified as cluster classes.

The forecasted enrollment of 606 for school year 1972-73 is approximately 45% of the enrollment of the 11th and 12th grade. Our goal of cluster enrollment of more than 50% of the 11th and 12th grade student body is in sight this next school year.

Component 50 - Cooperative Work Experience

The cooperative work experience program is our link between school-based instruction and industry-based application. Student, school and community compose this interesting aspect of complete career education.

With counsel from the Oregon Board of Education Career Education Specialists, we have revised and re-staffed our work experience program. We expect these changes to facilitate a greater student-community involvement with the employment aspects of the Project.

Our work experience program will benefit from the expertise of each cluster instructor and will occupy a major attention from our work experience supervisor, our exploratory work experience coordinator, and our instructor of diversified occupations. We will also draw heavily upon the advisory committees for help in establishing effective components of the work experience program.

Component 60 - Articulation

Articulation is being achieved through personal contact and through advisory committee activities. Greater visibility will be sought through the use of brochures now in the development stage and more newspaper coverage through greater activity at the public relations level.

At the suggestion of Mrs. Joyce Dechman, U. S. Office of Education, Health, Education, and Welfare Exemplary Projects Representative, plans are being made for establishing effective articulation with other exemplary projects. Oregon Board of Education Exemplary Projects Specialist, Tom Williams, assists with the opening of communication channels within the state.

Component 70 - Follow-up and Evaluation

Through the Oregon Board of Education this school uses the VERIFY system for follow-up of students. A local supplementary follow-up program is being designed to serve needs beyond the scope of the VERIFY program. Particular attention is paid to the needs of the handicapped graduate, in order to assure him/her of a support structure for subsequent employment or counseling needs. Close contact with the Oregon State Division of Vocational Rehabilitation is maintained for those students having special problems in the school-work transition. Also see page 24.

D. RESULTS AND ACCOMPLISHMENTS OF THIS PROJECT

The accomplishments of Project VIGOR occur largely in terms of an awareness of career education as a part of the general curriculum. This awareness has been stimulated within the community by news releases and activities of the advisory committees. The professional staff has been oriented by District in-service workshops, faculty meetings, individual contacts, and special projects described throughout the body of this report.

The table on Cluster Course Enrollment on page 30 indicates results in terms of student participation in vocational courses.

The experimental orientation programs conducted at the middle schools involve approximately 1500 students. Results from this program will be shown in subsequent evaluation reports.

Advisory committees have involved eighty lay community members, twenty-eight certificated staff members, and ten students. These committees have been a first step toward community involvement other than school board and budget committee for this District. The committees have proven such a valuable addition to the planning and implementation of Project VIGOR that serious consideration is being given to formation of additional committees for various departments and grade levels throughout the School District.

E. EVALUATION OF THE PROJECT

Evaluation is an ongoing operation within the Project and a responsibility of the Project administration. One evaluation project undertaken to collect base line data was conducted at the ninth grade level and is reported in Appendix G. Third party evaluation is the contracted responsibility of Oregon Board of Education, Research Coordination Unit, previously described in the body of this report.

Appendix E is the proposal submitted by O.B.E. R.C.U. for evaluating Project VIGOR for the fiscal year July 1, 1971-June 30, 1972. This appendix is included to give you an overview of the services performed by the third party evaluator.

F. CONCLUSIONS

Project VIGOR is a guidance-oriented curriculum project whose visibility exists through changes in student behavior. We are trying to change the entire curriculum in those ways which will make most likely those student experiences which result in a total alumni capable of engaging effectively with the world of work on a continuing basis.

In terms of the above-stated objective, the Director of Project VIGOR considers the first two project years successful.

Course content, teaching methodology, staffing patterns, personnel interactions, materials, and equipment are coordinated into a total school curriculum which might pass as "conventional" until examined in terms of post high school results.

Implications of this Project should favor an educational design appropriate for implementation by any other school system with similar aspirations for its graduates without imposing an expensive or disruptive reorganization program.

A review of Project movement to date together with considerations from site visitations reviewed in the body of this report has directed the Project management toward additional and altered activities for goal achievement.

Assignment of support personnel will center on the buildings being served with central office activities taking a secondary priority. Individual school principals will assume a more direct administrative role in career education programs than they have to date.

APPENDIX A

BIBLIOGRAPHY

BIBLIOGRAPHY

Betz, Robert L., and others, Perceptions of Non-College-Bound Vocationally Oriented High School Graduates, Kalamazoo, Michigan, Western Michigan University, 1968.

Darcy, Robert L., An Experimental Junior High School Course in Occupational Opportunities and Labor Market Processes, Ohio University.

Draper, Dale C., Educating for Work.

Feldman, Marvin J., Making Education Relevant.

First Annual Report of the National Advisory Council on Vocational Education.

Miller, Juliet V., Intensive High School Occupational Guidance Approaches for Initial Work and Technical School Placement, U.S. Office of Education, (CG400003).

Oregon State Department of Education, Guide to Structure and Articulation of Occupational Education Programs, Division of Community Colleges and Vocational Education, Salem, Oregon, 1968.

Oregon State Department of Education, Self-Understanding Through Occupational Exploration (SUTOE), Department of Education, Division of Community Colleges and Vocational Education, Salem, Oregon, 1969.

Parnell, Dale, Articulation and Coordination of Occupational Preparatory Curriculum From High School Through the Community College, Report of Task Force II, Oregon Board of Education, Salem, Oregon, 1969.

Sloan, Nancy, Orientation Approaches to Increase Student Awareness of Occupational Options, U.S. Office of Education, (CG400002).

State Advisory Council for Vocational Education, The Challenge of Change, 1968.

State of Oregon, Final Report of the Education Improvement Advisory Commission, 1966.

Varenhorst, Barbara R., The Life Career Game, The School Counselor, 1968.

Venn, Grant, Man, Education, and Work.

Project VIGOR
Oregon's Exemplary Program in Career Education

Bibliography of Locally-Produced Curriculum & Instructional Materials

Project No. 0-361-0055

No copies available for distribution at this time.

NATURE OF MATERIALS	TITLE	GRADE LEVEL	EVALUATION
Teacher Handbook (150 pages)	Career Education Elementary School Teachers' Guide to Ideas - Career Awareness	1-6	Use of materials initiated in Fall of 1971. No revision at this date.
Teacher Handbook (15 pages)	The Individualized Field Trip in Primary Education Within a Social Studies and Economic Unit	2	Use of materials initiated in Fall of 1971 for one class of 30 students. No revision as yet.
Teachers' Guide (Kit containing transparencies, film list, pamphlets, maps, charts)	Work in the Woods	4	Developed to use in Spring 1971
Teacher Handbook (60 pages)	Ventura Park Career Enrichment Project	4-6	Use of materials initiated in one elementary school in Fall 1971. No revision as yet.
Teacher Handbook (50 pages)	Seventh Grade Teachers' Guide in Career Education for Gilbert Middle School Students	7	Use of material initiated in Fall 1971 to class of 495. No revision as yet.
Teacher Handbook (101 pages)	Eighth Grade Teachers' Guide in Career Education for Gilbert Middle School Students	8	Use of material initiated in Fall 1971 to class of 410. No revision at this date.
Teacher Handbook (35 pages)	Electricity-Electronics Course of Study	9-12	Use of material initiated in Fall 1971 to class of 27. No revision at this date.

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Project VIGOR
Oregon's Exemplary Program in Career Education

Bibliography of Locally-Produced Currciulum & Instructional Materials, cont'd. Project No. 0-361-0055

NATURE OF MATERIALS	TITLE	GRADE LEVEL	EVALUATION
Learning Packages (230 pages)	Industrial Mechanics	11-12	Use of materials initiated in Fall 1971 to Industrial Mechanics classroom of 204 students. No revision as yet.
Teachers' Handbook (100 pages)	Food Service	11-12	Use of materials initiated in Fall 1971 to class of 49 students. No revision at this date.
16 Audio Tapes & 90 Preview Sheets	Shorthand Practice Tapes for Speed Development	11-12	Material being used by 60 students on assignment and volunteer basis. Present evaluation indicates much usage of tapes, and improvement of speed over that of previous students.
Teacher Handbook (60 pages)	Metals and Industrial Metals - Course of Study	11-12	Use of materials initiated in Fall 1971 for 50 students. No revisions as yet.

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APPENDIX B

EXPLORATORY WORK EXPERIENCE OUTLINE

EXPLORATORY WORK EXPERIENCE OUTLINE

I. A project to place boys and girls between the 8th and 10th grades into full day on-the-job observations of people working within career areas of interest to the individual student.

Our school system makes no provision to reduce horizontal job mobility through pre-preparatory job environment exploration. We in no way assist the student to feel-smell-touch-or-hear the job or jobs of his indicated interest. Our assistance to him is only in the written or spoken word or the "quick look" field trip exposure.

Courses taken as prerequisite to given cluster areas - health, mechanics, food, etc. and which are subsequently changed prevent adequate sequential preparation for the final job area selected by the student. We allow the student to select prerequisites to certain cluster areas without exposing him to any true "job environment".

II. Objectives -

A. Outcome:

1. Students having an exploratory work experience will undergo fewer vocational area changes than other students.

2. Students having an exploratory work experience will select career cluster areas for secondary courses earlier than other students.

3. Students having an exploratory work experience will demonstrate through performance a greater motivation within career cluster courses than other students.

B. Activity:

1. Each student in a SUTOE class will identify three or more vocational areas which hold some interest for him; i.e., metalwork, construction, business, accounting, etc.

2. Each SUTOE student will compare his characteristics with known occupational requirements.

3. Each student will have an opportunity for an exploratory work experience before entering a cluster course.

4. Each exploratory work experience student will be exposed to the environment, including time, space, sound, smell, social atmosphere, and general appearance of an ongoing job within each of three different vocational areas.

C. Involvement:

1. The local adult community will have direct involvement with career education by providing exploratory work situations.

C. Involvement, continued:

2. Each exploratory work experience student will be exposed to the time and effort required to earn a living in various career areas.

III. 8th grade SUTOE teachers will help students determine major areas of practical interest. A counselor coordinating the SUTOE project will supervise the preparation of staff, students, parents, employees, and employers for the exploratory experience. Clerical staff will process information and facilitate scheduling and transporation arrangements. School administration will make time provisions. District administration will authorize fiscal considerations. Oregon Board of Education specialists will assist in correcting program in terms of evaluation interpretation and implementation.

IV. A full time counselor-coordinator will direct the project and provide liason between SUTOE, community, and secondary course selection.

Sixteen middle school SUTOE teachers will help students prepare for the exploratory work experience.

Clerical staff will be employed as required for information dissemination, data collection and processing.

Secondary school counselors will help program students into courses with career implications.

V. Students from Columbia Christian Academy, Portland Union Academy, and Portland Christian High School will be invited through their adminstrators.

VI. Cooperation between labor, apprenticeship council, employment service will be sought through the advisory committee.

VII. A search for similar programs will be made, and sponsoring agencies contacted for articulation.

VIII. Teachers of special achievement students will participate in the planning and operation of the program.

IX. In district evaluation for management will be provided by district staff.

Third party evaluation will report level of objective attainment. The Research Coordination Unit of the Oregon Board of Education has been retained by contract to evaluate Project VIGOR and will be approached in the evaluation of Project G.O.A.L.

X. Guidance counselors will assist students in the interpretation of their experiences for purposes of effective course selection with vocational implications.

XI. Separate accounting will permit identification of federal and matching funds.

XII. Conditions specified in H.E.W. Form 315 covering equal employment rights, non-discrimination, etc., have been adopted by our school board.

Mr. Gerald Olson, Exploratory Work Experience Coordinator, began Project GOAL in August 1971. Since that time he has been in constant contact with both District Middle Building adminstration, staff, and students. This contact has taken the following form:

(1) Met with eighteen 8th grade block classes and explained Project VIGOR, Project GOAL, career education, and occupational exploration.

(2) Met with the 6th grade classes at North Powellhurst Elementary School. Explained and discussed Project VIGOR, Project GOAL, career education, and occupational exploration.

(3) Arranged and conducted cluster visitations at the Senior Building for one block class from Floyd Light Middle School. Students visited in groups of five each.

(4) Met with twenty-three 7th and 8th grade block classes at Gilbert Middle School. Explained and discussed Project VIGOR, Project GOAL, career education, and occupational exploration.

(5) Met with Floyd Light Middle School block teachers to set up program for Mall 205 student occupational exploration.

(6) Completed Mall 205 business survey for possible student involvement in occupational exploration.

(7) Ran field test on U.S.T.E.S. Interest Survey in Floyd Light Middle School 7th grade.

(8) Met with twenty-one Floyd Light Middle School 7th grade block classes explaining and discussing Project VIGOR, Project GOAL, career education, and occupational exploration.

(9) Met with and set up three Mall 205 businesses for student occupational exploration.

(10) Administered U.S.T.E.S. Interest Survey to 420 8th graders at Floyd Light Middle School.

(11) Transported and worked with eight students in eight different occupational explorations.

(12) Administered U.S.T.E.S. Interest Survey to 320 8th graders at Gilbert Middle School.

(13) Met with Dr. McCaleb, Al Ross (Principal of Floyd Light Middle School), and employers at Mall 205 as follow up of first week of student occupational exploration.

(14) Met with interested 8th grade parents to discuss U.S.T.E.S Survey and its implications to and forecasting for 9th grade classes and participation in cluster classes.

(15) Interpretation of U.S.T.E.S. Interest Survey to block classes at Floyd Light Middle School.

(16) Contacted the summer school Principal Mr. Dave Petrasso for the exact dates of the summer school. Project "GOAL" will fall on the same starting hours as the summer school, June 19th at 8:30 a.m.

(17) Met with all the eighth graders during their block classes in both Gilbert Middle and Floyd Light Middle Schools explaining the format for the summer project GOAL. After sharing the dates of the project and the times the students would be involved, a show of hands was called for to determine the amount of interested students. 285 out of 780 eighth graders showed interest at this time.

(18) A brochure of information on project GOAL was prepared and sent home to the parents of the 8th graders.

(19) A registration blank was prepared and made available to students through the counseling office and also distributed by eighth grade block teachers. The registration blanks were due in the counseling office on May 19th. Fifty -three students officially signed up for the program.

(20) At this time students are being assigned to businesses that have particular occupational interests of the students.

(21) The needed help has been selected and will meet for a half day workshop on Thursday, June 15th to go over the forms and materials that will be used and to be assigned a number of the students as their counselees.

(22) One student will go out on a shift in a dentist's office on June 15th observing a dental assistant occupation. This will will be a pilot day to check and see how the project is going to work.

The above listed activities have been instrumental in developing a great interest in career education and occupational exploration in the Middle Building area. This interest is quite infectious in the adjacent business community as well.

Mr. Olson is continuing to develop exploration contacts in business areas for 8th graders, as well as developing plans for the three week summer occupational exploration project.

The summer school program will basically have the following format:

(1) Students will have selected three occupational areas of interest through classroom and community activities during the school year.

(2) Interested adults from occupational areas will be available to take students to work with them.

(3) On Monday - the first day of summer school - students will be briefed on the occupational area of their choice, as to how to act, look, and find information regarding that occupation. Reporting and sharing this information will be stressed.

(4) On Tuesday, Wednesday, and Thursday each student will participate for a full work shift with an adult from the area of his choice.

(5) On Friday each student will be debriefed and will make a report on his three-day experience.

(6) During the second and third week he will repeat the first week's experience in each of the other two areas.

This experience will enable the student to see, smell, hear, talk, and touch several occupational areas of his choice. With this background he will better be able to make a career choice which will result in more logical selections of high school courses.

It is rather difficult to assess the success and effectiveness of a program prior to the fact; however, we have attempted to do this objectively and as a result are submitting this request for an extension of partial funding for a second year of Project GOAL.

The amount requested is for the summer "on-the-job" expenses of instruction, secretarial assistance, and the summer portion of Mr. Olson's salary.

Please find the proposed budget attached.

APPENDIX C

CAREER AWARENESS PROGRAMS

V I G O R

DAVID DOUGLAS CAREER AWARENESS PROGRAM

School - Cherry Park

School Year 1971-72

Current career awareness activities listed below:

BUILDING CAREER ACTIVITIES:

Sales, earning money for funds, working in cafe, safety patrol. Made cookies to sell. Tours of building, jobs of mothers and fathers. Wrote to different businesses for field trip possibilities.

GRADE LEVEL CAREER ACTIVITIES:

Grade 1 Studied jobs in the school, who and why of parent's occupations.

Grade 3 Social Studies - Community Unit
Studying unit on Portland as it was from 1894 on. People or careers involved in changing the city's growth. Films shown such as: Governing the City, City Differences & Alike, Roots of the Tree-Oregon; field trips planned covering the bridges of Portland.

CLASSROOM CAREER ACTIVITIES:

Grade 1 Personal jobs for each student - changing jobs and taking responsibility.

Grade 2 Children are aware of community workers and occupations. Activities - autograph book of community workers and treasure hunt for business cards - discussion of jobs and places people work.

Grades 5-6 Art classes - permanent bulletin board display of careers connected with art. Discussion of these as they come up. Some students bring in pictures and newspaper articles to discuss.

V I G O R

DAVID DOUGLAS CAREER AWARENESS PROGRAM

School - Earl Boyles | School Year 1971-72

Current career awareness activities listed below:

BUILDING CAREER ACTIVITIES:

A 10-unit project for the entire year is in progress.

Arts & Crafts	Publications	Carpentry & Mechanics
Clothing	Student Store	Broadcasting
Agriculture	Geology	Economics
		Cooking & Food Services

GRADE LEVEL CAREER ACTIVITIES:

Grade 2 Field trip to Grandma's Cookies to study assembly lines-awareness of jobs at both production and distrubution level. Social Studies films related to occupations. Field trip to zoo for maintenance job and service job study. School Store - students sell newspapers for .01 which have been written by students (under communications)

CLASSROOM CAREER ACTIVITIES:

Grade 1 Unit on families which includes jobs fathers do. School unit includes jobs of school personnel.

Grade 2 Bulletin boards: Jobs Are Everywhere, Best Job in the World, What Jobs are Available in My Neighborhood, classroom discussion on parental jobs. Baking cookies as a class. Discussion of clothing and how we get it. Sewing small articles. Visit by nurse to discuss her job. Filmstrips, story-writing, story-telling. Pantomime of various jobs. Unit on community workers.

Grade 5 Listing jobs and job categories for each unit. Growing plants to sell in school store. Field trips to Pendleton Woolen Mills, KOIN TV. Newspaper publications - Clarke paper.

V I G O R

DAVID DOUGLAS CAREER AWARENESS PROGRAM

School - Gilbert Heights School Year 1971-72

Current career education activities listed below:

BUILDING CAREER ACTIVITIES:

Annual "Career Day"
Guest speakers were asked to explain different fields of employment.
School participation in logo contest for VIGOR.

GRADE LEVEL CAREER ACTIVITIES:

Grade 2 Study of community and occupations, guest speakers, nurse, grocer, policeman, postman, bus driver, secretary; field trips - Lloyd Center, fire station, Grandma Cookies; Use of money - buying and selling a product. "Yesterday, Today & Tomorrow" from Language Experience, Level III. Discussions on jobs desired or not wanted by students. Field trip to Historical Society to view early pioneer jobs and tools. Wrote stories about occupations, mural of various occupations, model of a community. Students form rolls from bread started by baker in school - place them in muffin tins - watch them bake - make their own butter and eat them. Prior to this they have studied about yeast, visited a bakery and had a baker come visit. They have made cupcakes and sold them at a tea. The students are learning about the properties of yeast, baking powder, the action of heat. They are using arithmetic in figuring amounts and in making change.

Grade 3 "What Will I Be From A to Z" program put on by class. Elementary crossword puzzle and "Occupations Game" using 15 different occupations. Presentations given to class by policeman, telephone installer, and study of the city and all its services - employment centers, etc.

Grade 4 Bulletin boards, reports of preferred careers, "what will you be 10 years from now?", poems and songs on types of work, films of occupations with discussion following.

Grade 5 Use of classified ads to 'hunt' for jobs. Research on a particular job to discover as much as possible about it. Interview parents to find out about their jobs. Pantomime of occupations. Pictures of occupations brought to class and stories written about them. Children receive $500 every period (play) and pretend to be working. Work on budgeting - become aware of income levels and jobs vs. income. Roleplaying of different occupations. Classification of careers and vocations - read ads. Art classes - permanent bulletin board display of careers connected with art. Discussion of these as they come up. Students bring in pictures and newspaper articles.

Grade 6 In discussions, careers are always brought in through questioning strategies.

V I G O R

DAVID DOUGLAS CAREER AWARENESS PROGRAM

School - Gilbert Park School Year 1971-72

Current career awareness activities listed below:

GRADE LEVEL CAREER ACTIVITIES:

Grades 1-2-3 Community Helpers study Studying the organization of a community and the occupations such as: Fire Safety - Police - Storekeeper - Doctor - Fathers and their work - School Nurse and Custodian and the activities of each.

CLASSROOM CAREER ACTIVITIES:

Art classes Permanent bulletin board display of careers connected with art. Discussion of these as they come up but no formal units.

Grade 1 Class taken to bank to learn about money.

V I G O R

DAVID DOUGLAS CAREER AWARENESS PROGRAM

School - Lincoln Park School Year 1971-72

Current career awareness activities listed below:

BUILDING CAREER ACTIVITIES:

CARE - Career Approach to Relevant Education for Grades 1-6. CARE is a project being developed by the staff under the direction of Mr. Ed McMahon. Many activities are planned and executed for each grade level, including activities with vocational as well as avocational implications. Parents share their talents, time and interests with students. Students help students.

(The Career Interest Center contains many animals, fish, woodworking projects, sewing, photography, electronics, etc.)

GRADE LEVEL CAREER ACTIVITIES:

Grade 1 Talked about mother's, father's jobs - made lists. Classified as to whether jobs dealt with goods or services - writing lesson. Film - cities and commerce. Where we get our food; list of goods and services. Tour of building - visited behind the scenes. Film - schools and jobs- lots of people work here.

CLASSROOM CAREER ACTIVITIES:

Grade 3 Macrame has been the interest of one third grade class. Hyperactive children have "settled down" because of their interest in this art. Parents have become interested and joined their children in making articles of macrame. Many are doing better school work due to the self-control they have acquired through this art. Teacher has taught students of other classes and is quite enthusiastic.

Children have a 50 gallon aquarium with 13 fish - this was done through the Career Interest Center.

V I G O R

DAVID DOUGLAS CAREER AWARENESS PROGRAM

School - Menlo Park

School Year 1971-72

Current career awareness activities listed below:

BUILDING CAREER ACTIVITIES:

Grs. 1-4 The Duso materials are very closely related to career development. Much of the program is self-awareness and an understanding of others. Stories related to varied careers are also involved, as well as role-playing, activities, and puppetry situations.

GRADE LEVEL CAREER ACTIVITIES:

6th grade "The Emporium" a new enterprise formed by a 6th grade class. They raised capital by forming a stock company. There are now about 300 shares of stock outstanding. Current market price is 26¢ a share. Value is determined by sale of stock between students (a recent deal between two students which will effect future stock prices). Their teacher, Mr. Chambers, is a member of the Board of Directors, along with 4 students. A manager was chosen from four applicants. Clerks were chosen by the manager after they filed employment applications with her. 3 new clerks will be chosen and trained by the manager each week. School supplies, used books and magazines are sold. Future items may include those things made or grown by students. (Economics, discussions, using Life on Paradise Island, Wilson, Harman and Warmke, Ramon, 1970, Scott-Forsman, as basis)

Grs 1-6 Music-concert (Spring) in April to be entitled Careers In Action, to consist of five sections: 1-Musical Careers, 2-Jobs from around the world, 3-American Workers 4-Contemporary Careers, 5-Work is Fun.

V I G O R

DAVID DOUGLAS CAREER AWARENESS PROGRAM

School - Mill Park School Year 1971-72

Current career awareness activities listed below:

BUILDING CAREER ACTIVITIES:

Integrated Career-Academic Project. Principal and staff have developed a program that is integrated very well into reading, writing, and arithmetic. (See Teachers' Guide to Ideas)

1-6 "Careers of the Sea" - a storage box 15"x15"x30" contains film strips, records, comic books, recipes, books and pamphlets on careers of the sea. This is one of 11 different boxes located in the elementary schools of the district. Each month the boxes, each with a different theme, are moved to another school.

1-6 Students develop relevant spelling lists from things observed on field trips.

CLASSROOM CAREER ACTIVITIES:

Grade 1 First graders are studying forestry and logging in Oregon. Each student has brought soil and planted tree seeds. Later they will plant their trees in a reforestation project.

Grade 2 Career education is based on parents coming in and talking to the children about their jobs. The children write a letter to the parent, thanking them and telling what they thought was most interesting. Follow-up activities include visiting as many as possible on the job doing art work related to jobs, writing reports and stories. We try to have at least one speaker per week.

V I G O R

DAVID DOUGLAS CAREER AWARENESS PROGRAM

School - North Powellhurst School Year 1971-72

Current career awareness activities listed below:

BUILDING CAREER ACTIVITIES:

Grades 1-4 The Duso materials are very closely related to career development. Much of the program is self-awareness and an understanding of others. Stories related to varied careers, role-playing, activities, puppetry situations. (Counselor)

GRADE LEVEL CAREER ACTIVITIES:

Grades 2-3 Student visitation to their parent's or relative's place of employment. 16 participated--spent half or whole day, gathering data and impressions in special booklets. Places included dairy, trucking outfit, chemical company, beauty shop, airport, VA office, shoe store, and grade school. Work involved truck driving, mechanics, policy work, supervision, store managing, teaching. Students recorded their findings on paper and on tape; parents took slide photos with VIGOR cameras on-the-job. Students doing interesting and detailed reports with drawings.

Grade 6 Students of music brought pictures and articles for bulletin board depicting careers in music (including sound equipment, instruments, playing, making, repairing, composing, recording, etc.)

CLASSROOM CAREER ACTIVITIES:

"The Little Bakery" is operated in the back of a second grade class. Neatly arranged on the shelves (book case converted) are rows of tempting pastries--made by every member of the class. The 'never-fail' recipe is flour, salt, and water, and then painted with tempera into breathtaking luscious hues.

The class didn't realize when they planned the store it would involve other occupations besides the bakery business, or making the pastries. They soon learned that carpenters were needed to construct the shop, and the boys were right there to pound the nails. The girls were handy with the butcher paper. Decorators were next needed (and supplied by the class, of course) as well as advertising people to make the signs and advertisements.

A manager or boss was essential for the bake shop, and every member in the class felt qualified for that position! Two efficient little boys said they would like to be custodians to keep the place looking immaculate each day.

Grades 2-3 Detailed probing of work of Post Office via films; operation of Postal Station in classroom - 2/7 - 2/16, 72.

Use of Field Enterprises "People, Place and Products" texts and films, preparing booklets as pertinent.

V I G O R

DAVID DOUGLAS CAREER AWARENESS PROGRAM

School - Russellville | School Year 1971-72

Current career education activities listed below:

BUILDING CAREER ACTIVITIES:

School Post Office - Each room has a mail box and a lot of mail. Use Xmas seals for stamps. Price - .01 for mail within building, .10 for pony to go outside bldg. Students must fill out application to become Postmaster. Learn about Special Delivery.

GRADE LEVEL CAREER ACTIVITIES:

Grade 4 Oregon industries - field trips to Pac. N.W. Bell, Mayflower Dairy, Franz Bakery, KGW TV, Post office, P.G.E., Bonneville Dam. Studying jobs as well as seeing the place of business and just visiting.

Grade 6 Lumber industry - related jobs. School newspaper - study jobs, actual production. Outdoor Education - outdoor related jobs. Art - carpentry - building bird houses.

CLASSROOM CAREER ACTIVITIES:

Grade 4 In conjunction with a weather unit, we made a chart showing jobs affected by weather, such as:

No Work	Weather	More Work	Weather
Airline pilot	foggy, snow	Policeman	snow
Road Construction	stormy	Snowplow oper.	snow
		Lifeguard	sunny

Grade 5 Films and discussions on Cattle ranchers, Doctors, Post Office, Policeman, jobs for mother, jobs for father, newspaper; film with a historical approach is "The Country Store". Plan field trip to Savings & Loan and have invited speakers to visit our classrooms.

Grade 6 Career - listing of jobs-awareness. Defining of various jobs - classified ads, listing jobs available. Career Puzzle - Lumber Industry Puzzle (related jobs) Math - jobs required training in Math. Literature - studied authors - what their job is like. Health - studied jobs in area of medicine. Creative Writing - fantastic story about you in a specific job. Social Studies - comparing Latin American jobs to U.S. jobs. Lumber Industries - listing of all jobs connected to this. Library research of jobs information. Field trip to newspaper publisher. Study of newspaper jobs - publish our newspaper. Reading skills related to job awareness. Career Reports - (information, pictures, interviews, etc.)

V I G O R

DAVID DOUGLAS CAREER AWARENESS PROGRAM

School - Ventura Park | School Year 1971-72

Current career awareness activities listed below:

BUILDING CAREER ACTIVITIES:

A career enrichment project for children in grades 4, 5, and 6 as follows:

January - Communication Careers

February - Forest, farming, and fishing Careers

March - Professional Careers

April - Transportation Careers

May - Food Services Careers

Mrs. McDonald, a school mother, gives of her time to prepare and coordinate field trips for the school for the themes sponsored each month.

A Career Day with community resource people in for lunch making presentations to various interested 1-6 grade students. Sixth grade students are assigned a 1st grader to be a "buddy".

CLASSROOM CAREER ACTIVITIES:

Classroom teachers are working on individual bulletin board themes for classroom interest areas.

V I G O R

DAVID DOUGLAS CAREER AWARENESS PROGRAM

School - W. Powellhurst School Year 1971-72

Current career education activities listed below:

BUILDING CAREER ACTIVITIES:

Display for P.T.A.

4th grade class is preparing talks on careers and sharing this with 2nd graders. 2nd graders take a quiz after the sharing and study the facts not understood on a one to one basis.

GRADE LEVEL CAREER ACTIVITIES:

Grade 4 Speakers from Fire Dept., Pacific N.W. Bell, Ambulance drivers.
Field trip to Fred Meyers 1/31/72
Films - list jobs seen and vocabulary words.

CLASSROOM CAREER ACTIVITIES:

Grade 2 Community Helpers - murals and notebooks (social studies and art), riddles (pantomime occupations).

Game of "Careers" to be played in the gym - all players are lined up against one end of gym - one person in the middle. Each person decides in his mind what his future career will be (when he or she is grown). Person in middle calls out a career. Person or persons with that career has to run by, so the person in the middle doesn't catch him, to opposite side and safety zone. If caught, they have to go to one side and cheer friends on. When all careers have been named and everyone switched over to other side, he can yell "All Careers" and everyone must change sides. When there are only a few people left, uncaught, the person in the middle chooses a new caller. (Variation of 'All Horses')

Grade 4 Murals, poster cards - "What We Want To Be"

Grade 5 Each child "interviews" mother and father re jobs. Several have gone to work with father and spent time there to report to class - with pictures to share. Field trip to a machine shop is planned.

APPENDIX D

ACTIVITIES WITHIN FUNDED CURRICULUM PROJECTS

SURVEY OF CAREER EDUCATION ACTIVITIES

SCHOOL Earl Boyles DATE March 29, 1972

GRADE LEVEL 4-6 with participation in appropriate units by grades 1-3 NUMBER OF STUDENTS INVOLVED 167-265

TEACHER Staff of Earl Boyles School SUBJECT AREA Soc.Studies-Lang.Arts,-Math-Arts

TYPE OF PROJECT 10-Unit Career Education Curriculum

PREPARATION OF STUDENTS FOR PROJECT An introductory discussion to provide an overview of each of the 10 units is conducted in each classroom. Students help to (1) establish goals for the two-week concentrated experiences in that particular unit; (2) select activities from the possibilities that have been prepared by the unit team leader; and (3) acquire the necessary skills demanded by their interest and planned activities.

ACTIVITIES OF STUDENTS

Units:	
Storé Newspaper Geology Arts and Crafts Clothing TV Broadcasting Agriculture Economics Cooking & Food Services Carpentry	Field trips; interviewing guest speakers and other resource people; viewing films; listing jobs in each occupation; doing individual research; constructing models, art forms, useful articles; maintaining the student store (an all-year project.)

MATERIALS AND EQUIPMENT NEEDED Varied according to unit under study

LIST OF OCCUPATIONS INVOLVED Students listed an average of 70 occupations in each of the career units, and pursued information on selected jobs depending upon interest and time.

RECOMMENDATIONS Inasmuch as three more units are still scheduled in this school year, final assessment or recommendations for this project have not been made. Extensive evaluation of the units by the Earl Boyles staff will be conducted at the close of the school year.

SURVEY OF CAREER EDUCATION ACTIVITIES

SCHOOL Mill Park School DATE March 28, 1972

GRADE LEVEL 1 NUMBER OF STUDENTS INVOLVED 21

TEACHER Dolores Romine SUBJECT AREA Career Education

TYPE OF PROJECT Unit Study on Logging

PREPARATION OF STUDENTS FOR PROJECT A film was shown showing logging of Douglas Fir. Children were asked questions, for example: Have any of you seen a logging truck? Do you know anyone who has worked in the woods? We made a group story and took it home.

ACTIVITIES OF STUDENTS Students built small logging camp in a woods of real Douglas Fir trees. These trees will be transplanted in their own yards. A logging road was scraped out of the dirt and the children learned about the importance of these roads.

MATERIALS AND EQUIPMENT NEEDED 1. Large box of dirt 8 X 10 feet at table height

2. Fir Seedlings

3. Scraps and Boxes to construct logging scene.

LIST OF OCCUPATIONS INVOLVED Chockerman, Chaser, Engineer, Truck Driver, Scaler, Hanler, Rigger, Faller

RECOMMENDATIONS The unit is a little advanced for first grade. It is a good introduction but would be better at 3rd and 4th grade level.

I recommend using this along with a conservation unit at that grade level.

I suggest also a follow-up unit in how lumber is used and how it provides jobs in Oregon for many other trades.

SURVEY OF CAREER EDUCATION ACTIVITIES

SCHOOL North Powellhurst DATE 3/16/72

GRADE LEVEL Second and Third Class NUMBER OF STUDENTS INVOLVED 17 from a class of 23

TEACHER Virginia Miles SUBJECT AREA Social Studies-Economics

TYPE OF PROJECT Individualized Field Trips

PREPARATION OF STUDENTS FOR PROJECT "Trip" note book with items listed for special attention, notations, and sketches that it was anticipated the children would experience while "on location" was thoroughly explored before their trip. The parents had met with me previously for briefing concerning the aims of the unit, the procedures we would use in class for correlating the feedback from the trips into a learning experience for the total class.

ACTIVITIES OF STUDENTS Accompanying a parent or relative to work and by observing typical work routines, as well as the way people work together, the materials, products, machines and equipment involved in a particular occupation, each child who had this experience brought back to class information for the total class. Oral reports were followed by a chosen form of written report (illustrated) that was taped for reuse. It was planned to use the taped reports with the slides taken by the parents while the children were on the trip. That the cameras we loaned to the parents were faulty and produced no slides is especially disappointing to the children.

MATERIALS AND EQUIPMENT NEEDED Cameras and film

LIST OF OCCUPATIONS INVOLVED services, managerial, mechanical, technical, professional, sales

RECOMMENDATIONS 1 - The period of time written into the unit is too compressed to be maintained. 2 - The precentages indicating success in evaluating the children's gains is too high. 3 - An unlisted value that cannot be evaluated is the camaraderie for the parent and child experienced and mentioned to me by a number of parents who felt it was a significant factor. 4 - The combined second-third grade class enabled me to judge the greater amount of success the third graders had in all areas of the unit.

SURVEY OF CAREER EDUCATION ACTIVITIES

SCHOOL Ventura Park School DATE March 29, 1972

GRADE LEVEL Grades 1 - 6 NUMBER OF STUDENTS INVOLVED 450

TEACHER Richard R. Winchell SUBJECT AREA Careers

TYPE OF PROJECT Emphasing a different career field each month.

PREPARATION OF STUDENTS FOR PROJECT Since teachers are aware of what career is being emphasized each month they are in a better position to prepare their students for field trips or resource people who are involved in project. The teachers are encouraged to follow up planned presentations with the writing of thank you notes, art work, class discussion, etc. over what was learned.

ACTIVITIES OF STUDENTS Each class is given the opportunity to choose from a list of resource people and scheduled field trips they are interested in hearing and seeing that are related to a particular Career field.

MATERIALS AND EQUIPMENT NEEDED A file of colored slides is being compiled of the field trips and resource people's presentation, which discribe various types of work experiences. Students are encouraged to make a narration to go along with slides of field trips which can be shared with other classes explaining what is going on in the slides.

LIST OF OCCUPATIONS INVOLVED The following career fields are being emphasized this spring: January, Communication Careers; February, Food Service Careers; March, Professional Careers (Planning a Professional & Related Careers Day); April, Transportation Careers; and May, Forest, Farming, and Fishing Careers.

RECOMMENDATIONS

1. There seems to be a need to develop an instrument which can measure children are gaining from this program--this is in the process of being developed.

2. A steering committee composed of teachers, parents, and administrat have met monthly in the development of this program. Feel this has been a good publi relation feature as well as a means to provide a program which gets ideas not only fr the school personnel but parents as well. Feel this committee might be strengthened by including some student representatives.

SURVEY OF CAREER EDUCATION ACTIVITIES

SCHOOL Floyd Light Middle School DATE March 29, 1972

GRADE LEVEL 8 NUMBER OF STUDENTS INVOLVED 8 every other week

TEACHER Fasse, Byhre, Muldoon, Patakoski SUBJECT AREA Social Studies-Language Arts

TYPE OF PROJECT Mall 205 Job Exploration

PREPARATION OF STUDENTS FOR PROJECT Students were given background information on careers - interest and personality tests - worked with SRA job kit, did research on various jobs, made cluster visitations to the high school, prepared folders while on the job and filled out a question form concerning their visitations. Upon return they shared their experiences with the rest of the class.

ACTIVITIES OF STUDENTS One week (approximately 2 hours a day) visitation to Mall 205 - White Front, Candy Calliope, Chess King and Wig Shop. Students were given a general tour then were placed in various departments by the personnel director. They were evaluated at the end of the week.

MATERIALS AND EQUIPMENT NEEDED Folders for students

Orientation on grooming, dress and conduct while at the mall

LIST OF OCCUPATIONS INVOLVED Retail, merchandise, advertising, service, warehouse

RECOMMENDATIONS This program has great possibilities if therewould be a half-time, or better yet, a full time person to coordinate the activities of students involved in the project. It is impossible for teachers with a full-time teaching load to do justice to this type of program.

SURVEY OF CAREER EDUCATION ACTIVITIES

SCHOOL Gilbert Middle School DATE March 29, 1972

GRADE LEVEL Eight NUMBER OF STUDENTS INVOLVED Potential of 100% of students throughout the year for (a)

TEACHER Edith Serell, Car. Ed. Chairman SUBJECT AREA LA-SS Block Classes

TYPE OF PROJECT (a) Student initiated all day on-the-job work experiences (b) Small group (maximum 12) visitations to cluster centers at David Douglas High School in terms of a student's pre-determined interest.

PREPARATION OF STUDENTS FOR PROJECT

SEE ATTACHED SHEET

ACTIVITIES OF STUDENTS

SEE ATTACHED SHEET

MATERIALS AND EQUIPMENT NEEDED (a) Each student arranges his own transportation to and from on-the-job visitation. In rare instances, school staff have assisted. (b) VIGOR office Middle School Coordinator, Jerry Olson, has hosted all trips to the high school cluster centers and has provided transportation.

LIST OF OCCUPATIONS INVOLVED (a) The range of occupations involved is as extensive and as diverse as students' interests in arranging for on-the-job visitations. (b) Seven different cluster centers currently established at the high school have been visited by our students.

RECOMMENDATIONS 1. Based upon student interest and response, we anticipate continuing both activities (a. Individual; b. Group) another year.

2. Next year, hopefully, manpower and motor-power (mini-bus) might be available for additional field trip experiences to areas of student interests that are less readily available to students on an individually arranged basis.

NOTE: Regarding Career Education Activities for Students in Grade 7:

The nature and scope of Career Education Objectives for Grade 7 (see 7th Grade Manual) limits activities and projects within the school setting for the most part. Away-from-school activities are deferred to students in Grade 8.

SURVEY OF CAREER EDUCATION ACTIVITIES

PREPARATION OF STUDENTS FOR PROJECT

(a) 1. Interest surveys were given all students, including U.S.T.E.S. to help students determine major areas of interest.

2. Through class discussions all students were briefed on procedures to be followed in terms of making individual arrangements in advance for on-the-job visitations of their choice.

3. Additional briefing included the nature and type of follow up reporting which each would anticipate making to classmates following a visitation.

(b) In general students who desired to visit a cluster center at the high school were required to provide satisfactory (from LA-SS teacher's viewpoint) written or oral evidence of their interest in a particular cluster.

ACTIVITIES OF STUDENTS

(a) 1. Every student had option to select a job situation in which he desired to spend all or part of a day.

2. He then obtained and had filled out in duplicate Permission Slip for Visitation to a Job. (See attached form.)

3. One copy was filed with his home room teacher (in advance); the other copy was taken by the student to the job situation.

4. Following a visitation, each student reported orally to classmates and filed a written report in his own Career Education folder.

NOTE: Every student who followed the above procedures was encouraged to make one or more visitations during the year. This is an on-going activity in all LA-SS classes.

(b) 1. Students who previously demonstrated interest in a cluster are scheduled for trips to the high school.

2. Each student must submit written permission from parent to make visitation.

ACTIVITIES OF STUDENTS (Continued)

3. Following a visit, each student reports to fellow classmates, and files a written report in his notebook as required by his teacher.

NOTE: Estimated student participation in cluster center visitations is 20 - 25%.

PERMISSION SLIP FOR VISITATION TO A JOB

CAREER EDUCATION

The following information is needed in order to spend a day observing an occupation:

Name of Student_____

Place of Visitation_____ ADDRESS_____

Date of Visit_____

Time of Visit From:_____ To:_____

Approval by person you are spending the day with_____

Position_____

Approval by parent_____

Teachers' approval for you to miss their classes. You will be expected to make up work missed.

Home Room_____

1st Period_____

2nd Period_____

3rd Period_____

4th Period_____

5th Period_____

6th Period_____

7th Period_____

8th Period_____

Mr. Barger or Mrs. Ott's approval_____

APPENDIX E

A Proposal For

DAVID DOUGLAS PROJECT VIGOR EVALUATION PLAN

Project Year July 1, 1971 - June 30, 1972

OREGON BOARD OF EDUCATION
942 Lancaster Drive N.E.
Salem, Oregon 97310

Instructional Services
Career Education
October 13, 1971

TO: Omer K. McCaleb

RE: Annual Evaluation of Project VIGOR.

1/ The Oregon Board of Education through its Research Coordination Unit (RCU) proposes to provide the evaluation component for Project VIGOR for the school year 1971-72.

2/ Following is an outline of the proposed evaluation procedures which will provide for assessment of the central components of your project.

A. The evaluation design will provide objective process and output data and information for each of the following components.

1. Component 10, Vocational Exploration-Grades 7-8;
   Component 20, Vocational Guidance-Grades 1-14;
   (Particular attention will be given to development of occupational awareness-orientation, grades 1-6.)
   Component 30, Relevancy of the General Curriculum;
   Component 40, Vocational Cluster Program-Grades 11-12;
   Component 50, Work Experience;
   Component 60, Program Articulation-Grades 1-14.
2. Attention will also be given to development of a comprehensive student follow-up and placement program.

B. Basic elements of the evaluation design may include the following assessment components to produce information for effective decision making based upon evidence of accomplishment of program objectives.

1. Context and input evaluation---verify and clarify program goals and objectives.
2. Establish evaluation perspective---identify assessment levels and establish evaluation purpose for each level.
3. Evaluation description---determine information requirements, timing, format, method of accumulation, etc., for each component.
4. Establish feasibility and credibility of the design.
5. Implementation---Initiate plan, accumulate data and information, interpret and prepare reports.
6. Evaluation---Compare observed outcomes with intended outcomes, reach conclusions, render judgements.

3/ The foregoing is intended to be a design outline only at this point. The complete evaluation design will be developed in cooperation with your staff to the end that those involved in the project are sufficiently involved in the evaluation activity to profit from its results. A detailed budget is also being developed.

4/ It will be the responsibility of the Research Coordination Unit to establish and maintain effective liaison with your office for the duration of this project.

OREGON BOARD OF EDUCATION
942 Lancaster Drive N.E.
Salem, Oregon 97310

5/ Additional resource personnel may be contracted to assist this office in the design and implementation of the Project VIGOR evaluation. In all cases such personnel will be fully qualified.

6/ A schematic diagram of the evaluation format suggested under item 2-B above is attached.

7/ Questions regarding this proposal should be directed to Dan Dunham, RCU Coordinator.

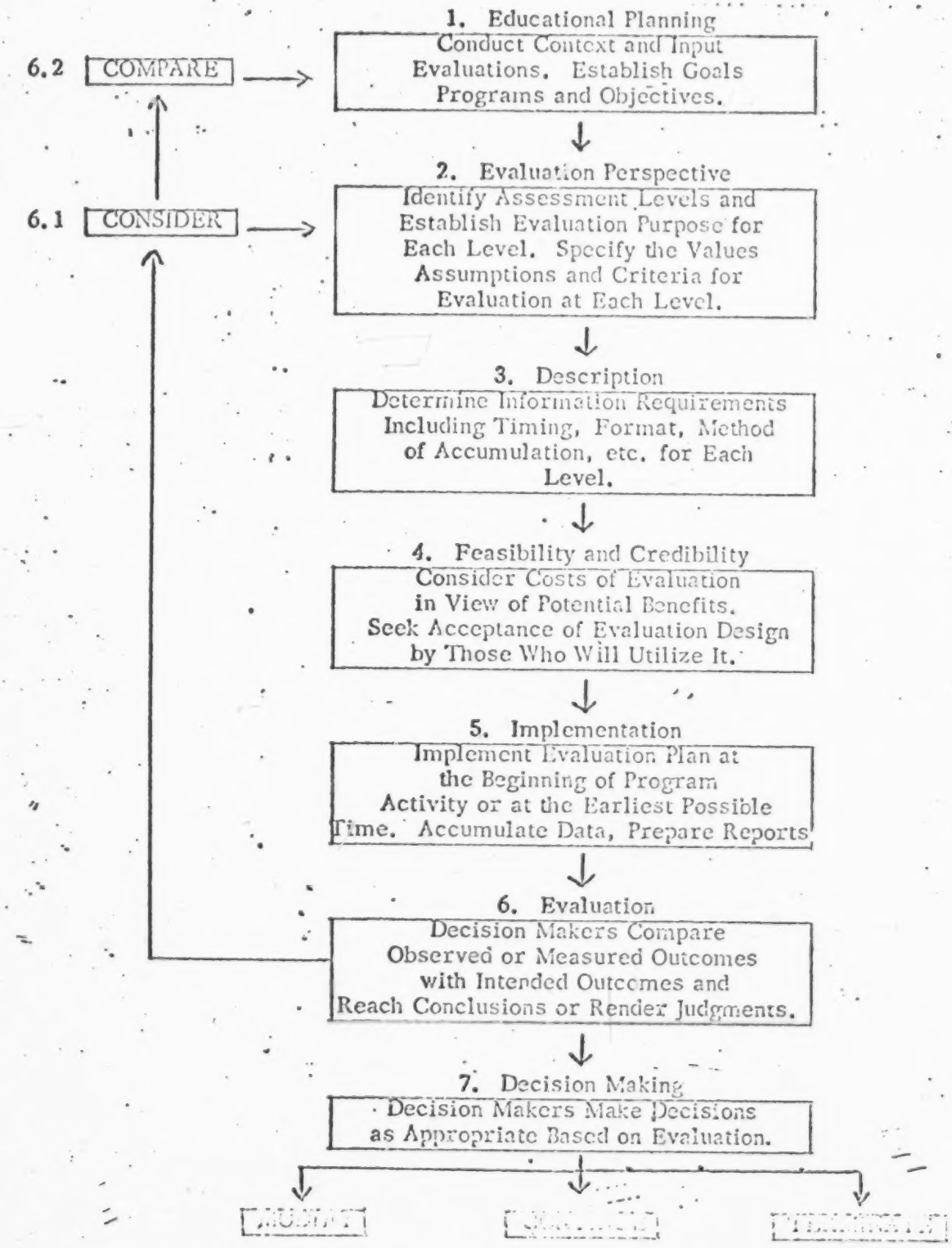
8/ We look forward to working with you in this important endeavor.

Leonard E. Kunzman
State Director
Vocational Education

cc: Dr. Howard F. Horner, Superintendent
Dr. Dan Dunham, OBE
Mr. Don Gilles, OBE

Attachment 1

MODEL FOR EDUCATIONAL EVALUATION



APPENDIX F

A Review of

Federal Exemplary Projects

Visited by

Project VIGOR Representatives

TO: Dr. Howard F. Horner, Superintendent of David Douglas School District

FROM: Omer K. McCaleb, Director of Career Education

SUBJECT: Review of site visitations to various Federal exemplary projects in career education by Mrs. Eleanor Laidlaw, Mr. Wayne Olsen, Mr. Joe Lelinski, Mr. Gerald Olson, and Dr. Omer McCaleb.

A Report of the Visitation Team to Five
Exemplary Career Education
Programs

District of Columbia:

A sequential pattern of career development has been introduced to influence the educational program of all students, K - 12.

At the elementary level, new curriculum has been introduced focusing on the economic and technologic aspects of society with its implications for basic skills of reading, writing and arithmetic.

Implementation at the elementary level has begun at two schools with a pilot program in each. Each school has selected a portion of the staff which has volunteered to work in the pilot project and has provided an inservice training program for them. One assistant director is responsible for both schools and supervises program development in those schools.

Evidence in the classroom of career education orientation is in the form of posters and projects relating to occupations. Each participating classroom has a cabinet containing basic tools for woodworking. Teachers relate the content of instructional concepts to occupational activity and terminology within each subject.

Two junior high schools have pilot programs in career education under the supervision of a second assistant director. Participating teachers are relating academic studies to a comprehensive survey of careers with emphasis on the pattern of work, the requirements for job entry, and some knowledge of the technology underlying the several clusters of careers.

There is no program now in effect at the high school level, but plans call for a comprehensive career development center in which all students would register jointly with their area high school. The center would be divided into several clusters, each with close ties to business, industry, governmental and professional institutions, and would provide general and specialized vocational and related academic courses.

Curriculum for the District of Columbia career education program has been prepared by a third party consortium of college people from that area. No copies of curriculum material are available for distribution outside of the D.C. system.

No visable aspects of the D.C. program seem immediately applicable to the David Douglas Schools. Certain materials and exercises used in instruction will be shared with our staff during inservice activities.

Apex, North Carolina:

Apex is a rural school system involving ninety percent of its students in a comprehensive occupational education program in all grades. Career Education is being assimilated into the established program of instruction mainly through

heavy involvement of administrators, vocational and non-vocational teachers, and the community.

Inservice workshops provide for teachers' exploration and curriculum development correlating career information into regular academic classes. A resource center provides materials for teachers and students at all grade levels.

The Apex curriculum has been changed to incorporate use of occupationally-oriented units of study by teachers (based on the cluster concept), exploratory courses on all levels and an after school concentrated vocational program called "Vestibule Training". Opportunities for job preparation include: drafting, business education, small engine repair, agriculture, brick masonry and carpentry. Special preparation under the Vestibule program includes training for nurse's aide, dental assistant, machine operator and electrical helper.

Supportive services available to students are career guidance in grades 1-4; counseling, career guidance and job placement in grades 5-8; and guidance, follow-up studies, and job placement for grades 9-12.

One unique feature of the Apex program which warrants examinations by Project VIGOR is the Vestibule training which offers job entry skills to identified school leavers. It places students with local business people who will instruct the students after regular business hours. In order to participate, students must be enrolled in regular school classes during the day and must provide their own transportation to and from the Vestibule class.

Chesterfield County, South Carolina:

Chesterfield's career education program spans grades K-12 and is now being implemented in phases, with select teachers and students being utilized in a pilot program.

Maximum release of student human potential is the main goal of the project. Assisting students in clarifying self-identity, developing good attitudes, expanding career knowledge and developing job skills leading to appropriate job placement and/or continuing education are secondary goals of the program.

Elementary objectives are to provide an early career orientation program. Junior high objectives are to provide hands-on experience and provide job information and skill development in specific occupational clusters. In the senior high, the program intends to motivate students enroll in specific career skill training programs.

Features peculiar to the program include: an activity unit approach in the elementary grades with such diverse units as the railroad industry, the housing of people, and the care of animals.

An "Introductions to Occupations" course for ninth grade students gives instructional and role playing exposure to many aspects of the working world.

Project PAL (Practical Application to Learning) is a tenth grade program correlating social studies, mathematics, and English to guide students in the development of basic skills upon which specialization can be built. Essential

principles of social adjustments and making a living are woven into a supportive interdisciplinary curriculum with emphasis on individual student needs.

Vocational Interdisciplinary Program (VIP) for under-achieving students at the high school level is intended to reduce the dropout rate, improve attendance, increase understanding of the interrelationship of subject disciplines, and provide necessary skills for employment. This program provides a number of instructional units combining laboratory experience with science, mathematics and communication instruction directly involved with that unit.

The Chesterfield program shows much evidence of classroom involvement. Teachers are giving evidence of an enthusiastic endorsement of career education through creative use of existing materials and assimilation of career awareness into ongoing curriculum.

Marietta, Georgia:

Cobb County Occupational and Career Development Program: The program is designed to develop an awareness of the individual's self-characteristics; to develop an awareness of occupational areas within the community and build a frame of reference for the state and nation; to provide awareness of educational avenues; to develop the ability for decision making; to promote understanding of the psychological and sociological meanings of work; and to provide special programs for the disadvantaged and handicapped.

Units of career education are being inserted at appropriate points into newly developed curriculum guides to insure continuation of career development activities. Teachers at all levels are altering very structured courses to accept a more realistic, "relevant to the current situation" sequence of subject matter presentation.

There are six basic elements of career development in the elementary program: manipulative hands-on activity, occupational introduction, tie-in of all subject matter disciplines, field trips into the business community, resource persons in the classroom and role-playing activities. The middle program has the same elements as the elementary segment with the addition of emphasis on interdisciplinary activities among the teachers and more community exposure for the students. The senior high segment continues these elements and adds more emphasis on placement.

The project provides direct assistance to students through regularly scheduled individual and group counseling and guidance by teachers and counselors. Placement and follow-up are functions of counselors and a career development specialist at the secondary level. Indirect assistance is provided by counselor management of school and community resources. The community has assisted students through advisory committees, resource persons from local industry and business, donations of materials for classroom use and the opening of businesses for inspection.

Inservice training has included a "kick off" meeting, monthly pre-service meetings, weekly meetings with teachers and project staff, summer workshops, continuous teacher-counselor contact and three inservice Saturdays.

Marietta is the Nation's show place for career education visibility. One can step into any of the model program classrooms and talk with students, teachers,

counselors or administrators and carry on meaningful dialogue concerning career education theory, concepts, methodology or activities. Room arrangement, displays and student projects all provide visible evidence of a high level of total involvement with career education.

Marietta is a model of total commitment and effective inservice programs designed for a reconstruction of curriculum from traditional to life preparation through career education.

Pittsburgh, Pennsylvania:

The aim of the program is to offer career orientation and initial exploration in grades 6, 7, and 8; to provide a choice of vocational area to explore in depth for grades 9-10; to provide for the acquisition of vocational training skills in selected areas for grades 11-12; and to qualify students in areas of choice with training designed especially for that choice in grades 13-14.

Peculiar to this program are provisions for alienated students who are potential dropouts; special programs for economically deprived students, including summer work programs and use of the Neighborhood Youth Corp; pre-work preparation for senior English classes and interviews in the school between students and employers.

Supportive services available to students include intensive counseling, guidance and placement of all students (a year-end follow-up revealed a 71% overall placement figure). The program also provides select training from a "Model City" school, school visitation by community business and industry representatives, field trips, continuous supportive counseling and follow-up. A special service is a pre-work program which combines training and part-time jobs.

The program staff operates a continuous program of inservice education for teachers, administrative staff and other interested members of the school district by identifying the needs and interests of teachers and by outlining systems for establishing communications between teachers and administrative staff within the program.

The essence of the career education program is academic and skill training combined to make available to students a broad range of options and to enable them to make relevant course and career decisions. The program provides information on where the jobs exist; what kinds of jobs are available at entry levels; knowledge of requirements for advancement and where the jobs may lead; how to find employment and how to apply; application completion; how to interview; and the appropriate behavior attitudes and values needed to successfully hold a job.

A review of career education in the David Douglas School District following observations in the above described programs has led to the following observation:

After a review of the visitations, the travel team and the staff of Project VIGOR are preparing a series of proposals concerning both fiscal and management procedures for the 1972-73 and subsequent school years. These proposals will be submitted to the Superintendent when completed.

APPENDIX G

A Report of Status Study

OREGON'S
EXEMPLARY PROGRAM
IN
CAREER EDUCATION
PROJECT VIGOR

David Douglas Public Schools
MULTNOMAH COUNTY DISTRICT NO. 40
2900 S.E. 122nd AVENUE 761-3131 PORTLAND, OREGON 97236

1500 S.E. 130TH AVENUE PORTLAND, OREGON 97233 (203) 255-6691

BOARD OF EDUCATION
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VIGOR
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COUNCIL
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Fred VanKirk
Glen Wilcox
Mark Weitzel

Omer McCaleb
Director
Project VIGOR

April 11, 1972

TO: Persons interested in career education status study conducted September 1971

FROM: Omer McCaleb
Director of Project VIGOR

SUBJECT: Report of ninth grade career education status study 1971

The study was intended to determine in which, if any, areas of our career education goals the students performed at an above chance level. The data collected were handled statistically, following a rather involved design for analysis. The full report will be available in the VIGOR office after April 23, 1972. An abbreviated report in enclosed.

A brief, but perhaps adequate, review of the findings may be reported as follows:

Table I shows the number of students tested and places them in groups as indicated.

The term V.E. on page 5 refers to a vocational exploration course taught only at Floyd Light Middle School.

On page 6 is an abbreviated statement of David Douglas District goals for career education, and a list which matches those goals to the survey item numbers intended to measure achievement of those goals.

You may be interested in checking the number of correct answers for items sampling a given goal. Table 2 is provided for that purpose, plus giving the number of correct answers required to be significant above chance level for each item.

In a nutshell, the survey conducted provides no evidence that 9th grade students at D.D.H.S. in the fall of 1971 could respond to the survey items at an above chance level.

Good career education programs are now underway in both middle buildings, and I hope to see some changes in the 1972 freshmen.

A STUDY OF THE STATUS OF CAREER EDUCATION IN THE NINTH GRADE AT THE DAVID DOUGLAS HIGH SCHOOL

I. THE PROBLEM

This study was an attempt to identify the status of Career Education in the David Douglas School District. It was the intent of the study to answer the question: Do the ninth grade students from David Douglas Elementary Schools score at an above chance level on items designed to measure performance with respect to District goals for career education?

The literature is extensive in describing vocational maturity; however, status studies for career education were not found. The necessity to develop an instrument for assessing career education status was thus established.

II. THE METHOD

An instrument was prepared to measure the status of career education according to goals adopted by the David Douglas District. The instrument was prepared for, tested in, and administered to the ninth grade students at David Douglas High School.

Five groups among which significant differences in status might be expected to exist were identified. Two major divisions

of students, slow readers and a group identified as heterogeneous, were further divided into sub-groups: one having had a course titled Vocational Exploration and the other having no such course. A fifth group was made up of a heterogeneous group of students from a different Middle School where no course in Vocational Exploration was taught.

A Chi-square design was used to establish the proper confidence level, and determine the number of correct answers required from each group for each of the first twenty-six items in order to be significant at the 1 percent level.

A Chi-square test was applied for each item identified as scoring significantly above chance. The test was applied between groups, which were:

Slow readers with the Vocational course.
Slow readers without the Vocational course.

Slow readers without the course.
Heterogeneous students without the course.

Slow readers with the course.
Heterogeneous students with the course.

Heterogeneous students with the course.
Heterogeneous students without the course.

Heterogeneous students without the course.
Heterogeneous students from other Middle School without the course.

The twenty-ninth item of the instrument required the students to write names of as many jobs as they could think of. All job names listed by each student were counted and recorded in his separate group. A two-way analysis of variance and F test was computed for the data from item number twenty-nine.

III. FINDINGS

Findings from the analysis of the data from the first twenty-six items. Each of the five groups studied responded to all twenty-six items. There were 130 item scores determined. Fifty-five item scores were determined to be above chance level.

A Chi-square test applied to each of the fifty-five item scores above chance between the appropriate groups revealed significant differences of scores in just three cases. These three cases were not consistent as to groups between which they occurred, or direction or occurrence.

Findings from the analysis of item number twenty-nine. A two-way analysis of variance corrected for disproportionality was applied to the data collected from the five groups. The analysis shows a significant difference between the slow and the heterogeneous group, with the heterogeneous group scoring higher on item twenty-nine. A significant difference is also shown in favor of the students

who had taken a course in Vocational Exploration when compared with those who had not taken such a course.

General Conclusions. The results of this study indicate that the status of career education at the ninth grade level in David Douglas High School, which is taken as an indicator of the effects of instruction at all preceding grades, was measured at chance level during the fall semester of 1971.

It is concluded that the influence of any career education in the David Douglas School System is negligible at this time.

It should be noted that no direct attempt to influence student behaviors in terms of the career education goals had been undertaken prior to the 1971-72 school year. The course in Vocational Exploration was implemented prior to adoption of any District goals in career education.

Such differences in group awareness of career education precepts as may have been observed in this study suggest the presences of variables other than those presented by the David Douglas Career Education program.

TABLE 1

DISTRIBUTION OF S's IN NINTH GRADE

	FLOYD LIGHT MIDDLE SCHOOL		GILBERT MIDDLE SCHOOL	Out of District	Absent	Total
	V. E.	No. V. E.				
Slow Readers selected for study	14	19				33
Slow Readers not selected for study			24	9	5	38
Heterogeneous Readers selected for study	53	53	53			159
Heterogeneous Readers not relected for study	100	106	140	48	63	457
Participated in pilot study	10	18	30			58
Total	177	196	247	57	68	745

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DAVID DOUGLAS DISTRICT CAREER EDUCATION GOALS

REFLECTED IN SURVEY INSTRUMENT

A - Every child will see the world of work as a part of his developing self.
B - Every child will learn some career classification (jobs) by name.
C - Every child will be able to identify the relationship between his school courses and the world of work.
D - Every child will learn to group employment classification into job families.
E - Every student will be able to relate a knowledge of his own characteristics to known occupational requirements.
F - Every student will be able to locate detailed information about specific job requirements.
G - Every student will explore chosen occupations.
H - Every student will select courses supportive to his broad career field choice.

GOALS TO WHICH EACH QUESTION REFERS

Item	-	Goal	Item	-	Goal
# 1		A	#16		H
# 2		F	#17		D
# 3		H	#18		E
# 4		A	#19		G
# 5		F	#20		D
# 6		A	#21		E
# 7		D	#22		G
# 8		E	#23		H
# 9		F	#24		G
#10		H	#25		F
#11		A	#26		G
#12		D	#27		C
#13		E	#28		C
#14		C	#29		B
#15		C			

TABLE 2

TOTAL CORRECT ANSWERS ON EACH ITEM FOR EACH GROUP

	School	Group	Speed	N													
Goal					A	F	H	A	F	A	D	E	F	H	A	D	E
Item					1	2	3	4	5	6	7	8	9	10	11	12	13
# r.t.b.s.*	L	N	S	19	14	14	14	14	14	14	14	14	14	14	14	14	14
# right	L	N	S	19	6	1	5	9	5	7	11	1	13	7	6	4	5
# r.t.b.s.	L	Y	S	14	12	12	12	12	12	12	12	12	12	12	12	12	12
# right	L	Y	S	14	2	1	3	8	4	6	9	0	7	6	4	8	1
# r.t.b.s.	G	N	H	53	26	26	26	26	26	26	26	26	26	26	26	26	26
# right	G	N	H	53	19	11	5	18	14	20	36	2	41	25	19	7	18
# r.t.b.s.	L	N	H	53	26	26	26	26	26	26	26	26	26	26	26	26	26
# right	L	N	H	53	14	5	17	27	9	27	32	5	44	34	26	21	20
# r.t.b.s.	L	Y	H	53	26	26	26	26	26	26	26	26	26	26	26	26	26
# right	L	Y	H	53	18	13	8	21	6	26	27	6	41	25	15	20	14

* required to be significant

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TABLE 2 (Continued)

TOTAL CORRECT ANSWERS ON EACH ITEM FOR EACH GROUP

	School	Group	Speed	N													
Goal					C	C	H	D	E	G	D	E	C	H	G	F	G
Item					14	15	16	17	18	19	20	21	22	23	24	25	26
# r. t. b. s.*	L	N	S	19	14	14	14	7	9	9	7	7	9	9	7	7	7
# right	L	N	S	19	0	5	11	11	4	4	5	1	2	1	5	5	5
# r. t. b. s.	L	Y	S	14	12	12	12	6	8	8	6	6	8	8	6	6	8
# right	L	Y	S	14	1	5	5	10	0	3	4	5	2	1	6	7	4
# r. t. b. s.	G	N	H	53	26	26	26	11	16	16	11	11	16	16	11	11	11
# right	G	N	H	53	6	17	28	47	8	17	17	10	11	3	21	4	15
# r. t. b. s.	L	N	H	53	26	26	26	11	16	16	11	11	16	16	11	11	16
# right	L	N	H	53	3	19	26	47	20	17	18	11	12	5	19	11	19
# r. t. b. s	L	Y	H	53	26	26	26	11	16	16	11	11	16	16	11	11	16
# right	L	Y	H	53	3	15	16	43	10	10	13	9	9	4	15	28	17

*required to be significant

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VT 019 102

A RESEARCH AND DEVELOPMENTAL WORKSHOP FOR VOCATIONAL TEACHERS IN WRITING BEHAVIORAL OBJECTIVE MODULES AND TASK STATEMENTS FOR FIFTY-FIVE INSTRUCTIONAL AREAS. FINAL REPORT.

DELAWARE COUNTY AREA VOCATIONAL-TECHNICAL SCHOOLS, MEDIA, PA.

MF AVAILABLE IN VT-ERIC SET.
PUB DATE - 30JUN72 16P.

DESCRIPTORS - *TEACHER WORKSHOPS; *VOCATIONAL EDUCATION TEACHERS; *COURSE OBJECTIVES; COURSE ORGANIZATION; INSERVICE PROGRAMS; *VOCATIONAL SCHOOLS; *BEHAVIORAL OBJECTIVES
IDENTIFIERS - PENNSYLVANIA

ABSTRACT - PRESENTED ARE THE RESULTS OF AN INSERVICE WORKSHOP BY AREA VOCATIONAL EDUCATORS IN THE ADMIRAL PEARY AND DELAWARE COUNTY AREA VOCATIONAL CENTERS TO STANDARDIZE INSTRUCTION IN 55 INSTRUCTIONAL AREAS WITHIN THE THREE SCHOOLS. INCLUDED ARE MATERIALS ON: (1) BACKGROUND INFORMATION, (2) PROCEDURES TO BE FOLLOWED, (3) INSTRUCTIONAL AREAS BEING IMPLEMENTED IN DELAWARE COUNTY AND THOSE INSTRUCTIONAL AREAS IN WHICH OBJECTIVES WERE DEVELOPED IN THE ADMIRAL PEARY AREA. AN APPENDIX INCLUDES NOTICES, SCHEDULES, AND ASSIGNMENTS USED IN THE WORKSHOP. (SN)

VT 019 102

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FINAL REPORT FOR PROJECT #19-1061
(June 30, 1972)

TITLE: A Research and Developmental Workshop for Vocational Teachers in Writing Behavioral Objective Modules and Task Statements for Fifty-Five Instructional Areas

INSTITUTION: The School Board of Intermediate Unit #25
Delaware County Area Vocational-Technical Education
6th & Olive Streets
Media, Pa. 19063

Clyde E. Dalton - Executive Director

Merrill I. Hughes - Vocational Director

Robert D. Klingler - Supervisor of Curricula

FORWARD

Vocational Education in Pennsylvania has been challenged to assume a major role in implementing the Career Education concept. At the same time vocational educators are asked to expand and improve the quality and quantity of educational opportunities to serve the needs of youth and adults for occupational preparation. The Delaware County Area Vocational Technical staff has accepted these challenges and is acting to improve the occupational training program by developing and implementing behaviorized instruction.

The description of the inservice program and the developed course behavioral statements which follow clearly indicate the extent of the dedication of the County Staff. The entire effort was a result of encouragement from the Research Coordinating Unit, Dr. F. B. Moody and Dr. C. Curtis; assistance of the Pennsylvania State University, Dr. V. Dupuis, Dr. P. Bell and staff; and of cooperation with the Admiral Peary Vocational School, Dr. B. Flack and Dr. E. Lareau.

The following course material, which was developed during the workshop and the succeeding week, has been reproduced in its entirety so that other Vocational Educators may derive maximum benefit from our efforts.

Merrill I. Hughes
Vocational Director

ABSTRACT

A Research and Developmental Workship for Vocational Teachers in Writing Behavioral Objective Modules and Task Staterents for Fifty-five Instructional Areas

The Delaware County Area Vocational-Technical Schools employed fifty-seven teachers to develop corplementary unit (rodular) behavioral statements and task behavioral statements to be used in specialized occupational education presently offered in the schools. Sixteen teachers acted as editors of the behavioral statements developed by the Admiral Peary Vocational Education staff. The workshop consisted of two days, June 16-17, 1972, of supervised and intensive effort to create acceptable behavioral statements followed by a week of independent effort to completely behaviorize one level of instruction (a year's instruction).

All materials were submitted to the Supervisor of Curricula for review and acceptance. Each accepted course was typewritten in a standard format and reproduced for dissemination. The prepared materials are to be employed to (1) standardize instruction within the three Area Schools, (2) employed as an evaluative tool, and (3) be used as a collection to be drawn upon by other educational agencies.

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Appendix

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I. BACKGROUND

A. Need for Reference Criteria.

There has been and continues to be a national and state effort to establish a basis for accountability in education. The instructional product has become the reference point for measurable outcomes. The State plan devotes considerable space to encourage the writing of behavioral objectives which may be used in establishing accountability. "Continuous assessment and evaluation of training programs is of major importance in order to assure that such programs are meeting critical needs for vocational personnel in the Commonwealth." (State Plan Pt. IV - 1.7)

According to Ash, in directing the Nat onal Study for Accreditation of Vocational/Technical Education, educators have shifted their emphasis from the process to the product. The product is the student who as a result of exposure to certain controlled and directed educational experiences develops certain competencies. Popham and Baker suggest that a teacher must specify the precise competencies of the learner if we are to evaluate the educational product. Therefore instructional objectives must be converted to "goal-referenced instructional models."

B. Need for Behavioral Objectives Workshop.

The writing of behavioral objectives has required extensive pre-service, in-service, and institutional training efforts. The effort has gained momentum where groups of teachers have been able to work together in concentrated effort. A recent project conducted by the Admiral Peary Vo-Tech Schools was successful in achieving modular behavioral statements for 3-year courses in twenty instructional areas. The Admiral Peary project was operated formally for 3 days and informally for 3 weeks. It succeeded in accomplishing the development of complete course objective goals.

The need is to establish similar workshop projects in several locations until a first complete set of behavioral statements is developed for every course area in vocational education. The Delaware County Vo-Tech Schools are in a unique position to carry on the developmental process in specifying instructional goals. During this academic year, the Vo-Tech staff has engaged in (1) reviewing occupational analysis, (2) organizing course outline units in practical learning sequence, and (3) specifying performance goals as behavioral statements for each unit outlined. These three elements

Background (Continued)

were accomplished for all 55 courses offered in the Vo-Tech Schools by June.

According to the Center for Vocational and Technical Education (Ohio State University) there remains a need to develop four additional elements (to prepare course materials) to fully implement behavioral statement instruction. This project provided the impetus for the teachers to complete the (1) task sequence to implement the already specified unit objectives (modules). The remaining elements which will occupy the staff's course materials development efforts during the 1972-73 school year will be (2) the development of a pre-test measure for each unit objective, (3) the preparing of a specific instructional plan to implement objectives and (4) the designation of a post-test measure.

II. PROCEDURE

The Delaware County Area Vocational-Technical Schools in cooperation with the Admiral Peary Vocational-Technical Schools organized and operated a workshop program for all instructional staff members as follows:

June 16, 1972 - Orientation to the Preparation and Editing of Unit (modular) Objectives

June 17, 1972 - Orientation to the Preparation and Editing of Task Objectives

June 19 thru 23, 1972 - Independent teacher preparation of course area objectives

June 21 to 30, 1972 - Clerical preparation of submitted objectives

The workshop, June 16 and 17, was conducted by the Pennsylvania State University staff. During the workshop teachers worked as teams in related course areas and submitted prototypes of behavioral models for review by the Penn State staff. As acceptable examples were approved the teachers were permitted to work independently. (See Appendix A.)

As total course packages of objectives were completed, the teachers submitted these to be typewritten. Approximately 35% of the teachers completed the assignment by Monday (June 19) another 60% had completed their work by Friday (June 23). The remaining teachers completed their project by June 30.

III. DELAWARE COUNTY OCCUPATIONAL AREAS' OBJECTIVES

This chapter consists of eleven occupational clusters. Each cluster is used as a base to organize the behavioral objective statements for specialized courses of instruction relating to that occupational area. The forty-eight courses are organized in one year packages as follows:

A. Automotive

1. Automobile Mechanics - I, II, and III
2. Automotive Technology - II

B. Building Construction

1. Building Maintenance and Service
2. Carpentry - I
3. Interior Finishing - II
4. Masonry - I
5. Mechanical Maintenance - I
6. Plumbing - I

C. Business

1. Technical Secretary - I
2. Business Data Processing - II
3. Computer Programming - II
4. Data Processing - I
5. Distributive Education - I

D. Electrical

1. Electrical/Electronics Basic - I
2. Construction Electricity - II
3. Electrical Technology - II
4. Electronics Technology - II
5. Environmental Control Technology - II
6. Industrial Electricity - II

E. Foods

1. Food Service and Perparation - I and II

2. Food Management - II

F. Graphics

1. Drafting and Design - I

2. Commercial Art - I

3. Printing - I

4. Photographic Technology - I

G. Health

1. Dental Laboratory Technology - I

2. Dental Office Assistant - I

3. Medical Laboratory Technology - I

4. Medical Office Assistant - I

5. Medical Service Assistant - I

H. Mathematics

1. Basic Mathematics - II

2. Algebra I

3. Algebra II

4. Geometry

5. Trigonometry

6. Advanced Mathematics

I. Metal Processes

1. Machine Shop - I (Machine Trades)

2. Machine Tool Mechanic - Automotive - I

3. Metal Fabrication - I

4. Sheet Metal - I

5. Welding - I, II and III

J. Personal Services

1. Cosmetology - I, II, and III

2. Consumer Services - I

3. Diversified Occupations - I

K. Technology Related

1. Communications Technology - I

2. Chemical Technology - I

3. Plastics Technology - I

4. Reading

IV. ADMIRAL PERRY OCCUPATIONAL AREAS' OBJECTIVES

This chapter consists of six occupational clusters. Each cluster is used as a base to organize the behavioral statements for specialized courses of instruction relating to that occupational area. The twenty courses are organized in three year packages as follows:

A. Agriculture

1. Agriculture Technology
2. Horticulture and Floriculture

B. Automotive

1. Auto Body Repair
2. Automobile Mechanics

C Building Construction

1. Carpentry
2. Electricity
3. Masonry
4. Plumbing

D. Mineral and Metal Processing

1. Machining
2. Mining
3. Welding

E. Service

1. Cosmetology
2. Health Services
3. Marketing Technology
4. Personal Services
5. Quantity Food Services

F. Technology Related

1. Electronic Technology
2. Engineering-Related Technology
3. Drafting and Design Technology
4. Scientific Data Processing

APPENDIX A

M E ~~M O R A N~~ D U M

June 12, 1972

TO: All Teachers

FROM: Robert D. Klingler, Coordinator of Curricula

SUBJECT: Two-Day Workshop in Writing Behavioral Objectives

It is with considerable pleasure that we extend an invitation to you to participate in the Behavioral Workshop scheduled for June 16 and 17 at the Marple School. Our staff will be participating with the Admiral Peary Vo-Tech staff to develop instructional materials in 55 course areas. We would like you to adhere to the following schedule regardless of whether you are participating in both workshops or the Friday session only.

RDK:pan
Encls.

SCHEDULE

Two-Day Workshop in Writing Behavioral Objectives

Location: Marple Service Center

June 16: All teachers attend

8:00-8:30 a.m.	Arrival
8:30-11:30 a.m.	Prespectives of Unit Objectives and Introduction of Task Objectives
12:00-1:00 p.m.	Buffet Luncheon
1:00-3:30 p.m.	Editing and Writing of Task Objectives

June 17: Participating Teachers

9:00-12:00 a.m.	Presentation and Preparation of Task Objectives
1:00-3:00 p.m.	Open for additional help

June 19-23: Free period to prepare Task Objectives

June 19 (p.m.) and 22 (p.m.): Discuss problems with Mr. Klingler on preparing materials (EL 6-1645)

June 23: All Unit and Task Objectives must be submitted to the Technical-Secretarial Laboratory at the Marple Service Center by 3:00 p.m. to obtain the stipend. (These may be submitted earlier.)

Stipends: Those teachers who participate in the workshops on the 16th and 17th and prepare the materials for submission on or before June 23 will be paid a stipend of $125. Those teachers who are unable to attend the workshop on the 17th but who are able to prepare and submit their materials by June 30 will receive a stipend of $75.

RDK:pan
6/12/72

ASSIGNMENTS

June 16: All teachers should arrive at the Marple Service Center not later than 8:30 a.m.

Each teacher will bring (1) prepared unit objectives for one year, (2) current course outline, (3) scratch paper and (4) pencils.

The teacher will be asked to actively participate by reviewing each objective for (1) clarity, (2) content of what, how, and how well a task will be accomplished, and (3) make any necessary adjustments to the objectives.

June 17: Participating teachers should arrive at 9:00 a.m. and have either Admiral Peary materials or their course unit behavioral objectives (depending on their assignment) with them. The workshop staff will describe the preparation of task objectives and supervise the writing of sufficient numbers to become accustomed to writing the statements.

June 17-23: Teachers may complete and hand in the task objectives or the Admiral Peary revisions at a convenient time before 3:00 p.m. on the 23rd of June. These must be submitted to the Marple Service Center, Technical Secretarial Laboratory.

RDK:pan
6/12/72

FORMAT

Each course will have a cover page prepared as follows:

DELAWARE COUNTY AREA VOCATIONAL TECHNICAL SCHOOLS

COURSE BEHAVIORAL OBJECTIVES

IN

(NAME OF COURSE)

(1st, 2nd, or 3rd) LEVEL STUDENTS

RDK:pan
6/12/72

FORMAT

Each unit objective will be prepared on a separate page as follows:

Unit No._____ Title _____

Unit Objective Statement:

After instruction and application, the student will be able to

. . . . . .

Task Objectives:

a.

b.

c.

d.

e.

RDK:pan
6/12/72

ERIC Clearinghouse for Vocational and Technical Education

The Ohio State University

1900 Kenny Road

Columbus, Ohio 43210

ATTENTION EDRS

The contents of this package are to be filmed continuously in VT number sequence, starting with the lowest number and proceeding to the highest, even though all documents bear the same ED number. According to an arrangement made with you by Central ERIC, the documents in this shipment are to be repackaged in this carton for pickup by Central ERIC. Please notify Mr. Frank Smardak at 962-2964 (Central ERIC) as soon as they are ready for return.

9708

VT 019 107
ESMAY, M.L.; FAIDLEY, L.W.
AGRICULTURAL MECHANIZATION AND LABOR
UTILIZATION IN ASIA.

AMERICAN SOCIETY OF AGRICULTURAL ENGINEERS,
ST. JOSEPH, MICH.
PAPER-72-530
AMERICAN SOCIETY OF AGRICULTURAL ENGINEERS,
2950 NILES ROAD, ST. JOSEPH, MI 49085 ($1.50)
MF AVAILABLE IN VT-ERIC SET.
PUB DATE - 30JUN72 25P. PREPARED FOR THE
ANNUAL ASAE MEETING (HOT SPRINGS, ARK., JUNE
30, 1972).

DESCRIPTORS - *DEVELOPING NATIONS; *MANPOWER
UTILIZATION; *AGRICULTURAL MACHINERY;
EQUIPMENT UTILIZATION; *AGRICULTURAL
PRODUCTION; ECONOMIC FACTORS; SYSTEMS
ANALYSIS; MODELS
IDENTIFIERS - INDONESIA; KOREA; BANGLADESH

ABSTRACT - AGRICULTURAL MECHANIZATION IN LESS
DEVELOPED COUNTRIES MAY GENERATE EMPLOYMENT
AS WELL AS INCREASE FOOD PRODUCTION BUT A
GOOD MECHANIZATION PLAN SHOULD BE FOLLOWED.
THIS PAPER PRESENTS A SYSTEMS MODEL FOR
EVALUATING THE INTRODUCTION OF AGRICULTURAL
MACHINERY INTO A DEVELOPING COUNTRY, WITH
PARTICULAR ATTENTION TO THE CONSIDERATIONS OF
LABOR UTILIZATION AND OTHER SOCIAL AND
ECONOMIC FACTORS. THREE ASIAN COUNTRIES ARE
USED AS EXAMPLES. ALTHOUGH CONDITIONS DIFFER
FROM COUNTRY TO COUNTRY, THERE IS ENOUGH
COMMONALITY THAT ONE MODEL WOULD BE
APPLICABLE TO MOST DEVELOPING COUNTRIES. (MF)

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Paper No. 72-530

AGRICULTURAL MECHANIZATION AND LABOR UTILIZATION IN ASIA[1]

by

M. L. Esmay

and

L. W. Faidley[2]

The less developed countries of the world are confronted with the question of improving agricultural mechanization that is compatible with the employment situation. Agricultural mechanization in labor surplus countries should and can generate employment as well as increase total food and fiber production. "Mechanization" is defined as including everything from the improvement of hand tools to the introduction of mechanical power units and associated equipment, thus should be a planned continuous program. The questions are if, how, when, and what types of specific tools and machines should be introduced in a given country at a given time.

The mechanization plan should be formulated from a well designed, reliable and thorough analysis. A basic principle of agricultural mechanization is that it be selective and meaningful (Kline et al., 1969). An introduction of a mechanical aid should fulfill the cultural, employment

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[1] This paper was prepared for the Annual ASAE Meeting in Hot Springs, Arkansas, June 30, 1972.

[2] Authors are Professor of Agricultural Engineering, and Graduate Fellow, respectively, of Michigan State University, East Lansing, 48823.

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and humanitarian needs of the society, the production needs of the country, and the economic needs of individual farmers.

Government planning agencies, research programs, international technical assistance organizations, lending agencies, agricultural engineers, economists, politicians, and farmers are all groping with the many questions of agricultural mechanization. A rational approach designed to determine the feasibility of machine introduction has not been developed. Some attempts have been made towards the design of macro models for agricultural production which, along with many other inputs, include mechanization. These broad approaches are not sufficiently detailed nor reliable for the formulation of plans and recommendations for the introduction of specific machines in a given country.

This paper presents a concept, and discusses the parameters and constraints of a systems model for the evaluation of present and future agricultural mechanization. Three Asian countries are included as examples for discussion purposes. Two are labor surplus countries (Indonesia and Bangladesh) and one (Korea) is becoming a labor scarce country. Conditions differ from country to country, however, the hypothesis taken here is that there is enough commonality for the formulation of one simulation model that would be applicable to many, if not all developing countries.

METHODOLOGY

Agricultural mechanization must be approached systematically. A micro-level analysis is eventually necessary in determining the feasibility

of introducing certain machines, but also the macro-level effects of mechanization must be considered. The flow chart of Table 1 presents fifteen parameters that must be evaluated in the formulation of plans and recommendations for the introduction of any tool, mechanical device, machine or power unit.

The sequence of the fifteen parameters of Table 1 is not necessarily in the order of priority or the order in which they might be evaluated in various countries. In any case, the human factors of employment, equitability, cultural effects and drudgery should be considered ahead of detailed cost and return economic analysis for the farm or nation level. Many of the less developed countries are food deficient and limited in cultivatable land resources so these parameters must also necessarily be considered early in any analysis.

The flow chart of Table 1 presents a concept rather than the details of analysis. The systematic evaluation consists of a logical and rational approach that in itself is neutral as to whether any or all mechanization is good or bad. It is impossible to generalize even in a specific country, and say no mechanization should be allowed in order to keep all rural people where they now are and doing the same jobs; or in the converse, blindly accelerate agricultural mechanization to encourage migration to the cities where laborers are needed (at least temporarily) for industrial development.

The evaluation of Table 1 must be applied for each cropping pattern in the various provinces or regions of a country. Various means of accomplishing each cropping function with different machines and power sources must be considered on a micro-level. The macro-level results may

TABLE 1. A flow chart for planning agricultural mechanization.

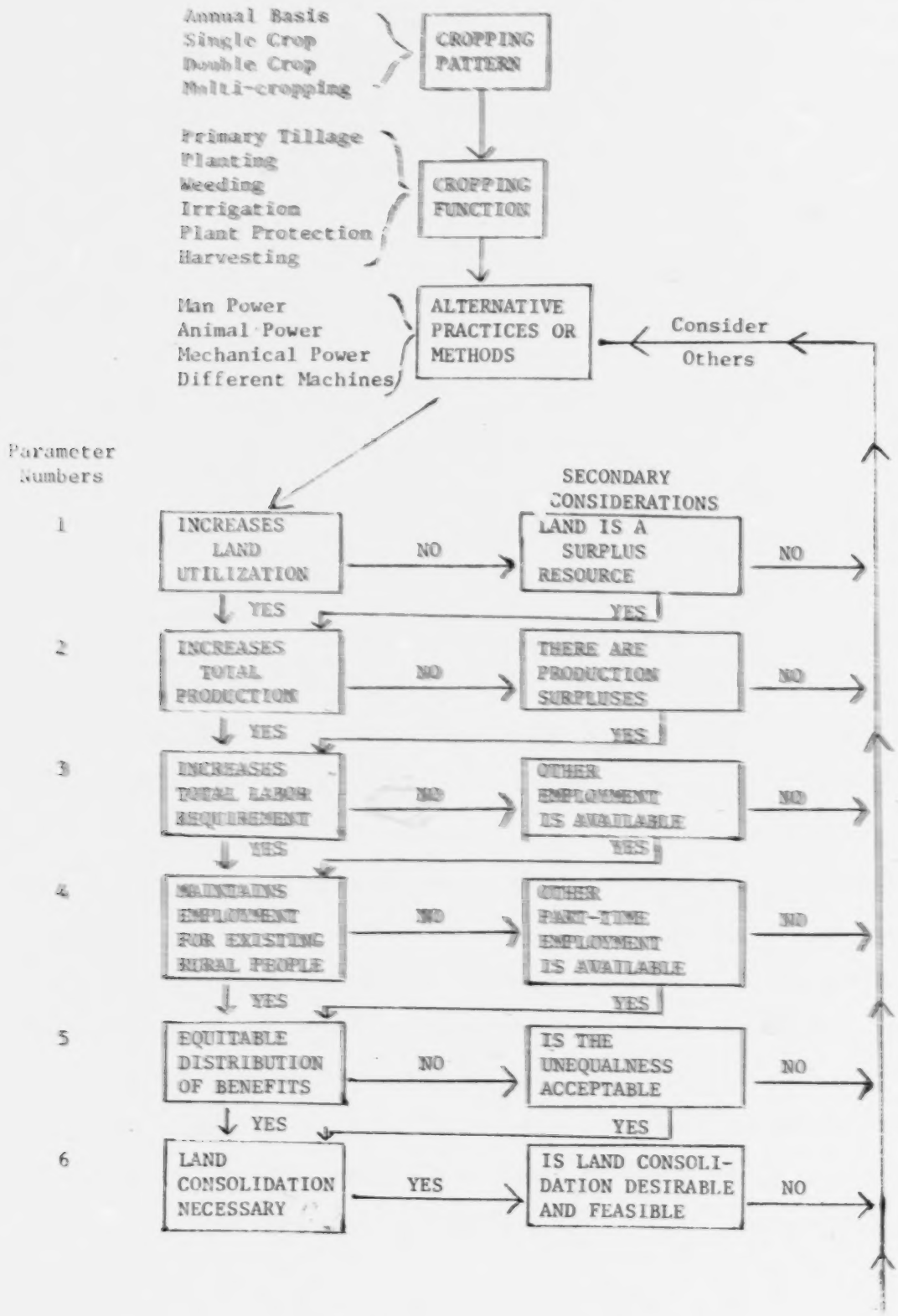
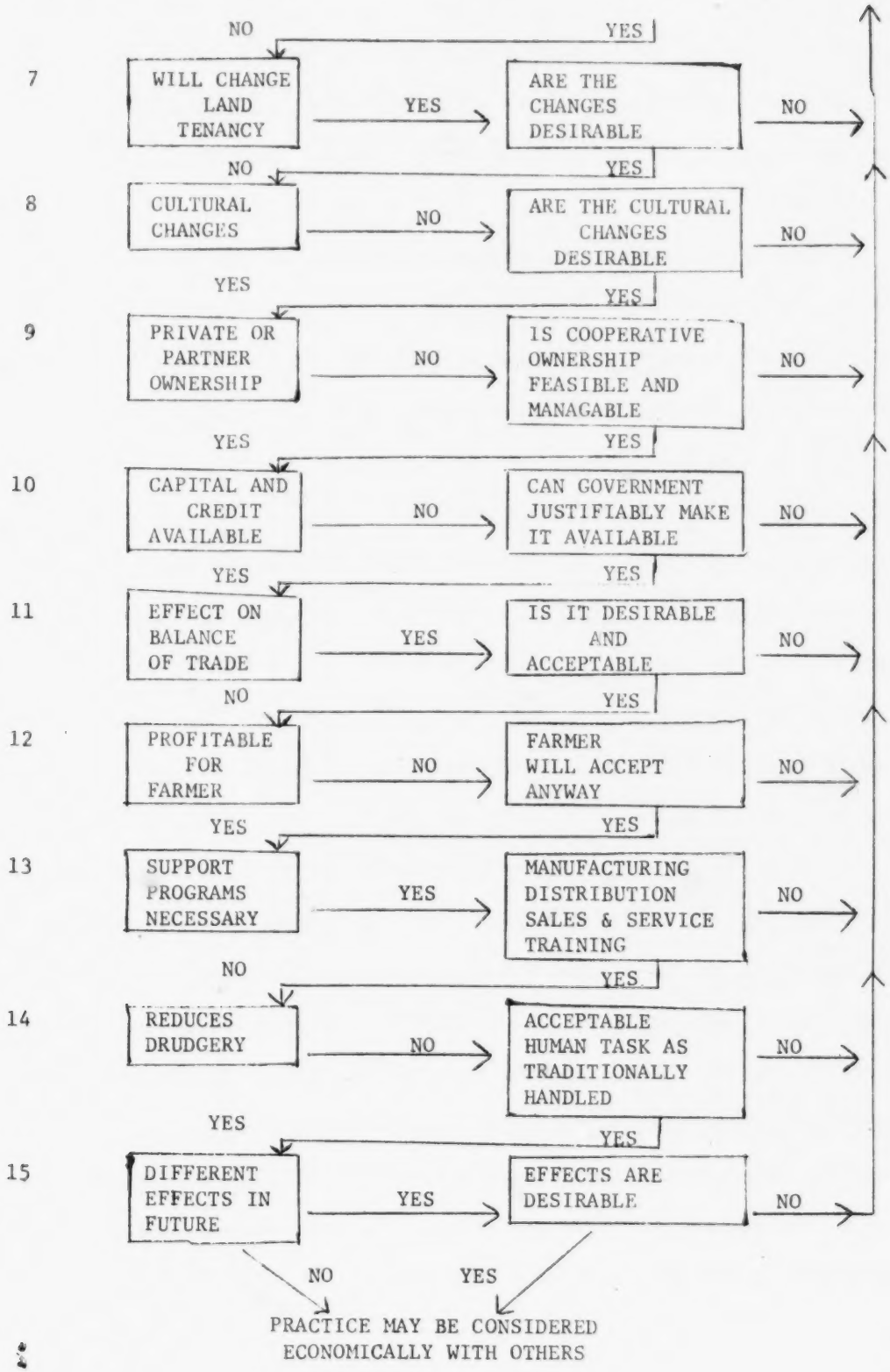


TABLE 1. (Continued)



be aggregated to a country wide basis for the formulation of major plans. The systematic evaluation of the critical fifteen parameters will provide alternatives and tradeoff information [illegible] making management decisions and plans.

There is a secondary consideration for each of the fifteen parameters of Table 1. For example, parameter No. 1; if the practice under consideration does not increase land utilization then move to the secondary consideration. In a given area or country it may be that land is not in short supply. In that case, move from the secondary consideration back to parameter No. 2 pertaining to food production. Likewise, parameters 3 and 4 pertaining to employment would be evaluated differently in labor scarce countries (Korea) as compared to labor surplus countries (Indonesia and Bangladesh). For each parameter, however, if the secondary consideration can only be answered with a "no", that particular method or practice must be evaluated against other parameters on a tradeoff basis. It may be eliminated altogether.

Analytical approaches for evaluating the first four parameters pertaining to land utilization and labor requirements are discussed in this paper for Korea, a labor scarce country with climatic seasons, and Indonesia, a labor surplus tropical country. Parameters 5, 6, 7, and 8 relate to "social costs" and must be evaluated mainly on a macro basis. The next four parameters, 9, 10, 11, and 12 pertain mainly to economic analysis. The secondary consideration of parameter No. 9 with reference to the cooperative ownership approach is discussed in some detail for Bangladesh in the last section of this paper. The fulfillment of the other

parameter requirements through the cocperative approach is also included.

Parameter 13 pertains to support programs for mechanization. These are of critical importance. Many mechanization schemes around the world have failed because of insufficient follow through with training, parts, and/or maintenance. Each support program would need a separate paper for any detailed discussion so are not included in this paper. The degree of drudgery must be somewhat of a subjective evaluation so has been included in the latter part of the model as parameter No. 14. The last parameter entitled future effects must be included to some extent in the evaluation of each of the other 14 parameters, but also at this point should be considered on a broad basis to double check for any other effects or trends.

INDONESIA-LAND AND LABOR UTILIZATION

Indonesia, particularly the Island of Java, is a labor surplus[3] and food deficient[4] country with limited resources of cultivatable land and irrigation water. The tropical climate provides a temperature suitable for continuous crop production, however, the availability of irrigation water is the limiting factor outside of the monsoon season.

Labor generation and increased returns per person in the rural areas can be enhanced by increasing the production of each available hectare of cultivatable land. Some new technological inputs must, however, be introduced in order to increase production significantly. Indonesian farmers

---

[3] There are approximately 66,000,000 people in Java living on 132,174 sq km of land. This is a density of 500 people per sq km (1290 people per sq mile). Food crops can be raised on only 6% of the land.

[4] In 1969-70, 10.5 million metric tons of rice were produced on 7.6 million hectares for an average of 1358 kg/ha. The five-year plan sets a target of 15.4 million tons of 1974.

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are presently doing a good job of maximizing rice production with the traditional inputs of indiginous plant varieties, limited humus fertilizers and rain water during the monsoon period.

Rice production can be increased by two to three fold with the introduction of improved varieties, fertilizer application according to plant and soil requirements, controlled water use and adequate plant disease and insect protection. The mature crop must be harvested, removed from the field, dried, stored and transported with a minimum of losses. The critical question for discussion in this paper is whether any improved mechanical aids or machines should be introduced along with selected other new inputs.

The introduction of the new, improved, longer grained rice varieties dictates some changes in the traditional method of harvesting and handling paddy rice in the stalk form[5], or shattering losses may amount to 20 to 25 per cent of the potential crop. These changes involve such things as; harvesting while the grain is still at a high moisture content of 20 percent and above, immediate threshing after cutting and controlled drying particularly during the monsoon season. All of these inter-related functions must be considered with the introduction of new rice varieties, and evaluation of possible mechanical aids for assisting the production and processing phases.

As indicated by the flow chart of Table 1, land and labor utilization should be evaluated during the first phases of considering the introduction of any mechanical device. Figures 1 and 2 present the graphical results of

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[5] Traditionally, paddy rice is harvested in Indonesia by cutting the stalk 15 to 20 cm below the head. This stalk paddy is gathered into small hand carry sized bunches of [illegible] to 4 kg each. The stalk paddy is thus transported, dried, stored, [illegible]d often times marketed in this bunch form.

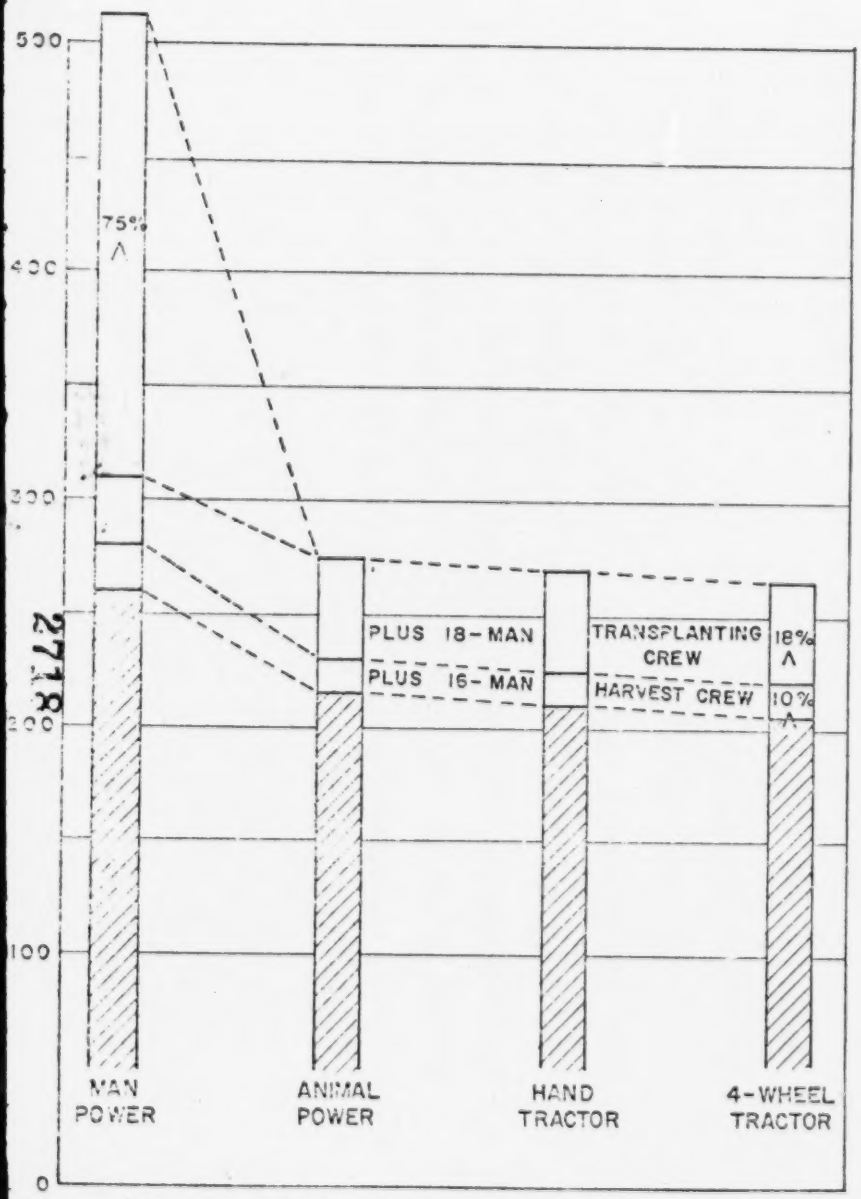

FIG. 1. LABOR UTILIZATION FOR ONE HECTARE OF CONTINUOUS RICE IN THE INDONESIA

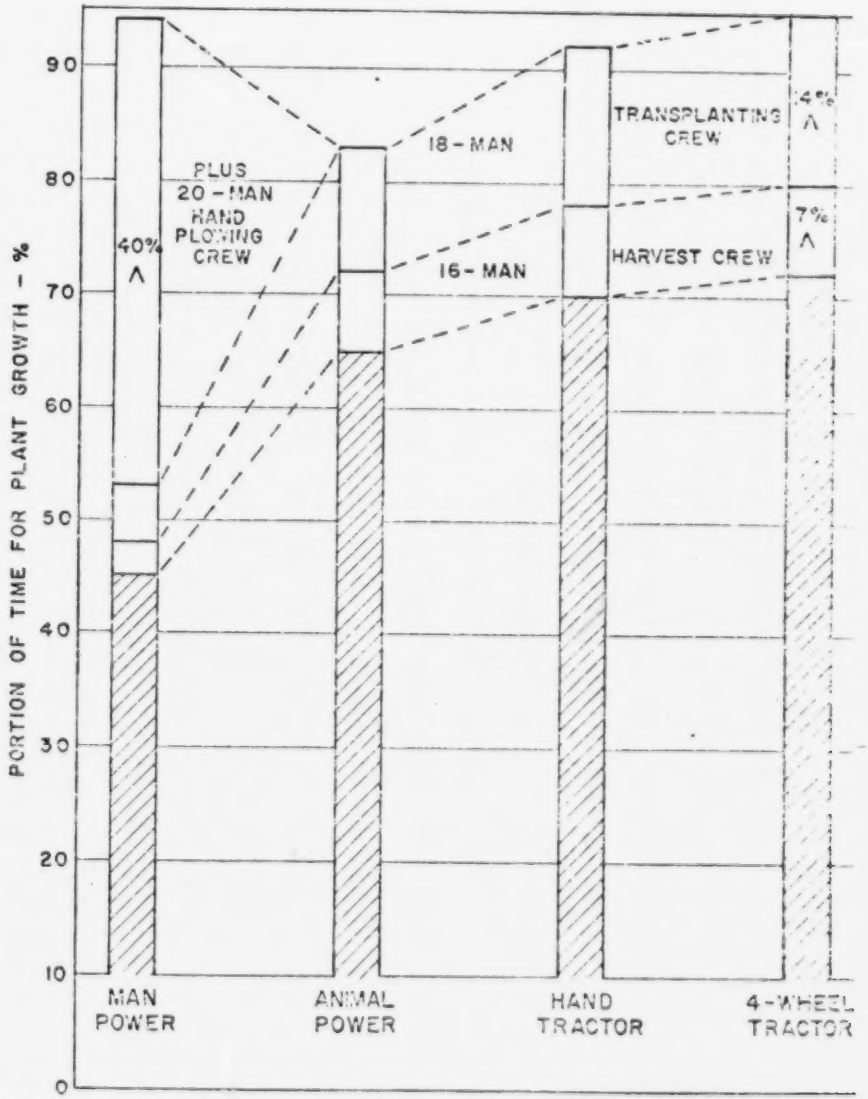

FIG. 2. LAND UTILIZATION EFFICIENCY FOR ONE HECTARE OF CONTINUOUS RICE IN THE INDONESIA

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an analysis designed to compare man power, animal power, and mechanical power for various rice production functions (Esmay et al., 1971). Figure 1 shows annual labor requirements for producing rice continuously on one hectare of land. Figure 2 shows the portion of time the hectare of land is utilized with a growing crop.

The following assumptions were made for this analysis:

1. Optimum water supply and control for year round rice production.
2. Optimum weather conditions for year round rice production.
3. One crop of rice required 120 days regardless of the time of year.
4. Abundance labor was assumed for all man-power operations.

The variables presented in the graphical analysis of Figure 1 and 2 only pertain to the cropping functions that must be performed in the field between crops of rice. These are basically land preparation, transplanting, and harvesting. All other labor consuming practices have little, if any, effect on land utilization so timeliness is not important in this respect. Timeliness may be important, however, for increasing yields and decreasing losses.

The cross hatched portion of the bars of Figures 1 and 2 represent a one-man operation for one hectare of rice production. The man days of labor per hectare per year include hand labor for all rice production functions. The labor data used is not totally representative of Indonesia so a breakdown is not given in this paper. The data are indicative enough however, to present the concept of labor and land utilization analysis. An actual feasibility study of mechanization for Indonesia must be based on reliable and accurate data.

The shaded bars of Figure 1 show man power (all hand operations) utilizing about 50 man days more labor per hectare per year than when animal or mechanical power was used for primary tillage. Figure 2 shows the comparative land utilization factors which explain the somewhat nominal labor utilization advantage of about 50 man-days per year per hectare. Animal and mechanical power for primary tillage increased the land utilization from 45% of the year to about 70%. This also means more crops of rice and more annual rice production.

The first increment above the shaded bars of Figures 1 and 2 represents what would happen by using a 16 man harvesting crew instead of just one man. The second increment is an 18 man transplanting crew. The size of crews shown here is arbitrary. The harvesting and transplanting crews complete each of these production functions for one hectare in a couple days; thus, there are significant improvements in land and labor utilization. The rice producing peasants of Indonesia know this, as it is exactly how they do it where there is abundant hired labor. This concept then shows a way of quantifying, comparing and explaining the production operations.

The somewhat more radical effect is shown by the third increment on the man-power bar, which represents the introduction of a 20-man hand-labor crew for primary tillage (plowing with the traditional short handled hoe). The labor crew approach to land preparation brings the land utilization factor up to that of animal or mechanical power and nearly doubles labor utilization in man days per hectare per year. This makes it evident that if hand labor is available for the large crew approach it is truly a

labor generative operation without sacrificing land utilization. Total production may be sacrificed some by the hand primary tillage unless it can be substantiated that resulting yields are equivalent to those for animal or mechanical power land preparation. Animal power looks a bit low in this analysis because only one animal pulled plow was assumed for the one hectare. Two or three animal plows could be used and the overall land utilization factor would then be as high as the other power sources.

At least in parts of Indonesia the transplanting and harvesting operations are traditionally done by large crews of laborers (mostly women). The farmers thus recognize that they can benefit by hiring large labor crews so they can get another crop of rice growing as soon as possible. The use of large crews of laborers for primary tillage with the traditional short handled hoe does not seem to be customary in Indonesia. Family male members appear to be the only laborers in the individual paddy fields doing primary tillage. Hand hoeing is hard work and evidently not traditionally done by women. This elimination of one-half of the potential work force possibly brings about some shortage of labor for the land preparation phase of rice production.

The model of Figure 1 and 2 exhibits considerable sensitivity to the variation in labor unit input and types of power for primary tillage. An evaluation of this type could be used quite effectively to determine what labor input and type of power for primary tillage would be necessary to develop a certain land utilization index. For example, if plans were being made for the production of three rice crops per year. The growing period for each can be predicted and the total might, for example, dictate that a

land utilization index of 85 percent must be attained. This would leave 15 percent of the 365 days of the year (55 days) for the land preparation, transplanting and harvesting of the three crops. Various combinations of labor crew sizes and/or animal or mechanical power for primary tillage could be determined to meet the constraints.

KOREA-LABOR AND LAND UTILIZATION EFFICIENCY

A shortage of rural labor is developing in South Korea, particularly during the double cropping peak labor requirement periods for rice and barley harvesting and transplanting in the southern provinces. Farm hired labor wages increase about 25 to 30 percent during these seasonal peak labor requirement periods, and the average hourly or daily cost of hired labor has been rising more each year than any other production cost. The limited rural labor situation has been brought about by a booming industrial sector and a static agricultural sector. The migration of rural people to the cities has, thus been stimulated. The movement of young people to the cities has been most prominent.

The limited availability of rural labor suggests a need for some type of mechanization to minimize labor requirements during the seasonal peak periods (Korean Government, 1971). South Korea must also increase the production of food grains as they now fall about 25 percent short of fulfilling consumption needs. If mechanization is to be most meaningful and beneficial for the country, then increased production must be a major objective along with increased efficiency of the farmer in accomplishing the peak period cropping functions. Any mechanization must, of course,

be economical and operational within the conditions of the country. The question at hand then, is what kind of an analytical approach can be made to determine the feasibility of selectively introducing machines at some optimum rate over the next 5, 10 or 15 years.

The analysis of mechanization for South Korea (a labor scarce country) must consider the same parameters (See Table 1) as for Indonesia (a labor surplus country) although the constraints placed on the various parameters are different. For the evaluation of parameters 1, 2, 3, and 4 of Table 1 for Korea an analytical approach is discussed and presented graphically in Figure 3. The concept of this micro-level analysis was suggested by Lee Jeung Han, 1971 and parallels that of Table 1 in that it pertains to a specific cropping pattern in a given climatic area. Various alternative practices and mechanical operations are considered for the required cropping functions. The symbolic labor requirements, as presented in Figure 3, are included in this paper for discussion purposes only. The analysis must also be carried on through evaluation of the other 11 parameters of Table 1. If none of the social cost parameters eliminate a given machine then the economic analysis is undertaken. This would include the parameters from No. 9 through 12.

The traditional man/animal agricultural cropping functions must first be studied. Labor requirements for each function must be determined and distributed into ten-day periods throughout the year. Figure 3 presents a graphical summary of one hectare labor requirements throughout the year for a double cropping (rice/barley) pattern in one example Korean province (Lee Jeung Han, 1971) (Kim Song Ho, 1970). The ten-day period labor totals were

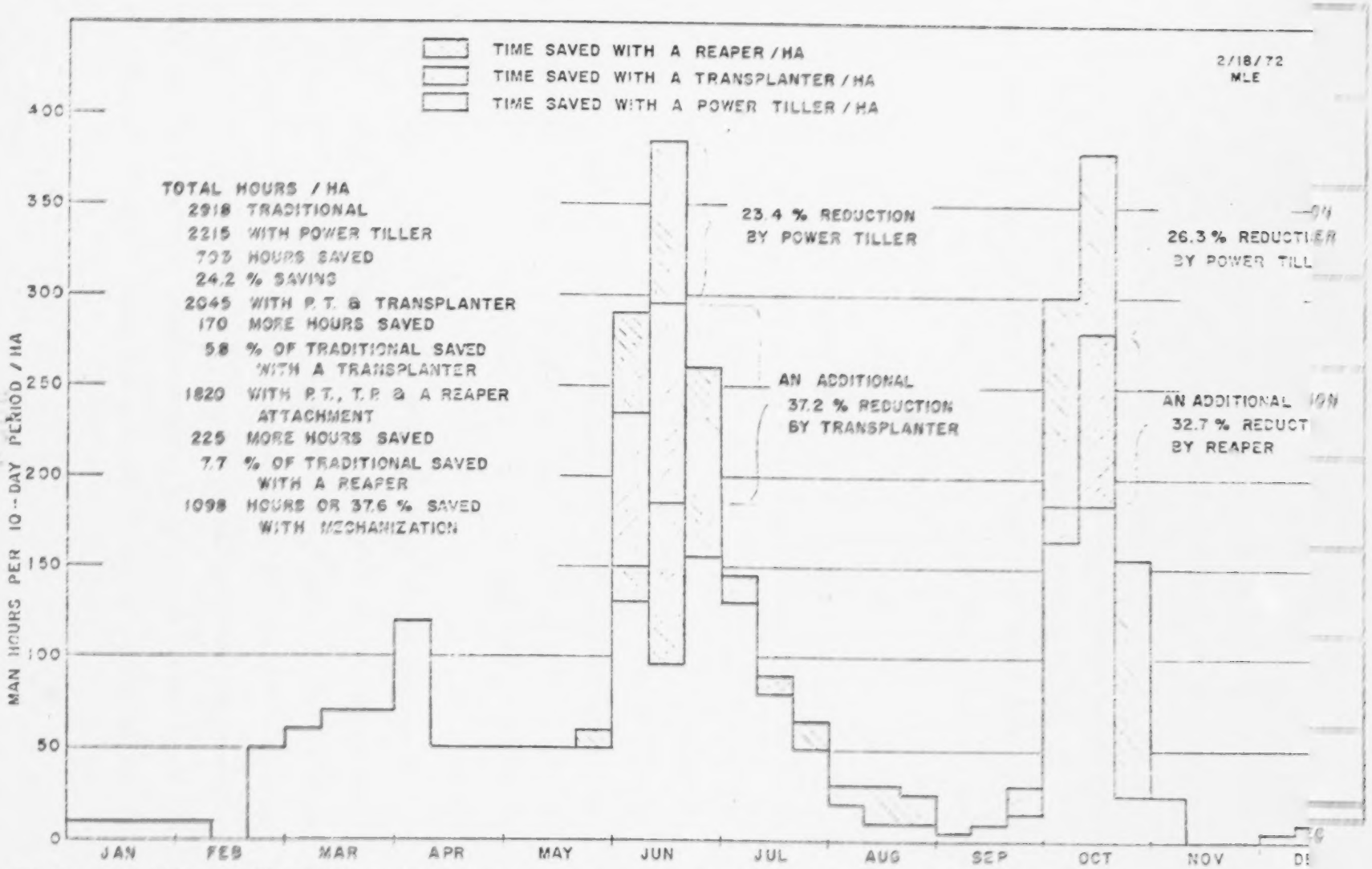

FIG. 3 RICE / BARLEY TRADITIONAL MAN-ANIMAL LABOR REQUIREMENTS — CHANG CHAN NAM DO, KOREA

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arrived at by first determining optimum planting, harvesting and other cultural practice dates for the two crops. From the cropping dates, time periods were set up for the accomplishment of specific tasks; and labor requirements for each function were distributed by 10-day periods.

The graphical presentation of Figure 3 emphasizes the severity of the two peak labor requirement periods for double cropping in the Chang Chan Nam Province of South Korea. The middle ten days of June and October each have labor requirements of four men working ten hours per day during all ten days.

The peak labor requirements are so critical that many farmers may choose not to attempt double cropping of barley with their rice crop. The climatic conditions of this province just barely allow the growing of two crops; thus, the cropping functions of barley harvesting, primary tillage and rice transplanting are squeezed into a short period in June and rice harvesting, primary tillage and barley planting squeezed into October. Barley is a low value crop compared to rice so the farmers don't want it to interfere or adversely affect the yields of their rice crops.

Mechanization for Korea should be designed to reduce labor requirements during the two peak periods and to accomplish the cropping functions quickly in order to make double cropping more economical. The shaded portions of Figure 3, presents the labor saving potential of some specific machines. Reliable machine performance data under Korean conditions for the three critial functions of primary tillage, rice transplanting and harvesting must be utilized. The use of a power tiller, for example, as

represented in Figure 3 for primary tillage may reduce the labor requirements about 25 percent for each peak period (Institute of Agricultural Engineering, 1971). Similar performance data for a push type mechanical transplanter indicate that it may reduce the June peak labor requirement another 37 percent. Likewise, a reaper may reduce the October peak labor requirement by 33 percent.

The economic feasibility is equally important to the machine performance and labor reduction. To make the feasibility study complete, all possible power units and machine types must be considered. This should include different sizes and kinds of power tillers along with 4-wheel tractor power units. Also, self propelled transplanters, binders, and combines should be included.

BANGLADESH-A MACHINE COOPERATIVE CASE STUDY

Bangladesh, formally the province of East Pakistan, is somewhat similar to the Island of Java, Indonesia, in so far as population density[6], and farm size are concerned. The industrial and service sectors in Bangladesh offer almost no opportunity for employment of persons that might leave agriculture. Any form of agricultural mechanization must not then displace rural labor and stimulate migration to the cities.

Table 2 shows that over 40% of the families are landless or near landless (less than .8 acres). In 1969, more than 70% of the rural families in the Comilla Thana (County) felt that they were unable to maintain current standards of living (Myeed, 1969). Employment opportunities for the small farmer with less than two acres and the landless seems to be crucial in preventing migration from the rural areas.

---

[6] Bangladesh has 1300 people/sq mile and 95% of these people derive their livelihood from the rural areas. Throughout the 1960's the population growth rate was 2 1/2%/year.

TABLE 2. Land holdings of agricultural families.

Land Holdings	% of Families
no cultivatable land	15
0.01-0.8 acres	26
0.81-2.0 acres	28
2.01-4.0 acres	18
4.01-6.0 acres	8
over 6.0 acres	5

Rice is the major crop grown in Bangladesh and accounts for approximately 80% of all crop land. The family and hired labor utilized in the production of improved and non-improved varieties of rice is shown in Table 3.

Table 3 indicates that except for tillage the number of man-days of labor per acre for each operation was greater when improved varieties of rice were grown, than when non-improved varieties are grown. The total labor required to grow improved rice, averaged 75.39 man-days per acre which was a 48% increase over the 50.89 man-days per acre average in growing non-improved varieties. Table 3 also indicates that except for tillage the proportion of labor that was hired was greater when improved varieties were grown than when non-improved varieties are grown. An average of 60.25 man-days/acre of hired labor, 70% of the total, was used in growing improved rice varieties compared to 30.50 man-days/acre of hired labor, 60% of the total, when non-improved rice was grown. The use of family labor was not significantly different, 20.4 man-days/acre when non-improved varieties were grown and 22.6 man-days/acre when improved varieties were grown. The

Increased labor used in growing improved varieties came almost entirely from hired labor. This differential in hired labor was significant at the 5% level. Experience in the Comilla Thana indicated that improved varieties were grown equally successfully by both small and large farmers (Faidley et al., 1971). Thus, improved varieties meet both requirements; labor generation and benefits to small farmers. The development of methods to increase the uses of improved rice varieties should therefore be encouraged.

TABLE 3. Family and hired labor utilization in rice production.

	Mandays of labor	% of labor		% of total hired labor in each operation	% of total family labor in each operation	% of total labor in each operation
		Hired	Family			
Tillage						
Improved rice	4.75	28	72	2	15	6
Non-improved rice	5.80	30	70	5	18	11
Fertilize						
Improved rice	6.00	66	34	8	9	8
Non-improved rice	5.05	61	39	8	8	8
Transplant						
Improved rice	18.00	83	17	28	15	24
Non-improved rice	17.52	78	22	41	19	32
Feed						
Improved rice	20.53	74	26	29	24	28
Non-improved rice	13.26	63	37	15	14	15
Insecticide						
Improved rice	1.92	44	66	1	4	2
Non-improved rice	1.23	31	69	1	2	1
Harvest						
Improved rice	15.23	82	18	23	13	20
Non-improved rice	13.16	68	32	27	20	24
Threshing						
Improved rice	8.96	51	49	9	20	12
Non-improved rice	4.87	18	82	3	19	9
Total						
Improved rice	75.39	70	30	100	100	100
Non-improved rice	50.89	60	40	100	100	100

IRRIGATION

Traditionally, Bangladesh has practiced a monsoon agriculture. Crops were grown during the monsoon season from March to September. The land then remained fallow the rest of the year. Mechanical irrigation, however, has allowed the growing of an additional crop during the dry winter season. Since improved varieties of rice were available for use during this irrigated season, labor generation has been dramatic. In the Comilla Thana mechanically irrigated acreage during the winter season increased from 1147 acres in 1965 to over 8500 acres in 1970 (Faidley et al., 1971). Hired labor use due to mechanical irrigation increased from 35,000 man-days in 1965 to over 450,000 man-days in 1970.

The benefits resulting from mechanical irrigation have been well distributed in the Comilla Thana. The main reason for this is that the pumps and wells were controlled by village cooperatives and not by individual farmers. Cooperatives were necessary because of the small fragmented land holdings of individual farmers. Only non-cooperative farmers with less than 1.0 acre were consistently represented in winter irrigation in a smaller proportion than they were in the total rural population (Faidley et al., 1971).

In summary, mechanized irrigation has both increased labor utilization and had its benefits successfully distributed to all segments of the rural population. Mechanical irrigation has been the most successful form of mechanization for increasing the intensity of land use in Bangladesh.

TILLAGE

Tillage in Bangladesh has traditionally been performed by a pair of bullocks working with a wooden plow. Essentially, no tillage has been performed by a man and a hoe. Farmers without bullocks rented them from other farmers. In the Comilla Thana only 8.2% of the farmers with less than one acre and 26% of the 1 to 2 acre farmers owned a pair of bullocks in 1964. Thus, the large majority of small farmers depended upon renting the source of power to perform their tillage.

The Comilla Thana attempted to supplement the bullock power by introducing 35 hp tractors. The tractors were owned by a central cooperative association and rented to groups of farmers through the local village cooperatives. Tractors reduced the total time required for tillage from 11.92 days/acre when bullocks were used alone to 5.45 days/acre when tractors were used in addition to bullocks (Faidley et al., 1971). Bullocks were not completely replaced in the tillage operation since tractors were used only for initial tillage and bullocks were still used for a final leveling and puddling of the soil before the crop was planted.

The human labor required for tillage was 6.18 man-days/acre when only bullocks were used and 3.16 man-days/acre when tractors supplemented bullocks. Table 2 indicated that over 70% of the labor used in the tillage operation was family labor. Tillage provided only 2% and 5% respectively, of the total hired labor used in growing improved and non-improved rice. Thus, hired labor use in tillage was small. Any reduction due to tractor use would be negligible in comparison to total hired labor requirements. Actually, persons using tractors used more total hired labor. Persons

using the tractors hired 56.45 man-days/acre of labor compared to 51.78 man-days/acre for bullock users when improved varieties of rice were grown and 33.75 man-days/acre compared to 34.49 man-days/acre when non-improved varieties were grown. In the Comilla Thana, tractor mechanization neither significantly increased nor decreased hired labor. Therefore, based upon a criterion of labor displacement, tractor mechanization can be neither justified nor rejected.

The second criterion, the benefits of tractor mechanization to the small farmers will next be considered. The distribution by farm size of persons using tractors for tillage and those using only bullocks for tillage indicates that 57.4% of all tractor users had farm sizes of less than 2.0 acres, while 53.5% of the bullock users had farms of less than 2.0 acres. Thus, a larger proportion of the tractor users had small farms than did bullock users. One reason for this is that 83% of the rice growers who did not own bullocks had farms of less than 2 acres. Of the farmers without bullocks, 49% used the tractors. Thus, the tractors were an important power source for the small farms without bullocks. In addition, during the irrigated season the farmers without bullocks who used the tractors cropped a larger proportion of their farms, 60% compared to 47% for those who rented bullocks. For farmers who owned bullocks, the proportion of their farms which was cropped was nearly equal when bullocks were used for tillage, 48%, as when tractors supplemented the bullocks, 49%. Thus, the tractors have benefited the small farmers without bullocks who owned, on the average, 1.35 acres of land, by increasing his cultivated acreage, while not giving this same advantage to larger farmers with bullocks who owned, on the average, 3.00 acres of land.

In the Comilla Thana tractors have apparently filled a power shortage for the tillage operation. Between 1965 and 1969 when the tractors were gaining a fairly widespread use, the value of livestock and, therefore, the number of work animals on farms measured in constant prices remained constant. Thus, farmers continued to own bullocks even though they supplemented this source of power by renting the tractors. The inadequacy of bullock power was especially apparent during the winter irrigation season of 1969 when 25% of the rice growers who owned bullocks also rented the tractors to help perform their tillage.

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SUMMARY

1. A concept of a model for evaluating the critical factors and parameters related to the introduction of specific tools, machines, and power units into a developing country is presented and discussed.
2. Particular attention has been given to the consideration of labor utilization, equitability of returns, and other socially related factors. These social parameters should be evaluated even before exhaustive economical analysis are made.
3. In labor scarce countries having seasonal cropping patterns, attention should be given to selective mechanization to minimize peak labor requirements.
4. In labor surplus countries maximum attention must be given to utilizing labor teams to maximize timeliness of operation and land utilization. Selective mechanization which will increase labor requirements should be considered.
5. Cooperatively owned and operated machines and power units for primary tillage can be labor generative and in particular not displace hired labor.

REFERENCES

Bureau of Agricultural Statistics, 1969, Directorate of Agriculture, Government of East Pakistan.

Esmay, M. L., J. B. Holtman, and LeVern Faidley, 1971, "A Systems Approach to Rice Mechanization in Indonesia", Rural Development Seminar, Southeast Asia Development Advisory Group (SEADAG), The Asia Society, held in San Francisco, California.

Faidley, L. W., and Esmay, M. L., 1971, "Introduction and Use of Improved Rice Varieties", Department of Agricultural Engineering, Michigan State University, East Lansing, Michigan

Faidley, L. W., and Esmay, M. L., 1971, "Tractor Mechanization in the Comilla Thana", (unpublished).

The Government of the Republic of Korea, 1971, "Prospectus for Farm Mechanization Project", Seoul, Korea.

Institute of Agricultural Engineering and Utilization, 1971, "Annual Summary", Ministry of Agriculture and Forestry, Suwon, Korea.

Kim Song Ho, 1970, "Prospects of Farm Mechanization in Korea, in Connection with Long-Run Projection of Rural Labor Picture", Agricultural Economics Research Institute, Ministry of Agriculture, Seoul, Korea, Report No. 1.

Kline, C. K., D. A. G. Green, R. L. Donahue, and B. A. Stout, 1969, Agricultural Mechanization in Equatorial Africa, Institute of International Agriculture, Michigan State University, Research Report No. 6.

Lee Jeung Han, 1971, "Needs for Farm Adjustment to a Growing Economy and Conditions for Farm Mechanization", Paper Presented at the A/D/C East-Asian Regional Research Workshop, Tokyo, Japan, August 23-31, 1971.

"Livestock Population in the Comilla Thana", 1964, Research and Survey Bulletin No. 1, PARD.

Muyeed, Abdul, 1969, "Strategies Involved in a Development System of Planned Social Change in Rural East Pakistan", Ph.D. Thesis, Michigan State University, East Lansing, Michigan.

United Nation, 1966, World Population Prospects, Population Studies 41.

VT 019 113

SEAMANS, MELVIN, AND OTHERS

AN EVALUATIVE STUDY OF AUTO MECHANICS AND AUTOMOTIVE TECHNOLOGY PROGRAMS AND CURRICULA. FINAL REPORT.

MADISON AREA TECHNICAL COLL., WIS.

WISCONSIN STATE BOARD OF VOCATIONAL, TECHNICAL, AND ADULT EDUCATION, MADISON.

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DESCRIPTORS - *GRADUATE SURVEYS; OCCUPATIONAL SURVEYS; EMPLOYMENT PATTERNS; EMPLOYER EMPLOYEE RELATIONSHIP; *PROGRAM EVALUATION; *QUESTIONNAIRES; *CURRICULUM EVALUATION; *AUTO MECHANICS (OCCUPATION); *VOCATIONAL EDUCATION; TECHNICAL EDUCATION

IDENTIFIERS - *WISCONSIN; EMPLOYMENT SKILLS

ABSTRACT - TO IDENTIFY THE NEEDS OF THE EMPLOYER FOR JOB ENTRY IN THE AUTOMOTIVE TRADES, DATA WERE COLLECTED BY QUESTIONNAIRE FROM GRADUATES OF VOCATIONAL AND TECHNICAL SCHOOLS IN THE STATE AND FROM THEIR EMPLOYERS. THE INFORMATION OBTAINED WAS INTENDED TO BE UTILIZED BY EDUCATORS IN UPGRADING VOCATIONAL SCHOOL AUTOMOTIVE PROGRAMS AND CURRICULUMS. FINDINGS INDICATE THAT, IN GENERAL, EMPLOYERS WERE SATISFIED WITH THE TRAINING THE GRADUATES RECEIVED. THE GRADUATES ALSO RATED THEIR TRAINING GOOD, BUT CALLED FOR MORE HOURS OF TRAINING IN GENERAL AND SPECIALTY AREAS AND COURSES MORE RELEVANT TO AUTO MECHANICS. THE STUDY REVEALS THAT THE GREATEST PROBLEMS INVOLVE THE WEAK PLACEMENT PROGRAMS OF VOCATIONAL SCHOOLS AND THE SUBSTANDARD WAGES REPORTED BY MANY OF THE GRADUATES. RECOMMENDATIONS RELATE TO SUCH ITEMS AS: (1) BETTER COMMUNICATIONS BETWEEN INDUSTRY AND AUTOMOTIVE TRAINING PROGRAMS, (2) LICENSING PROGRAMS AND OTHER PROGRAMS TO HELP RAISE WAGE RATES FOR GRADUATES, (3) EMPHASIS ON MAKING RELATED SUBJECTS RELEVANT TO AUTOMOTIVE SUBJECTS, AND (4) REVIEW OF THE NUMBER OF HOURS OF ACTUAL AUTOMOTIVE TRAINING. (KH)

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November, 1972

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Final Report

Project No. 04.040.151.222

AN EVALUATIVE STUDY OF AUTO MECHANICS AND AUTOMOTIVE TECHNOLOGY PROGRAMS AND CURRICULA

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FOREWORD

This study was undertaken with the hope that the information gained could be applied throughout the State of Wisconsin to help the various Vocational and Technical schools upgrade their automotive programs. The need to keep our programs in step with the changing technology in the automotive field is being felt by everyone concerned with the training of personnel entering the trade. Air pollution, safety and a general trend of trying to upgrade the quality of the automotive tradesman are just a few of the reasons for people involved in automotive training programs to attempt to increase the quality of their curriculums.

In general it is healthy to look at what we are doing for our graduates and the people that employ them. This survey attempts to get the feelings of these groups and tries to draw some conclusions from the opinions these groups have of our present curriculums and what they feel should be added to our programs.

Because the automotive training programs of our State are bursting at their seams in terms of numbers of students in recent years, it is also the attempt of this survey to see if we are not saturating the market with to many graduates. It was felt that this could best be determined by the number of graduates, that in the final analysis end up working somewhere in the automotive trade.

The actual jobs performed by the graduates and what the employer feels in needed by a person coming to him for his first job, was also considered to be of prime importance in determining what the content of our programs and courses should be. The need to look at what the graduate needs in terms of related courses and the content of these courses was one area that was given special consideration. Often students taking an automotive program express the opinion that many of the related courses are not a necessary part of their program. The survey has attempted to answer that question and the information provided should be given special attention by anyone responsible for orientation of automotive students entering our programs and by people with counciling duties.

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There is one thing that will become apparent as one takes a look at the variety of jobs listed by graduates. Many of our graduates do not end up working in the automotive trade. The reasons are many, but one reason becomes apparent when wages of those working in other than automotive areas are compared with those of the auto mechanic. The licensing of mechanics and of automotive service outlets was not covered by this survey, but it is a subject that we as leaders in the automotive service trades need to become involved in. The good and bad of licensing has long been discussed. One thing that it could do is to raise the stature of the trade and possibly raise the wages of some of our graduates.

The need for more sophistication in the repair and servicing of the automobile is being investigated by the auto manufacturers, the Federal and State governments and by private agencies. The educational institutions of this State must keep their curriculums geared to meet the needs of this changing technology. It is hoped that this survey report will be of help in meeting this need.

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The following people or groups have helped to make this study possible.

Mr. Merlin Maiers, Assitant Chairman Trades and Industry, Madison Area Technical College, whose help and guidance has been much appreciated.

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Gratitude is also expressed to the graduates and employers who were willing to give of their time to make the survey a success.

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Chapter I
INTRODUCTION

I. Problem and Need:

A. Startling developments in science and technology and a rapidly expanding economy are spelling out important changes in the structure of the occupational world. Specific jobs become obsolescent more frequently, old occupations disappear, and new occupations emerge, not always in foreseeable fashion. The pressures of a rapidly changing technological society make career decision making by youth, curriculum revisions by staff, and program planning by administrators even more dependent on research, follow-up of students, and assessment by employers for appropriate data and information needed in developing plans, solving problems, improving instruction, and assessing progress toward achieving the goals of the system.

B. The success of an institution can best be measured by the success of the student. To ascertain the effectiveness of a school's programs, there must be a follow-up from the day the student enters the institution until after he gains employment or transfers to another institution. Follow-up is a process by which an educational institution seeks to determine how effectively it is meeting the current and future needs of those it serves. Vocational, technical and adult education State staff and districts must determine how well their stated mission, goals and objectives are being achieved. The employer of the product is also a valuable source of information.

C. Follow-up studies indicate that many graduates of occupational education programs are not placed in the occupation for which they were prepared. Others move from one occupation to another. Many are asked to leave the establishment. Many need further training on the job.

D. A challenge to educators is to find a curriculum that will equip these individuals to do the job required of them, but the two-year school must beware of producing functional illiterates. Clyde E. Blocker warns us with this statement:

> The two-year college has been caught in the middle of this drive to increase the educat ion of the population. The four-year college and the university are ill equipped to cope with the increasing hordes of education minded individuals, particularly when so many lack even the most rudementary requirements for baccalaureate courses. The comprehensive tw-year college, with its willingness to offer courses of less than collegiate level, has been cited as the salvation of low ability students. It must be pointed out, however, that if theses courses do nothing more than promote a higher level of functional illiteracy then the tw-year college is not fulfilling its functions.

E. It is then the job of educators to design a curriculum that will produce a specialized worker, who will be able to go out into the world of work and to do the job for which he or she has been trained. Juanita G. Gillen makes this observation:

> As automation and an increasingly technical society have created new jobs that make education beyond the high school a necessity, many universities have met this and other adult education needs through branch off-campus centers. Community junior colleges are better equipped to give technical and semiprofessional programs than four-year colleges; in this respect they are not competitive, but complementary to four-year higher education programs. Community colleges' programs appeal to an ever wider range of needs of both youth and adults in increased numbers. These colleges are taking a new look at their aims and objectives and the curricula offered to meet these goals.

The Problem in Developing Curriculum

F. The development of curricula to meet the needs of the people can be approached in a number of ways. An interesting challenge from Edward J. Morrison:

> It is a significant forward step to decide as you have that a curriculum will be based upon analysis of the performance capabilities desired of graduates. I would agree that this is the proper basis for all curriculum development, but many who are less convinced than I of the validity of the general proposition would agree with you that specification of terminal performance capabilities is essential to development of revelant effective, efficient vocational curricula. For some time now, the American Institute for Research has been engaged with public school people in several projects to develop curricula which are relevant to three kinds of student needs: Vocational competence, responsible citizenship, and a continuing self-fulliment.

G. One of the problems confronting educators in developing curricula is the problem of time and change. Our inowledge is spiraling with each days passing. Each innovation calls for new skills and knowledges. How can the curriculum then keep pace with the times? The anseer may lie in bringing industry to help in building the curriculum with the help of advisory committees, workers and employers. They could help in the following ways:

1. Helping to determine the scope, breath and extent of specialization of the cirriculum and specific courses.

2. Assisting the analysis of special job skills and related technical knowledges required for employment.

3. Identifying types of occupations for which training may be needed.

4. Recommending needed changes in curriculum or specific courses of action.

5. Arranging for faculty and advanced students to attend local conventions, seminars and programs.

6. Conducting educational seminars, field trips and conferences designed for career orientation and enabling students to meet business leaders.

7. Donating or lending needed instructional equipment and supplies to keep training up to date.

8. Assisting faculty chairman or coordinators to maintain liaison with a wide range of business industrial contacts.

9. Providing summer employment to encourage the staff to keep current in the field of specialization.

10. Providing students part-time internship experiences, summer employment and work study programs.

H. Curriculum Based on Employer's Needs:

The basis for constructing and maintaining a relevant curriculum can be obtained from employer's needs. In addition to using advisory committees and joint curriculum committees, surveys of employer's observation of workers on the job, interviews with supervisors and other methods can be used.

I. A Diploma program and an Associate Degree program are a part of the programs offered by many of the schools in the Wisconsin VTAE system These programs will be the object of this evaluative study.

Because of the needs cited it seems logical that the following objectives be established for this project.

The Objectives of the Study

The main purpose of this study was to identify the areas of our automotive mechanics programs that:

1. Presently are meeting the needs of employers and the graduates from these programs.

2. Are in need of change or revision to meet the requirements of employment int the automotive jobs that are offered to our graduates.

3. Should be dropped or added to our curriculums to make the sensitive to the needs of our graduates and their employers.

The study was also designed to identify present and future employment needs in the various areas of our State. It is this information that can be helpful to people in designing the size and scope of our automotive programs.

The objective is to identify the needs of the employee for job entry and the traits and skills necessary to keep the job and advance as the opportunities arise.

Chapter II
METHODOLOGY

Selection of Participants

A list of employers and the graduates they had employed were supplied by the districts through a request by the Wisconsin State Board of Vocational and Adult Education. Not all districts were involved in automotive programs for the survey period of 1967 through 1971. Most of the lists supplied by the districts were fairly complete for the graduates and their addresses, but most of the lists were very incomplete concerning employer information and addresses.

The usable employer addresses were assembled and surveys were sent. Fifty of the employers were asked to participate in personal interviews. The cooperation of the employers was good concerning the personal interviews, but poor response was experienced on the returns of the surveys by mail.

Design of the Questionaire

Selection of the questions and information contained in the questionaires was based on the cirriculums and the specific courses listed by the catalogs automotive listings and their related courses. Automotive texts and instructors teaching some of these courses were asked to help design the questionaires. Employers were contacted in regard to the employer survey. The kinds of information asked for was intended to provide information that could help establish the worth of our cirriculums to the employers and the graduates of our programs. A comprehensive review of the programs and their content and the needs of employers and graduates were the main considerations in the design of the questionaires.

Before actual collection of the data the questionaires were tried on several test groups. Second year automotive students that had automotive jobs were used on the employee surveys. The employer survey was review by consultants hired for this purpose.

Processing Procedures

The information gathered by the instruments and the investigators was processed and the report was written. It was decided to divide into the three general areas covered by the surveys. The information is reported by the number of respondents answering and by the percent of the respondents they represent. In some cases the information provided by the employer and the graduate is compared.

Comments and Remarks

There are many comments and remarks contained on various pages of this report. Many respondents took the opportunity to express their opionions. Many of these remarks were repeat and for that reason not all remarks received are reported. It is to the credit of the people working in the various automotive programs in the State of Wisconsin that the comments concerning the quality of our programs is usually highly favorable. Although the statistics provided by this report help tell the story of the needs and desires of the employers and graduates, the remarks and comments provide the depth of understanding that should help us determine the merits of some of the areas of our curriculums.

CHAPTER III

FINDINGS

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INTRODUCTION TO THE FINDINGS

In the areas of subject matter evaluation the graduates were asked to rate the value of various subjects as the subjects related to their jobs. The students were also asked to comment at the end of each subject area and many supplied comments. Selected comments for each subject area follow the subject matter evaluation for each of the areas studied.

Many times a student in an automotive program expresses his wish that he should not take any related subjects such as mathematics, science and communications. We asked the graduates how they feel about the degree of need for these subjects. The results are summarized immediately following the statistics for each area. The results in some cases tend to reinforce the structure of present programs. In other cases the need for the subject matter is shown, but the degree or depth needed for the jobs tend to vary.

The study tries to establish the amount of use a graduate has on his job for the different subjects. The data for those questions is sometimes a more reliable key to the need for these subjects than are the individual questions concerning the subjects. It is interesting that some graduates checking <u>knowledge Essential</u> will in turn indicate they have little use for a given subject area on their job. One can only assume that people have use for these subjects at home or in some avocational area. Some may consider the knowledge essential for daily living. The reasons people feel a subject is valuable are many. It should be noted that most graduates seem to feel academic subjects are more valuable as they progress in their jobs and their lives.

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The graduates were asked, "how do you like your present job". There was a choice of four answers. The range of answers were fairly wide in distribution. Many graduates stated that they like their job, but plan to move on. The reason for their desire to move became somewhat apparent during the personal interviews and by analyzing the data on salaries paid graduates. A picture of low pay for this industry tends to emerge. Many starting salaries fall much below the salaries in other jobs requiring much less training.

One example of dissatisfaction with wage conditions was expressed by a graduate that cornered the interviewer on one of the personal visits. This graduate had been working in highly skilled areas of the automotive trade for two years since graduation, but was only being paid $2.25 per hour. This graduate intends to quit the mechanics trade and go to work for a manufacturer who pays twice his present salary for a starting wage. It is very unfortunate that we the people of Wisconsin are spending the money to provide the auto industry with qualified people, only to have them treated so badly on the pay scales.

In defense of some of the shops that are paying good wages, it is not the fault of all business that the industry has a bad name for what the industry pays its mechanics.

The following degrees of job satisfaction were expressed by the graduates.

EMPLOYERS SECTION

EMPLOYERS SURVEY DATA

Of 931 employers identified from the district reports, only 477 of these employers were identified by an adequate address. The remaining 454 were either identified by name only or they were employers entirely out of the automotive field. It could not be expected that an employer not directely connected to the automotive field should be able to fill out a survey. 29 of these surveys were returned for insufficient address or bussinesses no longer at that address.

It is the recommendation of this report, that all districts attempt to keep better records of their graduates. Graduates should be asked to fill out data forms when they graduate and also supply the needed information through progressive follow up studies.

Concern was expressed by the employers that this survey was to long in length and that they could not afford the time to fill it out. The returns tend to re-enforce this statement, as only 52 usuable returns were received. The total number returned was 55 or 13% of those mailed. Complete returns shown by district are on the following page.

It is recommended that anyone doing another survey such as this one should attempt to keep the survey instrument to three pages or less in the interest of getting a better percentage of returns.

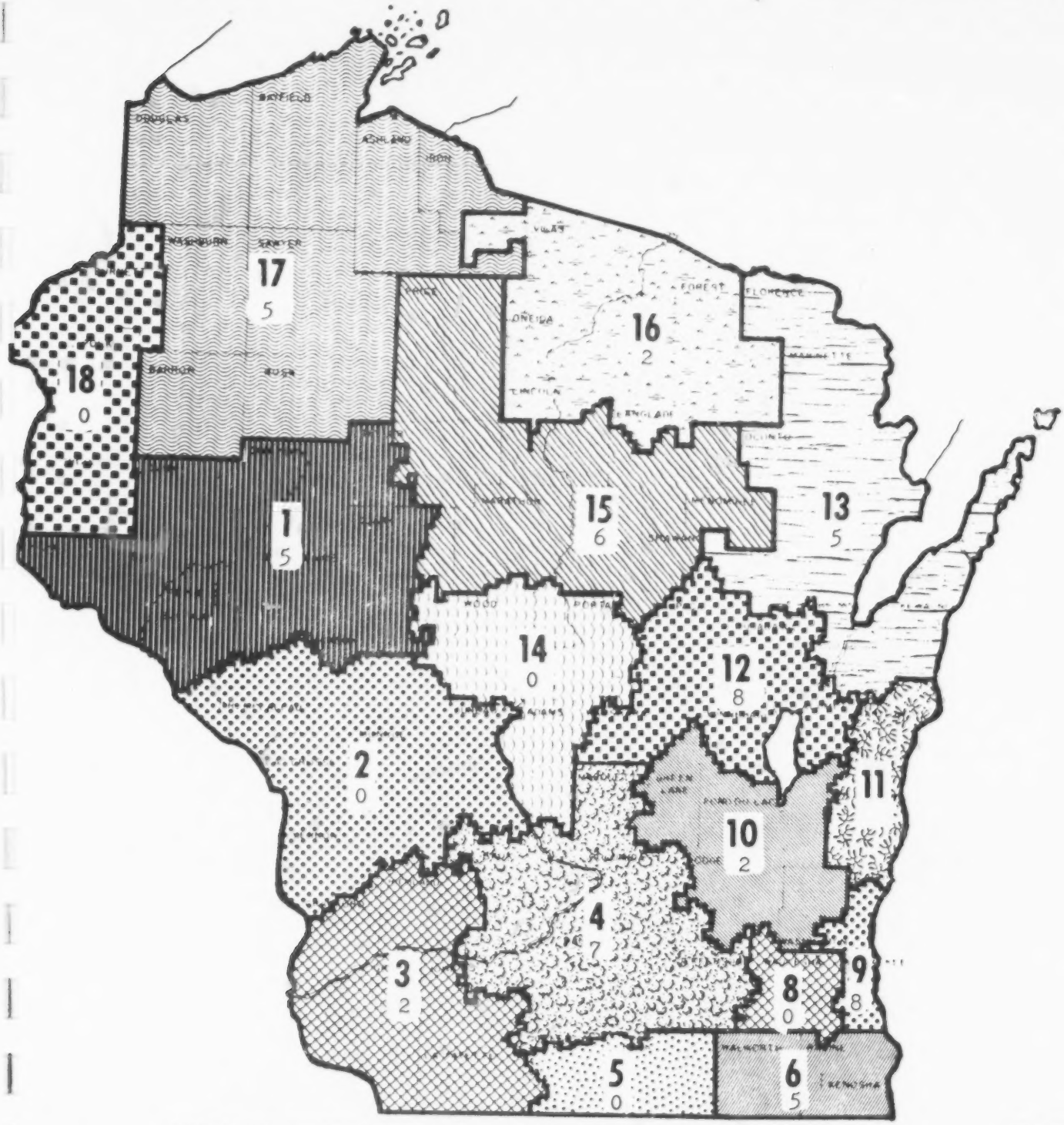
The personal interviews were handled by both investigators. 25 interviews were assigned to each investigator. The State was divided to allow the easiest access to the employers by car and in some cases by light air-craft.

The interviews in general tend to indicate that the employers are quite satisfied with the graduates they are obtaining from our programs. Most employers were very willing to take time from their schedules to be interviewed. Many helpful comments were forthcoming and these are printed in a rather large comments section at the end of the survey.

State of Wisconsin \ BOARD OF VOCATIONAL, TECHNICAL & ADULT EDUCATION

EUGENE I. LEHRMANN
State Director
137 EAST WILSON STREET
MADISON, WISCONSIN 53703

Number of employers responding, located by district.



WISCONSIN VOCATIONAL, TECHNICAL AND ADULT EDUCATION DISTRICTS

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APPROVED FOR OPERATION JULY 1, 1971

EMPLOYER SURVEY

The table below contains the data describing the number of companies contacted by the survey (described by district)

DISTRICT	Number Surveys	Returns		Personal Visits		
		Returned	Not Returned	Scheduled	Completed	Not Complete
1	34	5	29	8	8	
2	33	0	33	3	3	
3	9	2	7	3	3	
4	39	7	32			
6	47	5	42	2	2	
9	58	8	50	3	3	
10	23	2	21	4	4	
11	7	0	7	1	1	
12	42	8	34	4	4	
13	45	5	40	3	3	
14	10	0	10	2	2	
15	31	6	25	1	1	
16	25	2	23	3	3	
17	24	5	19	2	2	
Totals	427	55 or 13%	372	50	50	

From the 1967-1971 automotive program graduates, a total of 931 employers were identified. Of that number 477 (51%) were asked to participate in the survey. Personal visits were made to 50 of the employers.

EMPLOYER DATA

Persons responding to the employer survey listed the following titles:

> Service department manager, Cheif engineer, Owner, TBA manager, President, manager, Training supervisor, Superintendent, Business manager, Dealer personel coordinator and General manager.

The number of automechanics employed by the 52 employers was 1142. This is an average of 22 mechanics per employer. This average is not a good statistic to base anything on because one employer was a large city employing 403 mechanics.

Employers reported that 7.5% of their employees work on a part-time basis. Most employers interview reported that they seldom employ on a part-time basis and some say that they would prefer to employ apprentices, rather than part-time people.

Employers report that they employ 28% of their mechanics directly from the vocational schools of our State. The favorite means used by employers to get someone from one of our programs is by directly contacting the schools. The second most often noted means was by contacting employment agencies.

The average starting wages for a beginning graduate was $460.00 per month. The high was $787.00 while the low was $225.00. As stated earlier in this report, the wages paid to many of the graduates is to low to keep them interested in the automotive trade. The employers and our schools are both at fault for this situation. The employers should be more realistic in the amounts they are paying, while the schools are to quick to place a graduate without checking out the working conditions and wages. This is a real sore point with the graduates and employers alike. The graduate wants more money for his services, while the employer feels that until a graduate can prove his abilities he will have to work for a low wage.

MATHEMATICS

The employers were asked to rate the value of the various mathematics areas in respect to what they would expect from a graduate from one of the vocational auto mechanics programs of our schools.

Mathematics	Knowledge is Essential		Some Knowledge Necessary		No Knowledge Necessary	
	#	%	#	%	#	%
Basic math	35	67	16	31	1	2
Formulas	5	11	32	68	10	21
Fractions and decimals	23	44	26	50	3	6
Systems of measuring angles	13	27	27	55	9	18
Horsepower calculations	8	15	27	52	17	33
Shop geometry and layout	7	14	20	59	13	27
Graphs and charts auto related	20	38	27	51	6	11
Business math	12	24	29	58	9	18
Calculate areas and volumes	7	14	19	40	22	46
Payroll calculations	3	6	18	37	28	57
Repair order breakdowns	20	40	22	44	8	16
Parts make-up	20	38	27	52	5	10
Bookkeeping and accounting	2	4	23	46	25	50
Algebra	1	2	17	34	32	64
Powers & roots	4	9	11	23	32	68
Job estimates	21	39	25	46	8	15
Inventory control	8	15	28	54	16	31
Ordering parts and supplies	13	26	23	45	15	29
Income tax	4	8	19	40	25	52
Percentages	3	7	31	69	11	24
Ratios	12	26	21	46	13	28
Bills and billing	5	10	20	56	17	34
Wages and wage plans	4	8	30	63	14	29

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MATHEMATICS

This chart represents the amount of mathematics employers feel an auto mechanic in their employ needs to do his job. The last two columns are the results of the same question asked of the employees. Although this same information appears in the employee section of this report, this display gives the reader a chance to compare the results of both surveys.

Use Rating	Employer		Employee	
	#	%	#	%
Heavy use (daily)	20	38	108	40
Medium use (weekly)	21	40	109	41
Light use (monthly)	11	21	44	16.5
Never used	1	1	7	2.5
Totals	53	100%	268	100%

This chart indicates that both employers and employees agree on the amount of mathematics needed to be a good mechanic. It also points out that medium to heavy use of mathematics is indicated by about 80% of the respondents. The need for a good mathematics course or courses in our automotive curriculms is re-enforced by this information.

MECHANICAL DRAWING

The employers were asked to rate the amount of knowledge they felt an automotive mechanic needs in the areas of mechanical drawing.

Mechanical drawing	Knowledge is Essential		Some Knowledge Necessary		No Knowledge Necessary	
	#	%	#	%	#	%
Blueprint reading	15	30	23	46	12	24
Shop sketches	17	36	20	43	10	21
Drafting instruments	3	7	15	35	25	58
Use of automotive symbols	25	51	16	33	8	16

The respondents were asked to rate the amount of use their employees would have for mechanical drawing.

Use rating	Number	Percent
Heavy use (daily)	4	8
Medium use (weekly)	14	27
Light use (monthly)	22	43
Never used	11	22
Totals	51	100%

The indication is that not very many employers place a high value on these subjects.

SCIENCE

The employers were asked to rate the amount of knowledge they feel an automotive mechanic needs in the science areas.

Science	Knowledge is Essential		Some Knowledge Necessary		No Knowledge Necessary	
General Areas	#	%	#	%	#	%
Basic Chemistry	2	4	18	40	24	56
Basic Physics	7	16	19	42	19	42
Basic Science	9	19	28	49	15	32
Specific Areas	#	%	#	%	#	%
Properties of liquids	7	15	24	52	14	33
Change of state	6	13	25	56	14	31
Heat	12	27	23	51	10	22
Light	7	16	22	50	15	34
Sound	12	28	18	42	13	30
Magnetism	15	35	16	37	12	28
AC and DC electricity	25	51	21	43	3	6
Refrigeration	16	32	26	52	8	16
Work and energy formulas	5	11	22	49	18	40
Electronic theory	7	15	23	50	16	35
Basic fluids and laws	10	23	20	45	14	32
Gases, paints, lacquers, etc.	7	16	28	62	10	22
Plastic, glass, fabrics, etc.	2	4	29	66	13	30
Salts, acids, and bases	3	6	26	58	16	36
Batteries	30	63	16	33	2	4
Symbols and equations	6	13	30	64	11	23
Basic electricity	27	58	17	36	3	6

SCIENCE (cont)

This information represents the use ratings assigned to the areas of science by the employers and employees The employers and graduates were asked: In general, how would you rate the need for science for the automotive mechanic?

Use Rating	Employer		Employee	
	#	%	#	%
Need more science	16	35	114	44.5
Present knowledge is sufficient	24	52	124	48.5
Little to No science is needed	6	13	18	7
Totals	46	100%	256	100%

The area of science is an area of disagreement. Nearly all persons concerned with training or employing persons graduating from the automotive training programs of our State agree that many science subjects are a necessary part of an automotive training program. The disagreement comes from trying to define the necessary areas and subjects. Although most respondents tend to say that present courses are adequate, they also tend to indicate that only very little knowledge is essential in most of the specific subject areas. It appears that some effort should be made to separate out the areas of major importance and concentrate on them.

GENERAL EDUCATION

The employers were asked to rate the value of general education courses as they relate to the automotive mechanic doing his job.

General Education	Knowledge is Essential		Some Knowledge Necessary		No Knowledge Necessary	
	#	%	#	%	#	%
General English	24	49	22	25	3	6
Speech	17	35	25	52	6	13
Report writing	17	35	20	42	11	23
Ecomomics	10	21	26	54	12	25
Reading & understanding data	30	61	18	37	1	2

The following data is the value rating that the graduates and employers placed on general education courses.

Value Rating	Employer		Employee	
	#	%	#	%
Of great value	29	58	114	44.5
Of some value	20	40	124	48.5
Of little value	1	2	16	6
No value	0	0	2	1
Totals	50	100%	256	100%

There is a very high value placed on most of the general education courses.

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SALES AND MANAGEMENT

This information is the employers ratings for the area of sales and management.

Sales and Management	Knowledge is Essential		Some Knowledge Necessary		No Knowledge Necessary	
	#	%	#	%	#	%
Sales methods	18	41	18	41	8	18
Business Management	5	11	28	64	11	25
Marketing	5	11	22	50	17	39
Insurance	3	7	19	43	22	50
Finance	6	14	19	43	19	43
Retail selling	20	44	11	25	14	31
Customer Relations	31	69	10	22	4	9
Public relations	28	62	12	27	5	11
Shop management	17	35	28	58	3	7
Government Regulations	16	35	23	50	7	15
Interview Techniques	6	14	22	50	16	36
Wholesale selling	9	20	14	31	22	49
Service writing	13	28	27	59	6	13
Service Management	16	35	25	54	5	11
Public relations	25	54	17	37	4	9
Operate the Business	14	32	21	48	9	20
Service sales	24	52	16	35	6	13
Factory service	15	35	17	40	11	25

SALES AND MANAGEMENT (cont)

The employers were asked: In general, would you like to see more of these type of courses taught or would you rather see them taught less?

33 employers or 85% indicated they would like to see more of these type of courses taught.

6 employers or 15% indicated they would prefer the courses to be taught less.

The graduates were also asked the same question concerning the sales and management courses.

179 graduates or 76% indicated that they would like these courses increased.

56 graduates or 24% of those responding said that they would prefer to have these courses taught less.

The respondents were not given the choice of indicating that the present amount of courses in this area are adequate. The above information would become more valuable had they been given this choice.

METALS AND PLASTICS

The employers were asked to rate the amount of knowledge a beginning automotive mechanic should have in the areas of metals and plastics.

Metals and Plastics	Knowledge is Essential		Some Knowledge Necessary		No Knowledge Necessary	
	#	%	#	%	#	%
Machine shop	22	47	22	47	3	6
Gas welding	34	60	18	36	2	4
Arc welding	30	60	18	36	2	4
Welding aluminum	10	20	29	60	10	20
Brazing	30	67	13	29	2	4
Cutting metal with gas	31	65	14	29	3	6
Forging	6	12	20	42	22	46
Plastic molding processes	3	6	10	21	34	73
Die-casting	2	4	11	23	34	73
Heat treatment	9	19	13	28	25	53
Properties of Metals	15	32	24	51	8	17

The employers were asked to assign a use rating for the subject areas of metals and plastics The graduates responses for the same question are included for comparision purposes.

Usage rating	Employer		Employee	
	#	%	#	%
Daily	23	45	126	47
Weekly	19	37	85	31
Monthly	7	14	44	16
Never	2	4	16	6
Totals	51	100%	235	100%

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RELATED AUTO SUBJECTS

These related auto subjects are sometimes part of the regular automotive cirriculums, but are often separated out and taught in special classes. The employers were asked to consider the importance of these subjects to their beginning employees.

Related auto Subjects	Knowledge is Essential		Some Knowledge Necessary		No Knowledge Necessary	
	#	%	#	%	#	%
How to obtain Tech info & specs	31	63	15	31	3	6
Use of trade Manuals	35	70	14	28	1	2
Union & labor Organizations	2	4	25	51	22	45
Apprenticeship and journeymen	6	13	23	54	14	33
Retirement and Insurance	4	9	32	71	9	20
Dealership Organization	3	6	28	61	15	33
Further schooling for advancement	22	46	20	42	6	12
Parts department Procedures	10	21	29	62	8	17
Used and new Car preparation	10	22	19	41	17	37
Auto production Techniques	7	15	24	52	15	33
Sell merchandise	19	40	20	42	8	18
Auto body repair	9	18	24	49	16	33
Accessories	16	33	26	54	6	13
Air-conditioning	20	41	22	45	7	14
Light body repair	8	17	27	56	13	27

The employers were asked what importance they attached to the above subjects for the graduates they would employ.

25 or 49% indicate these subjects to be of major importance. 26 or 51% indicated them to be of minor importance. No one said they were of no importance.

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AUTOMOTIVE SUBJECTS

Employer responses

Brakes	Knowledge is Essential		Some Knowledge Necessary		No Knowledge Necessary	
	#	%	#	%	#	%
Theory of brakes and friction	36	86	4	9	2	5
Brake construction	41	82	7	14	2	4
Self energization	36	75	10	21	2	4
Hand brakes	28	65	13	30	2	5
Power brakes	33	70	12	26	2	4
Adjustment of Brakes	40	84	5	10	3	6
Flushing and Bleeding	40	87	4	9	2	4
Brake relining	40	85	5	11	2	4
Drum and shoe grinding & fitting	40	85	3	6	4	9
Cylinder overhaul and repair	39	85	5	11	2	4
Disc brakes	33	78	5	12	4	10

Chassis and Ride Control Theory	Knowledge is Essential		Some Knowledge Necessary		No Knowledge Necessary	
	#	%	#	%	#	%
Chassis and Ride control theory	27	63	11	26	5	11
Springs	29	65	13	29	3	6
Shock absorbers	33	70	10	21	4	9
Wheel alignment Theory	32	70	11	24	3	6
Wheel alignment visual inspection	33	72	10	22	3	6
Wheel alignment Road test	32	68	11	23	4	9

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AUTOMOTIVE SUBJECTS (cont)

Employer responses

Chassis and Ride Control	Knowledge is Essential		Some Knowledge Necessary		No Knowledge Necessary	
	#	%	#	%	#	%
Wheel alignment Service	32	68	12	26	3	6
Lubrication	37	79	8	17	2	4
Fluid system	37	79	8	17	2	4
Lubrication Inspection serv.	34	74	10	22	2	4
Rear independent suspension system	31	67	11	24	4	9
Wheel balancing Theory	35	75	9	19	3	6
Balancing wheels (static & dynamic)	32	70	12	26	2	4
Diagnosis of Suspension problems	34	76	7	15	4	9
Tire tread and wear	32	70	10	22	4	8
Plies and tire size	27	61	12	27	5	12
Radial tire design	28	61	13	28	3	6
Tire care	27	59	14	30	5	11
Tire service	25	54	18	39	3	7
Tire construction	28	61	15	33	3	6
Tire rotation	30	65	12	26	4	9
Differentials Theory	29	62	24	30	4	8
Rear axle theory	28	61	15	33	3	6
Description of axle types	28	61	15	33	3	6
Wheels	30	65	13	28	3	7
Drive lines	30	66	13	28	3	6
Leaf springs	31	66	13	28	3	6
Front end Suspension systems	33	73	9	20	3	7

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AUTOMOTIVE SUBJECTS (cont)

Employer responses

Engine Principles of Operation	Knowledge is Essential		Some Knowledge Necessary		No Knowledge Necessary	
	#	%	#	%	#	%
Engine principles of operation	37	86	6	14	0	0
Component parts	35	81	8	19	0	0
Tolerances of Components	32	76	9	22	1	2
Theory of Internal combustion	32	74	11	26	0	0
Detonation	32	76	10	24	0	0
Preignition	33	77	10	23	0	0
Engine Efficiencies	32	76	10	24	0	0
Trouble shooting engine troubles	40	93	3	7	0	0
Lubrication system Theory	34	76	11	24	0	0
Cooling System Theory	Knowledge is Essential		Some Knowledge Necessary		No Knowledge Necessary	
	#	%	#	%	#	%
Cooling system Theory	34	78	9	20	1	2
Heat exchangers	30	68	14	32	0	0
Heat transfer	33	75	11	25	0	0
Troubleshooting	38	88	5	12	0	0
Repair and service	37	86	5	12	1	2

AUTOMOTIVE SUBJECTS (cont)

Employer responses

Automatic Transmission Theory	Knowledge is Essential		Some Knowledge Necessary		No Knowledge Necessary	
	#	%	#	%	#	%
Automatic Transmission theory	23	53	18	42	2	5
Basic principles of operation	26	60	14	33	3	7
Torque Specifications	21	49	17	40	5	11
Torque converters	24	56	14	33	5	11
Hydraulic systems	22	51	16	37	5	12
Transmission Gearing	22	53	16	38	4	9
Removal of Major units	25	59	15	36	2	5
Power flow at various shift points	21	49	18	42	4	9
Adjustments	29	67	11	26	3	7
Be familiar with several types	30	71	10	24	2	5
Tune-up Theory, Practice, & Procedure	38	85	6	13	1	2
Theory of Basic Electrictiy	36	86	6	14	0	0
Electrical Systems	35	78	9	20	1	2
Standard ignition	31	71	12	27	1	2
Transistorized Ignition systems	32	75	10	23	1	2
Timing advance Mechanisms	35	81	6	14	2	5
Starters	35	82	7	16	1	2
Alternator charging Systems	37	86	5	12	1	2
Generator charging Systems	35	82	7	16	1	2

AUTOMOTIVE SUBJECTS (cont)

Employer responses

Electrical Systems (cont)	Knowledge is Essential		Some Knowledge Necessary		No Knowledge Necessary	
	#	%	#	%	#	%
In-depth theory in the above systems	33	77	6	14	4	9
Trouble shooting Electrical systems	37	86	5	12	1	2
Servicing the Electrical systems	34	83	6	15	1	2
Fuel Systems	#	%	#	%	#	%
Fuel systems	32	73	11	25	1	2
Theory on fuels and carburetion	33	72	13	28	0	0
Combustion process	32	70	13	28	1	2
Additives	29	65	15	33	1	2
Fuel feed Systems	35	76	11	24	0	0
Component parts	32	71	13	29	0	0
Pressure and Temperatures	31	69	14	31	0	0
Principles of Carburetion	35	78	10	22	0	0
Carburetion Accessories	33	73	12	27	0	0
Types of Carburetors	31	68	14	31	1	2
Fuel injection	26	59	17	39	1	2
Purpose of Supercharging	21	45	23	49	3	6
Effects of altitude	28	58	15	31	5	11
Trouble shooting the fuel system	38	83	6	13	2	4
Servicing the fuel system	37	82	7	16	1	2
Theory of emission control systems	31	69	14	31	0	0
Electrical control of emmission systems	30	67	14	31	1	2
Principles of Emission systems	31	69	12	27	2	4

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JOB ACTIVITIES

The employers were asked to rate the degree of proficiency they feel the Vocational school graduate should have in certain areas.

Job activity	Proficiency is Essential		Some Proficiency Advisable		No Proficiency Necessary	
	#	%	#	%	#	%
Align front Axles	12	26	27	59	7	15
Balance wheels	21	48	19	43	4	9
Replace front end components	23	49	21	45	3	6
Diagnose front end problems	20	45	29	45	4	10
Tune engines	39	81	8	17	1	2
Test electrical Units	37	79	9	19	1	2
Repair electrical units	25	54	18	39	3	7
Use equipment to diagnose Ign.	36	74	12	24	1	2
Operate chassis dynomometer	7	17	23	53	13	30
Repair standard Transmissions	16	34	21	45	10	21
Repair automatic Transmissions	24	51	15	32	8	17
Diagnose trans. & driveline problems	16	35	27	59	3	6
Repair rear axle Assemblies	22	47	15	32	10	21
Grind valves	21	47	19	42	5	11
Overhaul or rebuild engines	17	35	21	44	10	21
Light body repairs	5	11	24	55	15	34
Sell Merchandise	10	22	24	53	11	25
Manage a department	7	15	20	44	19	41
Operate the business	6	14	15	33	24	53
Do manufacturing Processes	7	16	11	25	25	59
Repair or replace driveline parts	12	35	19	56	3	9
Brake drum Turning	15	47	9	28	8	25
Carburetor Overhaul	21	51	18	44	2	5

The employers were asked to rate the subject knowledge and skills of employees who come from the vocational school programs

Subject	Strong		Moderate		Weak	
	#	%	#	%	#	%
Brakes	15	38	24	62	0	0
Chassis and Ride Control Theory	3	8	24	65	10	27
Engine Principles of Operation	17	44	22	56	0	0
Cooling Systems	11	28	26	67	2	5
Automatic Trans.	4	10	18	49	15	41
Theory of Basic Electricity	12	31	18	46	9	23
Electrical Systems	9	23	24	60	7	17
Tune-up Theory, and Procedures	16	41	22	56	1	3
Fuel Systems	10	25	28	70	2	5

Our schools are sometime accused of not providing training for people entering the foreign car agencies and other places that repair foreign cars. The employers were asked to assess the need for more training in this area.

Does your place of business include involvement with the foreign car market.

15 or 33% said yes, while 31 or 67% said No

If the employer answered yes to the above question he was asked if the graduates had the proper background for this work.

9 or 47% said Yes, while 10 or 53% said No.

SELECTED ACTIVITIES

A number of selected activities were listed and the employers were asked to indicate the amount of involvement they feel the average mechanic experiences in these activities.

Selected activity	Always (daily)		Frequently (weekly)		Occasionally (monthly		Never	
	#	%	#	%	#	%	#	%
Use equipment to diagnose problems	30	57	19	36	4	7	0	0
Solve customer Complaints	17	35	16	33	10	21	5	11
Sell merchandise	17	36	15	32	8	17	7	15
Act as a Service writer	5	10	13	27	19	40	11	23
Prepare repair estimates	10	23	6	14	19	43	9	20
Maintain equipment	31	69	4	9	9	20	1	2
Do mechanical Repairs to cars	35	75	5	11	3	6	4	8
Write technical Reports	4	9	10	21	14	30	19	40
Work on an assembly line	3	7	4	10	2	5	31	78
Run your own business	1	2	4	9	9	21	30	68
Manage a business for someone	1	2	4	9	16	37	22	52
Work for a parts department	3	7	6	13	20	44	16	36
Do used or new car prep	9	21	8	19	15	36	10	24
Maintain production Machinery	10	25	5	12	11	28	14	35
Work as a jobber salesman	2	5	1	2	11	25	30	68
Work as an auto service manager	2	5	6	14	13	31	21	50

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PERSONAL INTERVIEW SECTION

CHAPTER IV

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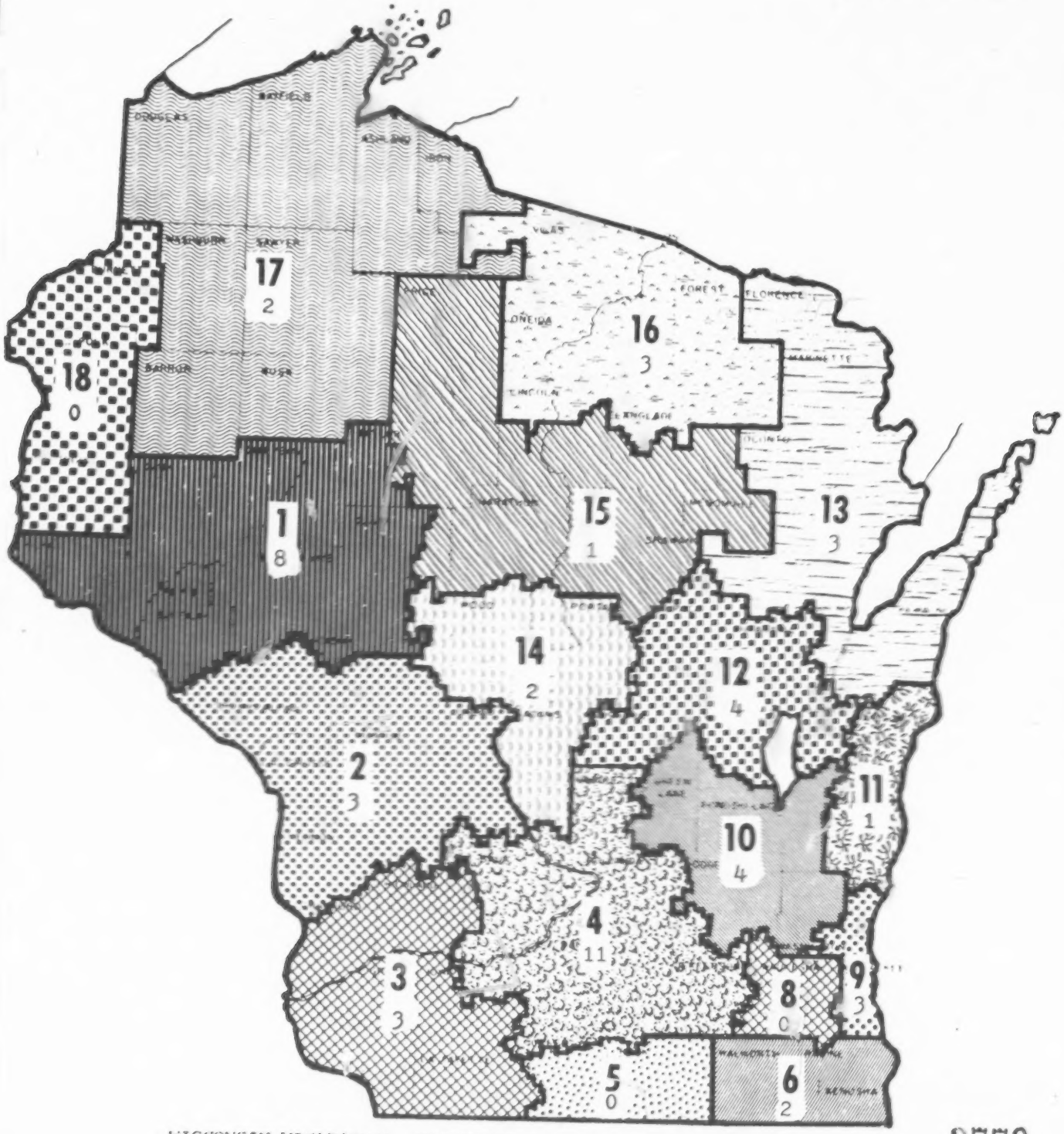
State of Wisconsin \ BOARD OF VOCATIONAL, TECHNICAL & ADULT EDUCATION

Locations by district of personal visits by investigators.

EUGENE I. LEHRMANN
State Director
137 EAST WILSON STREET
MADISON, WISCONSIN 53703



WISCONSIN VOCATIONAL, TECHNICAL AND ADULT EDUCATION DISTRICTS

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APPROVED FOR OPERATION JULY 1, 1971

PERSONAL INTERVIEWS

The personal interviews section of this report includes data from the interviews only. 50 personal interviews were held, but only 29 of these interviews resulted in the interviewer being able to get the survey instrument completed. In all 50 interviews the investigators were able to obtain the opionions of the employers. These opinions are worth reading as they give a through look into what these employers think of our graduates.

The data included with this section of the report was the data collected with the 29 surveys that were filled out during the interviews. Only the general summary of this information is included on the premise that the mail returned report is very complete and reflects the views of the average automotive employer.

SUMMARY

Number of automotive mechanics employed:

A total of 171 mechanics were employed. This represents an average of 6 per employer.

What percent of your automotive mechanics are employed on a half time or less basis?

5 out of 171 or 3% were employed on this basis.

Approximately what percent of your automotive mechanics are employed directly from the vocational schools?

Out of 20 employers responding to the question, they indicate that 33% of their employees come from this source.

It should be noted that the above statistic on numbers employed from vocational schools cannot be used as a guide.

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PERSONAL INTERVIEW SUMMARY (cont)

All employers interviewed said that direct contact with the school or the student was the method used to obtain the employees from our schools.

The average monthly pay for a beginning employee direct from the schools was $357.00.

In general, how would you rate the need for mathematics for the automotive mechanics?

Heavy use (daily)	Medium use (weekly)	Light use (monthly)	Never used
18	8	3	

This group of employers feels that the employee has heavy use for mathematics.

In general, how would you rate the need for science for the automotive mechanic?

Need more science	Present knowledge is sufficient	Little to No science is needed
4	22	4

Please rate the value of general education courses as they relate to the automotive mechanic doing his job.

Of great value	Of some value	Of little value
20	9	0

In general, would you like to see more sales and management courses taught, or would you rather see them taught less in schools for auto mechanics.

More	Less
17	5

Not all 29 employers responded to this question.

PERSONAL INTERVIEW SUMMARY (cont)

In general, the automotive mechanics use the information taught in the areas of metals and plastics:

Daily	Weekly	Monthly	Never
15	12	2	0

Does your place of business include involvement with the foreign car market?

Yes	No
9	7

If yes, do your mechanics have sufficient background to do foreign car repairs?

Yes	No
5	4

A total of 13 respondents did not answer this question at all.

The following pages contain the comments and remarks by some of the employers interviewed. These pages are worthwhile reading as they are the feelings of these employers regarding our graduates and our programs.

EMPLOYER COMMENTS

The following thirty two pages are comments concerning the graduates and the automotive programs. These are the comments that were collected by the personal interview method.

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Most of the fellows don't want to work, lack ambition. They need to realize that they must start on the bottom to find out what they know and how badly they want to work.

They think that when they come from school they are fine mechanics. The students should be informed that they are not going to be line mechanics.

Whatever is necessary to make them think, that is what needs to be done. They have a lot of knowledge, but they don't visualize why they must do certain things, as why change oil in a car.

Teach them what an employer expects. They should be good salesmen for their employer.

There is a lack of good behavior. They don't know how to act, when to talk, and when not to talk.

They fail to understand that there must be a profit made in order for them to have a job.

They don't understand the theory of the electrical systems. More electrical and air conditioning study is needed. Study only the basics of automatic transmissions and specialize in the respective shop.

More need for body repair and refinishing.

The graduate mechanic does not understand the basics of greasing a car, changing the exhaust system, etc. They want the line job.

In school, often the problems of the cars brought into the lab dictated the course of study. Suggests the student work on a mockup engine, under structured process of learning.

Summary:

More emphasis needs to be placed on the development of attitude toward work. The importance of experience as well as knowledge should be noted. There is a weakness in the areas of customer

relations and employer-employee relations. Acceptable behavior needs to be outlined.

The concept of operation for profit needs clarification.

Weak in electrical systems, air conditioning, body repair and refinishing. Devote less time to automatic transmissions; specialize on the job.

The student should work on a mockup engine under a structured process of learning.

Business:

Interviewed:

Comments:

Mr. believed that most instructors at the schools were very knowledgeable and did a good job of teaching. He believed the vocational schools are keeping up to date on modern equipment for testing.

Knowledge of principles of engine operation and electrical systems is quite satisfactory with the graduate. Need to emphasize emission control systems although the graduate had some knowledge of the subject.

After the first year of school, allow the student to select a specialty area of concentration, such as air conditioning, transmissions, etc.

The graduate didn't like to work alone on large jobs.

Summary:

Instructors at the schools are knowledgeable and do a good job of teaching; schools are keeping up to date on testing equipment.

Graduates have adequate knowledge of the principles of engine operation and electrical systems. Emphasize emission control systems.

After the first year of school, allow the student to select a specialty area.

Salary:
$3.00 / hour

Business:

Interviewed:

Comments:

Attitude is the one most important trait needed by the person behind the counter, along with aptitude. Much of the work or business is on a personal basis, and the employee must have a very positive attitude toward the customer.

The number one priority is the customer, and each customer is treated equally.

If the employee has an open mind, the employer can mold him to meet the specific needs of the system. If the employee does not have an open mind, he cannot be molded.

Attitudes are developed from abilities, the desire to work, interest, and aptitude.

The employer must develop an incentive, interest, bonus, and reasonable benefits to the employee. At the same time, the employer expects a lot from the employee.

This employer is not concerned that the employee have a strong background in the automotive system operations.

Summary:

The most critical qualities of the vocational-technical school graduate are attitude and aptitude. The employer may provide further incentive through bonuses and other benefits, but he does so with expectations of the employee.

The graduate should realize that the number one priority is the customer.

Business:

Interviewed:

Comments:

The graduates of vocational school do not have a good basic knowledge of electrical systems. Would like the students to have a better understanding of the electrical scope.

Need more understanding of tires.

Only a basic knowledge of the cranking and ignition systems is necessary.

In some cases, the graduate mechanics do not speak out and try to sell themselves and/or the product to the customer.

They have a general good attitude toward work. This employer has experienced very little turnover. Generally quite satisfied with the student graduates.

Summary:

The graduates have a good basic knowledge of electrical systems --stress the electrical scope. Need more understanding of tires. Only a basic knowledge of cranking and ignition systems is necessary.

Place more emphasis on customer relations and salesmanship.

Has found a general good attitude toward work among the graduates. Is quite satisfied with the student graduates.

Salary:
$160 / week plus
$2.25 / hour minimum

Business:

Interviewed:

Comments:

The problems encountered in the shop are a lot different than they are in the school.

More screening before going into the auto track; some apparently not inclined in the auto mechanics field.

The students might select one particular area and specialize in it, mainly in the mechanical end such as differentials, transmissions, etc. At the same time, obtain general knowledge in the other areas.

There is demand for a good automatic transmission man. Do not need a lot of specialized training for a particular company in automatic transmissions as the employer will send him to a specialized school.

There is a great demand for air conditioning mechanics.

The tune-up mechanic needs in-depth knowledge of pollution control. All graduates should have knowledge of this area.

Get some experience on trucks, air brake systems, trailer systems.

Spend more time on safety in whatever they are doing.

The graduates have a satisfactory understanding of brakes, electrical systems, and engines.

There is no need for clerical experience.

Most of the graduates have good customer relations and fellow-worker relationships.

When the mechanics are under the apprentice program, they don't apply themselves as they should and their productivity is at a low level. There is not much concern for their employer. Stress that if the mechanic is good for his employer, he increases his own security on the job.

Summary:

Students should consider specialization in one particular area. School should conduct more screening of the students' avocational choices.

Disparity between school lab problems and on-the-job problems.

There is demand for automatic transmission and air conditioning mechanics.

Technical areas to emphasize include pollution control, trucks, air brake systems, trailer systems. Stress safety in all areas.

The graduates have a satisfactory understanding of brakes, electrical systems, and engines. There is no need for clerical experience.

Most graduates have good customer relations and fellow worker relationships.

Work attitudes need improvement. Relate his productivity to the whole picture.

Apprentice freshman salary
is 60% of $4.50.

Business:

Interviewed:

Comments:

It is a "must" for graduates to be knowledgeable about air conditioning. Emphasize emission control system--it is becoming more important year after year.

More emphasis needs to be put on the test equipment. There is too much guessing, which causes the customer cost to go up and develops poor customer relations.

Instill in the student the necessity of being accurate, and not part correct.

Public relations should receive more emphasis. All mechanics are involved with the customer. They need to understand what to say and what not to say.

The graduate seems to lack enthusiasm, and in some instances, is not interested in becoming a first rate mechanic.

The employer should not expect the mechanic to make him much money during the first year.

Summary:

Technical skills that need emphasis include air conditioning, emission control systems, and test equipment. Accuracy in all areas is a must.

Further develop the student in good public relations principles. If possible, create enthusiasm for their profession.

Business:

Interviewed:

Comments:

The graduates have a good knowledge of electrical diagnosis. Knowledge of engine overhaul is good. They could use more specialization in automatic transmissions. They also need a good background in air conditioning. Background of the emission control systems is necessary, although the federal government does not allow much work on them.

The graduate mechanic must have background in alignment and suspension work. They need to be able to do alignment and know how to correct related problems.

The graduates do understand the manuals well and how to use them.

The graduate mechanic needs to realize that he should be able to increase his speed on the job. Many are not aware of why they should do a good job, e.g., for promotion and/or better salary.

The mechanics need more study in business economics. They need to learn why the customer must pay a given price in order for the business to keep going. The mechanics do not understand what is going on in the financial world; many come from families where they would not learn this concept.

Stress customer relations. When to speak and what to say is important. They need a mastery of English.

Summary:

Complimented the graduate mechanics on electrical diagnosis, engine overhaul, understanding and use of manuals.

Expressed need for more emphasis in technical areas of automatic transmissions, air conditioning, emission control systems, alignment and suspension.

More study of business economics is needed. Stress necessity of profit margin. They should be familiar with financial concepts.

Emphasize customer relations.

Relate mechanic efficiency to salary increases and promotions.

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Business:

Interviewed:

(This business primarily works with lift trucks.)

Comments:

There is a great demand for lift truck mechanics.

Electric lift trucks are the coming power drive unit as they usually operate in an enclosure.

The graduates have little hydraulics experience or electronic knowledge. There is a real lack of knowledge of the electrical systems.

Knowledge of LP and standard gas is needed. Good welding experience is needed.

Rapport with customers is usually good.

Summary:

There is a great demand for lift truck mechanics. Give some attention to electric lift trucks.

The graduates need experience in hydraulics and welding. Stress electrical systems, electronics, LP and standard gas.

Customer relations is good.

Salary:

New men	$3.95
Experienced mechanic	$4.55

Business:

Interviewed:

Comments:

Mr. is satisfied with the graduate mechanic.

The graduate should have a good general background of automotive basics and specialize in one or two areas, e.g., air conditioning.

The graduate mechanics are good on cranking systems and ignition systems. There is a lack of understanding of the alternator.

Stress neatness and cleanliness.

Customer relations is good. The mechanic needs to be able to write up what was done on a car to justify the labor to the customer's satisfaction.

Summary:

Mr. Tomasvewski is satisfied with the graduate mechanic.

The graduate should have a good general background and one or two specialties.

The graduate mechanics are good on cranking and ignition systems. Stress the alternator. Emphasize neatness and cleanliness. The mechanic needs to be able to write up the work done on a car.

Customer relations is good.

Business:

Interviewed:
Service Manager

Comments:

The students from the vocational schools who are auto mechanics have a lot more confidence than those who do not have vocational experience.

There is a great need for good mechanics, but the wages are going to have to improve. The student should be made aware of the wages and benefits of auto mechanics (which are very little).

Good human relations and personal contact from the mechanic to the customer is important.

The graduate mechanic understands engine overhaul, but needs more experience in electrical, charging, ignition, and starting systems. The graduate should understand the basic principles of emission control systems. The mechanic needs a lot of knowledge and experience in troubleshooting, especially in the areas of power windows, brake lights, backup lights, etc. In the wiring harnesses there are often pinched wires or other production problems. Body fitting (adjusting doors, etc.) and upholstery repair is necessary.

Summary:

Areas needing emphasis in the vocational school program include the electrical, charging, ignition, starting, and emission control systems; troubleshooting, particularly in the electrical system; body fitting and upholstery repair; and customer relations.

There is a need for vocational school graduate mechanics, but the graduate should be advised what to expect re: wages and benefits.

Business:

Interviewed:

Comments:

Do not understand the various electrical systems (cranking, charging, and ignition), or how to do basic troubleshooting. Need understanding of basic electrical principles. Weak in knowledge of disc brakes; do not know how to fix brake squeaks.

There is a need for a better understanding of the tune-up procedure.

Do not remember how to operate a scope. May not be the lack of responsibility of the school, but possibly the lack of recent experience on the part of the mechanic.

Need to emphasize the area of air conditioning.

The graduates are strong in automatic transmissions and engine rebuilding.

Do not understand that a profit must be made in order for the mechanic to be employed. The graduate mechanics did not have an understanding of the flat rate practice; they do not realize they cannot take unlimited time for a repair.

Fail to realize the graduate mechanic must serve the customer, serve the employer, and make a profit for the employer.

Need to fill the gap of communication with the customers. Ability to sell the customer on things that need to be replaced on the car.

Summary:

This employer found the graduate mechanic to be strong in the areas of automatic transmissions and engine rebuilding, but weak in electrical systems, disc brakes, tune-up procedures, scope operation, and air conditioning. He also noted a need for improvement in customer relations and operation of a business for a profit.

Business:

Interviewed:

Comments:

The schools should offer a good basic program in the respective fields of interest, and the graduate can then go into the field and learn the specialties.

Do not require so many unrelated courses in which the student is not interested, as this kills his educational incentive.

The work experience obtained through the school while the student is in school, or during the summer between the two years, is very worthwhile.

The graduate does not use the trigonometry and algebra much but a general background is good.

Psychology related to the specific area of study is worthwhile and should be continued.

Need more study on how the parts catalog system works--how to use the catalog to locate parts.

Schools do not teach bookkeeping relevant to the specific areas of study.

The student should learn how to do diagnostic work on the electrical systems without the use of expensive test equipment. Many shops do not have this test equipment.

The basic theory of emission control systems should be taught, but the specific skills related to the different makes and models will be acquired in the field.

Summary:

The educational program should offer a strong basic program with less emphasis on specific skills which can be acquired on-the-job. Do not require the student to take many courses unrelated to his major, although a general background in trigonometry, algebra and psychology is worthwhile.

Areas needing further emphasis include the parts catalog system, electrical system diagnosis without expensive test equipment, general knowledge of emission control systems, and bookkeeping related to specific areas of study.

Business:

Interviewed:

Comments:

Feels the graduate is getting more education on-the-job than at the school. Feels there are poor teachers and poor discipline within the schools.

The machine education the students receive in the vocational schools is satisfactory; the graduates will specialize at the industry.

Vocational school will give the students the automotive fundamentals; the graduates may then go to specialized schools to develop a specialty in a given area, e.g., automatic transmissions.

A good math background is needed. Not so much emphasis on algebra and trigonometry, but be able to read instruments, e.g., dial indicators, micrometers, calipers.

Skills desired, but often lacking, in automotive graduates: how to do inventory, inventory card filing, and record keeping of what is in stock. Proper valve adjustment and grinding.

Summary:

Qualifications of teachers and discipline of students within vocational-technical schools need scrutiny.

Automotive fundamentals and machine education as taught in the vocational schools are satisfactory; graduates may develop a specialty by further training at a specialized school or on-the-job.

A general background in math is needed. Technical skills deserving emphasis include inventory maintenance, proper valve adjustment and grinding, and instrument reading.

Business:

(Sells parts)

Interviewed:

Comments:

Believes auto mechanic courses are adequate. Also small engine and marine engine curriculums are good.

Many students don't know how to handle customers and schools should give more direction. The graduate has to be a mechanic, salesman, and preacher. He needs to possess good selling ability, and personality is very important in sales.

There is not sufficient emphasis placed on how a business is run and that a profit must be made to succeed.

No problem with emission control in this business.

Need more knowledge in welding and welding equipment. More emphasis needs to be put on front-end principles of operation and chassis; frame alignment and front-end alignment; wheel balancing; body finishing and painting; farm and tractor mechanics; and electrical systems.

Summary:

In general, courses in auto mechanics, small engine, and marine engine are adequate. Customer relations, salesmanship, and operation of a business need to be stressed.

Need more knowledge of welding and welding equipment; front-end and chassis; frame and front-end alignment; wheel balancing; body finishing and painting; farm and tractor mechanics; and electrical systems.

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Business:

Interviewed:

Comments:

The program should be longer. Too much on the very basics.

Graduates fail to understand that they must make a profit for their employer, or they are not any good. Need (1) good communication with customer, (2) salesmanship, and then (3) mechanical ability. If you don't have the customers you don't need the machanical ability. Should let the customer watch you work in order to build his confidence in you as a mechanic; tell him what you are doing to his car. Many mechanics lack tact and courtesy and are too cocky with the customer.

They are not cleanliness conscious. A clean mechanic is a good mechanic. Keep the shop clean and organized.

Need to have a basic knowledge of how a shop is run.

The average garage is geared to tune-up, brake overhaul, emission control, carburetion, etc., and these areas should be stressed in the school. Engine overhaul is not too important; it is a specialty and done in an engine overhaul shop.

Need to establish a procedure for tune-up, brake, and other types of work. Many graduates don't know how to clean wheel bearings, pack them, take them out of the wheel, etc.

Place more stress on electrical system diagnosis outside of the ignition, charging, and starter systems, e.g., lights, radio, panel lights. Should know the electrical theory.

More emphasis needed on front-end alignment and diagnosis of front-end problems of all kinds. Need to know how to make safety checks, which serve the customers and make a profit for the employer.

Summary:

Emphasis needs to be placed on communication with the customer (customer relations), salesmanship, tact and courtesy. The graduate needs to understand the operation of a business and necessity of profit. Clearnliness and organization should be Stressed through practice.

Establish and teach a procedure for tune-up, brake overhaul, and other types of work. Stress these procedures and emission

control, carburetion, and place less emphasis on engine overhaul.

More knowledge is needed of diagnosis of front-end problems of all kinds and electrical system diagnosis for areas other than ignition, charging and starter systems. Know how to make safety checks.

Business:

Interviewed:

Comments:

Graduates of vocational-technical schools should possess a positive attitude toward their work.

There is a great demand for expertise in air conditioning and emission control systems.

Summary:

Single, most important attribute desired is a positive attitude toward their work. Technical areas to be emphasized would be air conditioning and emission control systems.

Business:

Interviewed:

Comments:

Mechanics in this shop do more assembly work, not so much automotive mechanic repair except with Air Force trucks.

Looks for vocational graduate rather than off-the-street person when hiring. Believes the vocational school, in Oshkosh, in field of automotive mechanics is doing an excellent job.

These areas must be emphasized to young people:

1. Respect for authority.
2. Recognition that they are selling their time and talents.
3. Employer has right to require certain things from an employee.
4. Customers go through the plant and observe employees at work.
5. Realization that the customers are the boss. They must please the customers. If there is no profit, a job won't exist.

Feels the unions don't really serve a positive purpose. Graduates begin employment with a very positive attitude; after six months, the union somehow destroys some of this in some employees. Need to realize there are two sides to all stories. Be more positive in their work.

Math background necessary if they are going to advance in machine shop. Shop math is sufficient for automotive work. Importance of algebra and trigonometry depends upon how far they want to advance.

Place more emphasis on blueprint reading. Need drafting experience to conceptionalize three dimensional objects. Be able to read technical manuals, bill of materials, schematic drawings, understand specifications.

Need more emphasis on metal fabric, welding, sheering, metallurgy, strain on metal. Need to achieve better use of tools.

Teach basic principles of how dynamometer works; specialized training on operation of dynamometer can be obtained on the job.

Concentrate on the fundamentals.

Summary:

Develop positive attitudes toward their work. Emphasize respect for authority, recognition that they are selling their time and talents, customer relations, profit concept. Explain unions.

Concentrate on the fundamentals of automotive mechanics. A math background is necessary. Place more emphasis on blueprint reading, ability to read technical manuals, bill of materials, schematic drawings, specifications. Need more study on metal fabric, welding, sheering, metallurgy, strain on metal, basic principles of the dynamometer. Work to achieve better use of tools.

Business:

Interviewed:

Comments:

Need a lot of practical experience, along with classroom theory on all aspects.

Need more education in areas of chassis and ride control. Knowledge of emission control and air conditioning is in great demand.

Need a good general knowledge of all phases of electrical systems.

Summary:

The student should graduate with an understanding of the theory, as well as practical experience regarding automotive maintenance and repair. Areas to receive particular emphasis are chassis and ride control, emission control, air conditioning, and electrical systems.

Business:

Interviewed:

Comments

He looks for these attributes in an individual when considering employment: ability to work with humbers, appearance, and a high school education.

Good human relations is most important.

Employees lack a positive attitude toward interests of their employers. Returning to work following the noon hour break is an example of their unwillingness to work until it is time to work.

There is a lack of understanding of how the system works from manufacturer to wholesaler to jobber, e.g., why it is possible to buy cheaper from Fleet Farm than from jobber.

Learn stock and control of stock. Have an understanding of the components and know what the part looks like.

Comments (Employees):

More emphasis needed on salesmanship: selling the product (why the customer should buy a particular item over another item) and selling yourself to the public. Revise course in psychology to meet specific needs, e.g., meeting people.

A course is needed on how to use parts catalog and price sheets; how to identify parts by customer descriptions. Need more teaching aids.

Get into more transmissions and actually show the items to the students.

Some employers didn't seem to care that they had graduated from a vocational school.

Summary (Mr. McCaben):

Emphasize development of good human relations and employer-employee relations. Also stress importance of appearance.

The graduate in this field must understand how the system works (from manufacturer to wholesaler to jobber). He must learn stock and control of sotck, understand components and know what the part looks like.

Summary (Employees):

More education needed to develop qualities of salesmanship and customer relations. Add information on parts catalog and price sheets to the program. More in-depth study needed on transmissions; use visuals.

Need to educate possible future employers on advantages of hiring vocational school graduates.

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Business:

Interviewed:

Comments:

The vocational-technical school falls short in general education: cannot properly read manuals, electrical diagrams, and vacuum systems.

The student needs a general automotive background rather than specializing in one area. The specialist will not get the job as there is not enough work in one specific area.

The mechanic must understand the theory of the various systems --electrical, fuel, etc.

Little is needed in the sciences beyond a general background. Blueprint reading not necessary.

The mechanic must be able to get along with the customer and fellow workers. Good appearance is important. Suggests a survey of the customers to find out what they feel.

Try to get manufacturers to financially support the students in automotive vocational education. Possible in-service training.

Vocational-technical schools should teach attitude and professionalism. Encourage self-study and self-responsibility, which result in promotions, etc.

Schools should have diagnosis equipment. Many mechanics do not understand correct diagnosis procedure; need to learn how to approach a problem. The graduate mechanic should have a good understanding of tolerance and how to read instruments. The school should teach something about the metric system. An understanding of warranty is needed; some mechanics take longer on a job than they should.

Would give them on job training if they understood the basics.

Summary:

The vocational-technical schools need to provide a good general education and general background in automotive mechanics rather than specializing in one area. Theory should be stressed. Involve manufacturers if possible.

Vocational-technical schools should teach attitude and professionalism.

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Customer relations and employee-employee relations are important. Also stress appearance.

Technical skills to be given special consideration include diagnosis procedure (and how to approach a problem), tolerance and instrument reading. An understanding of the metric system and of warranty procedures would be helpful.

Business:

Interviewed:

Comments:

The educational program needs to put more emphasis on:

1. Basic service work, sales, product knowledge.
2. Good basic knowledge of electricity.
3. Ignition system.
4. Tune-up procedure.
5. Basic principles of operation of the respective systems (teach the broad concept and then work on the specifics).
6. A broad program rather than in-depth specifics.
7. Components and what they are supposed to do.
8. Air conditioning (apparently not taught at all in the schools).
9. Up-to-date teaching (don't use old techniques).
10. A program for service stations with less time spent on transmissions and engine overhaul.

Personality and attitude are big factors, although as such, may not be able to be taught in schools.

This employer noted that too many young people feel they don't need to work unless they can make $5.00 / hour, whether or not they know or can do anything.

His employees are more profit conscious since he has put them on an hourly rate plus commission.

Summary:

The needs pointed out include a broad educational program that would stress the basic principles of operation of the systems and a working knowledge of the components. Specific areas of need include basic service work, tune-up procedure, sales, product knowledge, basics of electricity, ignition systems, and air conditioning. In all, there is a need to use up-to-date techniques of teaching. Personality and attitude should not be ignored.

Business:

Interviewed:

Comments:

Emphasis should be given to air conditioning, brakes, and tune-up. More study is needed of cooling system diagnosis. Teach the students how to approach an electrical problem or diagnostic procedure; also need to know how to check out an alternator, battery, starter, etc.

The study of air conditioning is very important; also study, to some degree, the emission control system.

A thorough knowledge of the scope is helpful, yet some people with a good background and lots of experience do not need the scope a great deal.

Service stations are not designed for engine rebuilding, transmission work. Emphasis on tires and wheel balancing not needed.

Although the service station is not involved with diesel engines too much, there is a great demand for good diesel mechanics. Mr. Tilot would set up a diesel service if he could find a good diesel mechanic.

Instill within the student the concept of selling the product to make a profit. The graduate needs to be able to do basic bookwork and math.

Bookkeeping and good business people are scarce. If the graduate mechanic possesses these abilities, he could develop a business of his own rather than working for someone else forever.

Stress the importance of customer relations. A good employee has mechanical ability, looks neat, can read and write.

Summary:

Technical areas which should be emphasized include air conditioning, brakes, tune-up, cooling system diagnosis, electrical systems, diagnostic procedure, alternator, battery, starter, and the scope.

Areas that do not need special emphasis for the service station employee include engine rebuilding, transmissions, tires, and wheel balancing.

The ability to do basic bookwork and math is important. The graduate should understand the concept of selling the product to make a profit.

Stress customer relations.

Business:

Interviewed:

(Company emphasis is on diesel mechanics.)

Comments:

There is a demand for more diesel mechanics; there is no diesel vocational school in the Green Bay area. Need for truck mechanics and some emphasis should be placed on this area when teaching auto mechanics.

They need more in-depth understanding of the electrical system.

Emphasize the need to record the work done on an engine, vehicle mileage when work was done, the importance of keeping a good maintenance record of each engine.

Need more study on air brakes.

Develop the correct attitude toward work and interest in doing a good job. Too much concern given to the union; workers hide behind the union and don't do a good job.

Summary:

There is a real need for diesel and truck mechanics. Emphasis should be given to these areas when teaching auto mechanics.

Study air brakes and the electrical system. Learn to keep engine maintenance records.

Help students develop the correct work attitude and interest in doing a good job.

Business:

Interviewed:

Comments:

Fellows with insufficient ability are being put into the automotive field. Employees must have ability to reason. A good employee must know how to write.

Graduates are weak on theory.

Need to know the entire procedure for running your own business, including the bookkeeping procedure. Be able to read a catalog and make out a work order. Teach that a profit must be made in order to operate a business.

Stress the importance of making a good impression with the customer.

Without question, electricity needs emphasizing. Wiring harnesses are in need of study. Need to be able to read a schematic of electricity. There is a lack of understanding of heat loss.

Summary:

An employee in the automotive field must understand the theory, and have ability to reason and to write. The graduate mechanic should understand the operation of a business, the profit concept, be able to do bookkeeping, read a catalog and make out a work order. Customer relations should also be stressed.

Technical areas to be emphasized include electricity, electric schematics, wiring harnesses, and the concepts of heat loss.

Business:

Interviewed:

Comments:

Would like to see the schools strongly encourage the students to go into a specialty, such as automatic transmissions. This business could employ a full-time automatic transmission man. Along with the specialty, a general auto mechanic background is needed.

Do not stress engine overhaul. Most of this is done in a machine shop or traded for a short block. Valve and head work is sufficient.

Stress the electrical diagnosis procedure and the individual electrical systems. Put more emphasis on power steering.

No real demand at the present for emission control as it is usually ignored.

Schools apparently do a good job in teaching students how to write up repair orders, work performed, and parts supplied.

Impress upon the students that their attitude and personality is important to them and to their employer. The graduates do a good job in looking out for the employer.

Good public relations should be highly stressed. The graduates need to realize the customer is their paycheck. Need to listen to the customer, judge the customer's personality, and work with him as indicated.

Summary:

In addition to acquiring a general auto mechanic background, encourage students to specialize in an area, such as automatic transmissions.

Technical areas that do not require emphasis include engine overhaul and emission control. Do stress electrical diagnosis procedure, electrical systems, and power steering.

Knowledge in writing up repair orders is good.

Impress upon students the importance of their attitude and personality. Place much emphasis on public relations. Explain the relationship between the customer and their paycheck.

Salary: $2.10 / hour

ONE AND TWO YEAR DIPLOMA

PROGRAMS SECTION

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EMPLOYEE SURVEY DATA

The table below contains the data describing the number of graduates contacted by the survey. One and two year diploma programs and associate degree programs. (described by district)

DISTRICT	Number of Surveys	Diploma Programs		Associate Degree	
		Returned	Not Returned	Returned	Not Returned
1	107	29	78		
2	70	2	68		
3	14	4	10		
4	157 59*	43	114	15	44
6	75 44*	14	61	12	32
9	86 21*	32	54	6	15
10	56	18	38		
11	48	12	36		
12	70 36*	19	51	10	26
13	123	24	99		
14	41	11	30		
15	107	37	70		
16	38	8	30		
17	62	19	43		
Totals	1054 160*	272	782	53	117

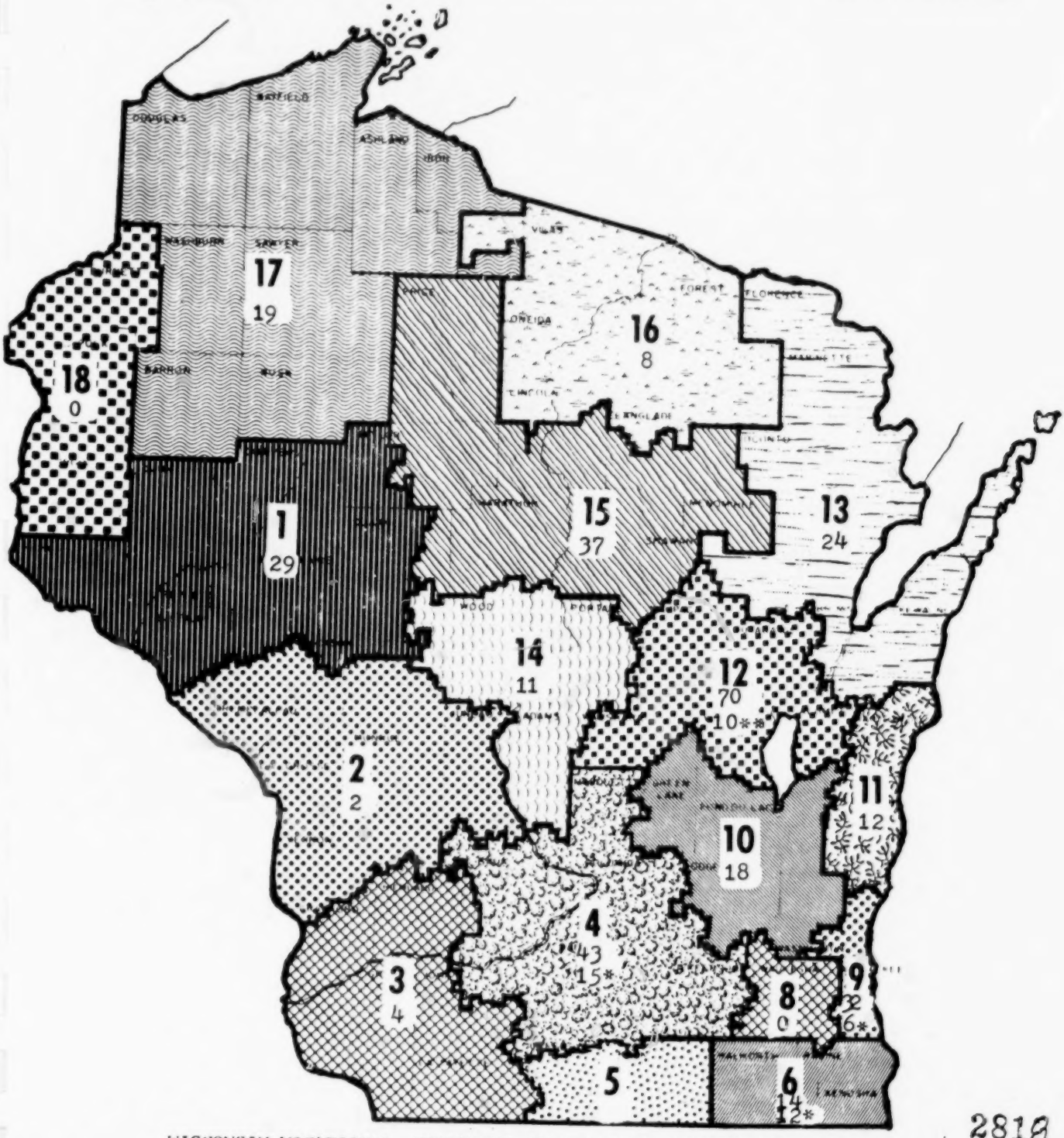
* Associate degree

One and two year diploma 26% returns
Associate degree 33% returns

State of Wisconsin \ BOARD OF VOCATIONAL, TECHNICAL & ADULT EDUCATION

Locations of respondents for one and two year diploma and associate degree program graduates.

EUGENE I. LEHRMANN
State Director
137 EAST WILSON STREET
MADISON, WISCONSIN 53703



WISCONSIN VOCATIONAL, TECHNICAL AND ADULT EDUCATION DISTRICTS

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APPROVED FOR OPERATION JULY 1, 1971

PERSONAL DATA: One and two year diploma programs.

The following chart indicates the years from which the graduates responding to the survey graduated.

Year of graduation	Number	Percent
67	27	10
68	40	15
69	49	18
70	63	23
71	93	34
Totals	272	100%

EMPLOYMENT DATA:

What is your present employment status?

Status	Number	Percent
Full time	250	93
Part time	8	3
Unemployed	10	4
Military Service	24	9
Totals	268	109

The numbers and percentages do not add properly because, some graduates checked both full time and military.

EMPLOYMENT DATA (cont)

Question asked: How well does your automotive training relate to your present job?

Relationship	Number	Percent
Directily related	167	62
Somewhat related	62	23
Not related	40	15
Totals	269	100%

Although 85% of the graduates indicate that they work in directly related or somewhat related jobs, a significant amount of graduates (15%) are not getting jobs related to their training.

The following chart relates to the job titles that were reported by the graduates. Job titles of an automotive nature are listed and the statistics recorded. Any job not directly related to the automotive field is listed as miscellaneous.

Title	Number	Percent
Mechanics or Technicians	151	62
Service Manager	13	6
Equipment Maintenance	2	1
Misscellanous	76	31
Totals	242	100%

EMPLOYMENT DATA (cont)
One and two year diploma programs

The respondent was asked to indicate the length of time that he held each job. To get an indication of whether the graduates are getting jobs and sticking to them the statistics for the last job listed on the survey was recorded. The data is listed by a span of months and by the number and percent holding a job for that particular span.

Length of job in months	Number	Percent
1-6	37	14.5
7-12	71	28
13-24	63	25
25-48 or more	83	32.5
Totals	261	100%

The graduates were asked if their initial job was obtained before their graduation date. This data gives an indication of the numbers of students that are working in the automotive field while attending school. Only jobs considered automotive in nature were to be considered by the respondent.

Job Obtained	Number	Percent
Before Graduation	148	57
After Graduation	113	43

The above charts indicate that the average graduate obtains a job before graduation and tends to hold his present job 24 months or longer.

EMPLOYMENT DATA (cont)
One and two year diploma programs

Question asked: What assistance did you have in obtaining your initial job?

Catagory	Number	Percent
Friend	89	33
Parent	33	12
School Guidance & Placement	15	5.5
Teacher	21	8
Wisconsin Employment Serv.	13	5
Newspaper Ad.	28	10.5
Dept Head	2	1
Other	66	25
Totals	267	100%

It appears that friends produce more jobs in the automotive field than any other source. It appears that our schools are not doing the job of placing graduates. It is recommended that more effort to develop a working relationship with industry to help improve our placement record.

Degree of job satisfaction expressed by district.

How do you like your present job?

DISTRICT NUMBER	I am very pleased	I am fairly satisfied	I am satisfied but plan to change jobs	I dislike my job, I will change jobs
1	10	9	8	1
2	1	0	1	0
3	0	1	2	0
4	18	9	13	1
6	5	6	5	2
9	10	6	5	2
10	9	6	1	2
11	5	2	4	1
12	4	5	6	8
13	10	9	4	1
14	2	5	3	2
15	9	10	14	2
16	0	2	5	0
17	8	5	4	2
Totals	91	75	80	24

Automechanics, one and two year diploma programs.
Data is expressed in number of graduates only.

Average monthly rates of pay for graduates at the time of job entry .

Automechanics programs- One and two year diploma programs

DISTRICT	1	2	3	4	6	9	10	11	12	13	14	15	16	17	%
Under $400	20	2	1	15	13	13	10	10	10	16	8	21	5	15	61
$400-$500	5	1	19	3	11	3	2	7	5	3	10	3	2	1	28
$500-$600	1		1	7	1	3	2		1	1		3			8
$600-$700				1		2	1			1	1				2
$700-$800				1									1		.5
$800-$900															
$900-$1000														1	.5
Over $1000															

Average monthly rates of pay for graduates at the time of survey.

Under $400	8	1	1	3	5	8	4	4	4	4	2	11	8	7	26
$400-$500	7	1		9	5	6	6	2	7	10	6	11	4	4	30
$500-$600	6		1	10	2	6	2	2	4	3	2	7		5	19
$600-$700	4			12	2	4	2	2	2	2	1	2		1	13
$700-$800	1		1		2	1	1	1	1	3		2			5
$800-$900				4		4	1		1		1				4
$900-$1000				2				1							1
Over $1000				1			1					1			1

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MATHEMATICS

The following information is the subject evaluation for the area of mathematics for automechanics in one and two year diploma programs.

The question asked: (Please rate the amount of knowledge that you as an automotive mechanic feel is essential to do the type of work you are presently performing.)

MATHEMATICS	Knowledge is Essential		Some Knowledge Necessary		No Knowledge Necessary		No Response
	#	%	#	%	#	%	
Basic Mathematics	208	78	53	20	6	2	
Algebra	37	14	127	49	98	37	
Slide rule use	15	6	73	28	169	66	
Fractions	141	53	103	39	21	8	
Powers and roots	16	7	77	31	152	62	

The following information is the use rating given the subject of mathematics by graduates from the one and two year diploma automechanics. The information is recorded by district.

Information asked for: (In general how would you rate the need for mathematics in your present job?)

The data is recorded by number of graduates only.

DISTRICT	Heavy use	Medium use	Light use	Never used
1	8	13	5	1
2	1	0	1	0
3	0	2	1	0
4	28	13	8	0
6	8	7	4	2
9	9	11	9	0
10	8	7	1	0
11	4	5	1	1
12	6	13	2	0
13	11	6	6	0
14	7	5	0	0
15	18	14	5	1
16	2	2	3	2
17	6	10	2	1
TOTALS	116	112	48	8

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COMMENTS
For The Area Of Mathematics
Graduate Responses

"A math course is helpful, especially in fractions."

"Sometimes you could use more math."

"You use mathematics during every job figuring out what the cost will be to do the job for the customer."

"Need more on decimal equivalents."

"I feel that math plays an important role in a mechanic role and I feel that my knowledge of math will help me."

"Basic math is essential, also we use micrometers and feeler gauges and proper use of these are important. I wish I would have had more math as far as figuring gear ratios, cubic inch displacement etc. I had it, but it didn't stick."

"Basic math for estimates and labor rates, parts and materials. Suggest more time spent on metric system."

"Knowledge of advanced math is not necessary, but sometimes helpful."

"The subjects we had were good if only all the teacher would have taught them in direct relation to auto mechanics."

" I feel that even though you may not use directly in the job you are schooling for, but when the chance for advancement or more schooling come along it is essential."

"Daily use of math, but not very complex math. Subraction and addition."

"Math in my job is mostly in connection with weights and tolerances and speed formulation."

"Basic math and decimals are absolutely essential."

"I work as a lumber piler and at the end of the day you have to figure out the amount of footage you have piled during the day."

SCIENCE

The following information is the subject evaluation for the area of science for the two year associate degree programs.

Information requested: Please rate the amount of knowledge that you as an automotive mechanic feel is essential to do the type of work you are presently performing.

General Science Subject Areas.

SCIENCE	Knowledge is Essential		Some Knowledge Necessary		No Knowledge Necessary	
	#	%	#	%	#	%
Chemistry	16	6	123	46	127	48
Physics	33	13	105	40	125	47
Basic Science	88	33	117	45	60	22
Specific Subject Areas						
	#	%	#	%	#	%
Properties of liquids	81	30	132	49	58	21
Change of State	68	25	133	50	66	24
Heat	132	50	106	40	29	10
Light	78	30	122	46	65	24
Sound	94	35	113	43	59	22
Magnetism	114	43	99	38	49	19
AC and DC Electricity	194	72	56	20	21	8
Refrigeration	92	35	108	40	65	25
Work & energy Formulas	55	20	117	44	98	36
Electronic Theory	96	36	108	40	64	24

SCIENCE (cont)

Automechanics do not place a high value on science courses in relationship to their present jobs. Most graduates however, do feel that science rates at least Some knowledge necessary. It is interesting to see that all but 16% of the respondents indicate that some science beyond high school is needed.

Question asked: How would you rate the need for science courses in curriculms of the auto mechanics programs?

Need category	Number	Percent
Present courses are adequate	155	58
More science is needed	70	26
Less science is needed	22	8.5
No science beyond High School	20	7.5
Totals	267	100%

Many principles used in teaching automotive subjects are in the area of physics and science. It becomes the job of automotive instructors to do a better job of selling the value of these subjects. More cooperation and communication between instructors in the automotive and science areas seems to be needed.

COMMENTS
For The Area Of Science
Graduate Responses

"Some knowledge of science is good, but not a great deal of time should be spent on science."

"Most of my science needs are for background in writing technical articles."

"Practical training on the subject itself, such as electrical systems and more in the mechanical field to help with experience on the job."

"More new things are learned everyday and I think a person should know more about them."

"A much more basic science course is needed."

"I had science in gigh school and this gave me 80% of the knowledge required for auto mechanics."

"I hate sciences."

"Courses are adequate, but should pertain to trade being studied."

"To my past experience the need for science is not needed that much."

"I do not think it is really necessary, but in my case I took an extra course in science while in tech school and I think it helped me some."

"The knowledge of chemistry helps you know what happens to oil inside an engine, coolant in a cooling system and explain why preventative maintainance is necessary."

"More on properties of liquids, heat, magnetism and electrictiy."

"There isn't a great need for science because the only things that are taught in that course are usually taught over in the shop theory course."

"Only science dealing with engine metal and body metal directly relating, not general science."

"I would like to see more on A.C. and D.C. electricity and electronic theory."

GENERAL EDUCATION

The following information is the subject evaluation for the area of general education. The information is for the one and two year diploma programs.

Information requested: Please rate the degree of knowledge that you as an automotive mechanic feel is essential to do the type of work you are presently performing.

General Education	Knowledge is Essential		Some Knowledge Necessary		No Knowledge Necessary	
	#	%	#	%	#	%
General English	123	46	127	47	20	7
Speech	120	44	119	44	33	12
Report writing	71	27	127	48	65	25
Economics	84	32	124	46	60	22
Human Relations	190	70	71	26	10	4

Human Relations received a very high rating, with only 4% of the respondents indicating "no knowledge necessary". The area of Human Relations is also held in high regard by the employers.

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GENERAL EDUCATION (cont)

The graduates were asked to rate the general education subjects as to their value in their present job.

Information requested: In general, how would you rate the need or value of general education courses as they relate to your present job.

VALUE RATING	Number	Percent
Of great value	114	44.5
Of some value	124	48.5
Of little value	16	6
Of no value	2	1
Totals	256	100%

This information is a valuable tool to take to the students involved in our automotive programs. It is apparent by the response that graduates do recognize the value of general education. Many students complain the most about these subjects. It is worth noting that graduates do not feel that our schools are wrong in teaching these subjects.

COMMENTS
For The Area Of General Education
Graduate Responses

"All of the general education subjects are important when trying to express yourself, or explain various procedures to fellow employees or customers."

"Human relations is very important no matter what your occupation is."

"I think general education before hand is very good because it helps a person get along with others and gives him a chance to express himself properly with others."

"Human relations and customer relations are quite important in my job."

"I feel that the vocational schools should push more human relations and report writing, mainly in the field of description writing."

"These subjects are very important to me in management, where a general mechanic does not need them as much."

"Human relations was put to good use."

"High School english courses, I feel are adequate."

"The courses aren't too bad as are."

"If a person didn't care to learn english in grade and high school, he isn't going to learn it in technical college."

"Human relations was the only subject of value to the jobs I studied for."

"Main use for these courses is in dealing with customers."

"I feel these courses are essential whenever you have to deal with people. Also, the economics related courses are helpful in my own personal life."

At least 20 of these comments concerned the high value placed on human relations courses.

SALES AND MANAGEMENT

The following information is the subject evaluation for the subjects of sales and management. The respondents are from the one and two year diploma programs.

Information requested: Please rate the degree of Knowledge that you as an automotive mechanic feel is essential to do the type of work you are presently performing.

Sales and Management	Knowledge is Essential		Some Knowledge Necessary		No Knowledge Necessary	
	#	%	#	%	#	%
Sales methods	122	46	108	41	35	13
Business Management	125	47	91	34	49	19
Marketing	70	27	117	45	72	28
Insurance	69	27	133	51	57	22
Finance	83	31	124	47	57	22
Retail selling	88	34	106	42	61	24
Customer Relations	191	69	67	24	18	7
Public Relations	191	69	67	24	18	7

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SALES AND MANAGEMENT (cont)

The graduates were asked: In general, would you like to see more of these type of courses taught or would you rather see them taught less?

Of the 235 respondents 179 or 76% indicate they feel that more of these subjects should be taught, while 56 or 24% indicate that they would prefer them to be taught less.

Many comments in this section lend themselves to indicate that many graduates feel that these subjects come in handy several years after graduation. Only a small percentage of the graduates move to these positions immediately after graduation. These facts would indicate that it would seem best to not put much emphasis on these subjects during the programs, but it would be wise to offer more of these subjects on a trade extension basis.

It is also apparent from many of the comments(see comments section) that many graduates think that these subjects should be tied directly to the automotive field. Instructors teaching in these areas should be aware of this need and by use of resource persons and other methods should attempt to make the subjects relate to the automotive field.

COMMENTS
For The Area of Sales And Management
Graduate Responses

"One or all of the sales and management subjects are important to any individual in everyday life."

"These courses are always useful no matter what kind of job you have."

"These courses are not very helpful to a mechanic."

"I feel the modern day auto mechanic has to be able to sell service as well as perform it."

"If you want to be any kind of a success at any business you have to know how to sell not only your business, but yourself as well."

"Instead of spending a lot of time in courses like science , sales and management, I feel more time should be spent in shop theory and the shop practical learning."

"Customer relations should be stressed in these courses."

"I think some courses may not be important directly to a mechanic, however they are all important to individual developement."

"The automotive industry in the last decade or so has had the misfortune of being judged as"cheats".

More training programs and experience will help to change this opinion of the public."

"courses were not adequate."

" I think there should be fewer of these courses taught and more emphasis placed on other areas of mechanics."

"In my job nothing is accomplished unless something is sold, so I feel these sales and management courses are essential."

METALS AND PLASTICS

Many of the subjects in this area are directly related to the automotive work that graduates perform. There are many subjects in this area that are not directly related. It is one perpose of this section to provide the reader with an assesment of how the graduates feel about the need of these subjects in relationship to their work.

Information requested: Please rate the degree of knowledge that you as an automotive mechanic feel is essential to do the type of work you are presently performing.

Metals and Plastics	Knowledge is Essential		Some Knowledge Necessary		No Knowledge Necessary	
	#	%	#	%	#	%
Machine shop	172	63	85	31	15	6
Welding	101	75	56	21	11	4
Forging	40	15	136	51	89	34
Foundry	27	11	131	49	107	40
Plastic molding Processes	26	10	107	40	133	50
Die-casting processes	31	12	113	43	119	45
Heat treatment	120	45	104	39	43	16
Properties of Metals	137	52	99	37	30	11

2837

METALS AND PLASTICS (cont)

The graduate was asked to rate the amount of use that he had for these subjects. He could check daily, weekly monthly and never. The following chart represents the choices of the graduates. The chart gives the total number answering and also the percent that number represents.

Metals and Plastics	Number	Percent
Daily	126	47
Weekly	85	31
Monthly	44	16
Never	16	6
Totals	271	100%

The areas of Forging Foundry, Plastic molding processes and Die-casting processes need to be reviewed. These areas may have some worth, but the graduates seem to feel that they are not worth a lot of time in our curriculums.

2838

COMMENTS
For The Areas Of Metals And Plastics
Graduate Responses

"A lot of welding. Other than that they are just helpful."

"We do a lot of welding, molding of plastics and you also have to know the different properties of metals."

"A lot of welding and machine shop work."

"Lots of welding on exhaust systems and welding broken parts that can't be replaced.

"Welding and properties of metal are very important."

"I think that these courses are essential, because when you go out looking for a job and you are asked about any of these subjects your chances of getting a job is greater if you know something about them."

"You must have this knowledge in order to do alsost any big job in the shop."

"Sometimes when machinery breaks down I usually get in some welding and some use of the machines in the maintenance shop. I was thinking about going into machine shop training myself. I was taught basic welding in auto mechanics."

"The school I attended did not have half of the courses that I checked and you need them all to be a successful mechanic. There are so many problems that you don't realize about until you start the job."

"Basic knowledge of these subjects help you to understand the reasons for failure of parts and components."

"Sometimes parts are just not available and you have to improvise or at least repair old parts, so this knowledge is very helpful."

"Teach more of these rather than the sales and english."

"Welding is the most improtant, both gas and arc welding."

RELATED AUTO SUBJECTS

Related automotive subjects are those subjects that are considered part of the automotive curriculums, but are usually separated out and taught as special classes. Some of these subject areas are considered specialties by some servicing outlets, while others consider the same subject to be a normal part of all mechanics duties.

Information requested: Please rate the degree of knowledge that you as an automotive mechanic feel is essential to do the type of work you are presently performing

Related Auto Subjects	Knowledge is Essential		Some Knowledge Necessary		No Knowledge Necessary	
	#	%	#	%	#	%
Parts department Procedures	133	53	97	38	23	9
Used and New Car Preparation	112	44	101	40	43	16
Air-conditioning	120	45	104	40	39	15
Accessories	175	67	57	22	28	11
Fluid Power (hydraulics)	167	65	71	27	22	8
Drawing Interpretation	104	40	118	46	36	14
Auto body repair	54	21	147	58	53	21

RELATED AUTO SUBJECTS (cont)

The graduates were asked to rate the subjects of parts department procedures, used and new car preparation, air-conditioning, accessories, fluid power, drawing interpretation and auto body repair. They were asked which of these subjects they considered most important. They listed the three they considered most important. A point rating system was used to determine the degree of importance the graduates assigned tc each subject. A first place rating was equal to three, a second place rating was equal to a two and a third place rating was equal to a one.

	Rating
Accessories	335
Fluid power (hydraulics)	309
Parts department procedures	277
Air-conditioning	206
Used and new car preparation	199
Drawing interpretation	184
Auto body repair	133

The subject of accessories rates very high with the graduates. This subject is one that is also mentioned as needing more attention by employers. The subject of accessories is very broad. This characteristic makes it hard for a school to develope a programs that meets the needs of all employers. This area and some of the other subjects on this page should be given some time and effort to help develop some better courses.

COMMENTS
For The Area of Related Auto Subjects
Graduate Responses

"The related auto subjects were all helpful, but not essential."

"Supposedly we had these classes when I attended."

"Air-conditioning is now in almost every vehicle and a good refrigeration man makes good money."

"I wish I knew more about accessories."

"Need more electrical trouble-shooting in school."

"I would have liked to had more air-conditioning training than I had."

"Fluid power is coming on strong in agriculture use and should be touched on in school."

" I feel these the most important because if a guy goes out for a mechanics job he is going to have to work on these so he should know something about them."

"I think that more emphasis should be put on the parts of the car that needs the most repairs."

"I feel that fluid power is most important, because I do a lot of automatic transmission work."

"Fluid power should be related more to automotive use than to a basic fluid power course."

AUTOMOTIVE SUBJECTS

Automotive subjects are naturally an important part of any automotive program. However, it is important to get the feel of how the graduate thinks these subjects are helping him in the job that he has.

Information requested: please rate the degree of knowledge that you as an automotive mechanic feel is essential to do the type of work you are presently performing.

One and two year diploma programs

Automotive Subject	Knowledge is Essential		Some Knowledge Necessary		No Knowledge Necessary	
	#	%	#	%	#	%
Brakes	235	87	22	8	14	5
Wheel alignment and balance	193	71	61	23	17	6
Engine Principles	240	90	13	5	14	5
Cooling systems	234	87	18	7	17	6
Standard trans. and clutches	202	77	44	17	17	6
Automatic Transmissions	174	65	72	27	21	8
Electrical Systems	239	90	14	5	24	5
Fuel systems	233	87	22	8	13	5
Rear axles	200	74	54	20	16	6

The graduates of the one and two year diploma programs were asked about their involvement in the foreign car repairs.

Question asked: Does your present job include any involvement with the foreign car market?

109 respondents or 42% of those answering said yes.

150 respondents or 58% of those answering said no.

Question asked: If you checked yes, did your program put enough emphasis on foreign car repairs?

27 respondents or 24% of those answering said yes.

84 respondents or 76% of those answering said no.

It is apparent that a substantial number of our graduates are involved in the repair of foreign cars. It is further apparent that our programs are not paying enough attention to this phase of the automotive repair market.

The graduates were asked the following questions:

> What subjects would you suggest should have been added to your program to make it of more value to your job and yourself?
>
> What subjects would you feel should be deleted from the auto mechanics program that you received?

The chart on the following page indicates the number of students suggesting that a course should be added or deleted. Only those subjects that were indicated by five or more students are recorded.

This chart represents the courses that the one and two year diploma program graduates suggested be added or deleted from their programs.

Subject	Delete	Add
Economics	7	2
Human relations	10	19
English (communications)	34	1
Psychology	6	1
Business management	3	15
Physics	14	1
Science	10	4
Mathematics	11	7
Foreign car servicing	1	6
Automatic transmissions	0	21
Machine shop	0	24
Air-conditioning	0	24
Fluid power	1	7
More hours in automechanics	0	15
Welding	0	15
Engine rebuilding	1	6
Auto body	0	14
Tune-up & carburation	0	9
Exhaust emmission controls	0	6
Parts courses	0	6

Continued

Subjects add or delete chart (cont)

Subject	Delete	Add
Marketing & advertising	3	12
Social science	5	0
Book keeping	3	7
Std. trans. & rear axles	0	10
Drafting	7	1
Front end alignment	0	8
Brakes	0	5

Because of space usage these courses were not listed by district. The statistics for a particular district are available on request.

2846

JOB ACTIVITIES

Degree of proficiency that one and two year diploma program graduates feel is need, based on work experience.

Job activity	Proficiency is Essential		Some Proficiency Advisable		No Proficency Necessary	
	#	%	#	%	#	%
Align front axles	143	57	95	38	14	5
Balance wheels	163	65	71	29	16	6
Replace front and components	175	68	70	28	9	4
Diagnose front end problems	168	67	76	30	8	3
Tune engines	219	88	19	8	9	4
Test electrical units (starters etc)	184	73	61	24	8	3
Repair electrical units	184	73	61	24	8	3
Diagnose electrical & ignition problems	211	84	32	13	8	3
Operate a chassis dynomometer	72	30	120	49	51	21
Repair standard transmissions	148	58	94	37	12	5
Repair automatic transmissions	159	63	79	31	14	6
Repair or replace drive line parts	177	71	59	23	14	7
Diagnose transmission & drive line problems	189	76	49	20	11	4
Repair rear axle assemblies	145	60	88	36	9	4
Grind valves	173	69	57	23	19	8
Overhaul or rebuild engines	187	75	46	18	18	7
Do light body repairs	68	27	151	61	30	12
Sell merchandise	86	35	123	50	39	15
Operate the business	115	45	96	38	42	17
Do manufacturing processes	60	25	111	45	73	30
Manage a department	109	43	107	43	35	14

SELECTED ACTIVITIES

The graduates of the one and two year diploma programs were asked to rate the amount of involvement they might have with these selected activities.

Activity	Always (daily)		Frequently (weekly)		Occasionally (monthly)		Never	
	#	%	#	%	#	%	#	%
Use test equipment diagnose problems	124	50	77	31	27	11	20	8
Solve customer complaints	110	44	69	28	42	17	28	11
Sell merchandise	83	34	52	21	46	19	65	26
Act as a service writer	43	17	56	23	47	19	101	41
Prepare repair estimates	42	17	57	23	45	19	100	41
Maintain equipment	133	53	77	30	29	11	14	6
Do mechanical repairs on cars	192	74	34	13	22	9	11	4
Write a report	35	14	45	18	56	23	109	45
Work on an assembly line	7	3	8	3	10	4	223	90
Run your own business	20	9	12	5	27	12	173	74
Manage a business for someone	25	10	19	8	44	18	160	64
Work for a parts department	30	12	22	9	51	21	143	58
Do used or new car preparation	34	14	54	22	55	23	100	41
Work as a jobber salesman	13	5	14	6	26	10	195	79
Work as a service manager	25	10	25	10	40	17	154	63

ASSOCIATE DEGREE SECTION

2849

PERSONAL DATA: Associate degree programs.

The following chart indicates the years from which the graduates responding to the survey graduated.

YEAR OF GRADUATION	Number	Percent
67	8	16.5%
68	11	23%
69	8	16.5%
70	11	23%
71	10	21%
Totals	48	100%

EMPLOYMENT DATA

Question Asked: What is your present employment status?

Status	Number	Percent
Full time	38	81%
Part time	6	13%
unemployed	3	6%
Military Service	6	13%
Totals	53	100% + 13%

The numbers and percentages do not add up to the totals indicated in the number of graduates, because some respondents checked both full time and Military.

EMPLOYMENT DATA (cont)
Associate degree

Question asked: How well does your automotive training relate to your present job?

Relationship	Number	Percent
Directly related	31	69%
Somewhat Related	11	24%
Not related	3	7%
Totals	45	100%

The statistics seem to indicate that the graduates are obtaining jobs that are related to their training.

The following chart relates to the job titles that were reported by the graduates. Job titles of an automotive nature are listed and the statistics recorded. Any job not directly related to the automotive field is listed as miscellaneous.

Title	Number	Percent
Technician or Mechanics	21	49%
Service Manager	3	7%
Parts man	2	5%
Equipment Maintenance	0	0%
Miscellaneous	17	39%
Totals	43	100%

2851

EMPLOYMENT DATA (cont)
Associate Degree

The respondent was asked to indicate the length of time that he held each job. To get an indication of whether the graduates are getting jobs and sticking to them the statistics for the last job listed on the survey was recorded. The data is listed by a span of months and by the number and percent holding a job for that particular span.

Length in months	Number	percent
1-6	6	14%
7-12	8	19%
11-24	12	29%
25-48	16	38%
Totals	35	100%

The graduates were asked if their initial job was obtained before their graduation date. This data gives an indication of the numbers of students tnat are working in the automotive field while attending school. Only jobs considered automotive in nature were to be considered.

Job obtained	Number	Percent
Before Graduation	24	57%
After Graduation	18	43%

The above charts indicate that the average graduate obtains a job before graduation and tends to hold his present job 24 months or longer.

2852

EMPLOYMENT DATA (cont)
Associate degree

Question asked: What assistance did you have in obtaining your initial job?

Catagory	Number	Percent
Friend	15	38.5%
Parent	1	2.5%
School Guidance & Placement	4	10.5%
Teacher	2	5%
Dept. head	1	2.5%
Wisconsin Employment Ser.	2	5%
Newspaper Ad.	8	20.5%
Other	6	15.5%
Totals	29	100%

It is apparent that there is no set pattern as to the the method that the graduates are obtaining their first jobs. If anything pertinent is shown it seems to be that the schools are not doing a adequate job of helping the students find employment.

2853

Degree of job satisfaction expressed by district.
Two year associate degree programs.

Question asked: How do you like your present job?

DISTRICT NUMBER	I am very pleased	I am fairly satisfied	I am satisfied but plan to change jobs	I dislike my job, I will change jobs
	#	#	#	#
4	8	3	5	0
6	4	5	2	1
9	3	0	2	0
12	5	1	3	0

46% of the respondents indicate that they are satisfied with their present jobs while 28% indicate that they are satisfied, but plan to move on or up. 24% said that they were fairly satisfied while only 2% indicate that they will definitely change jobs.

It appears that most of the graduates from the associate degree programs are finding jobs that are to their liking and are able to advance themselves to higher paying positions more quickly than the graduates from the diploma programs.

Average monthly rates of pay for graduates at the time of job entry.

Automotive Technology programs

DISTRICT	4	6	9	12	%
Under $400	8	3	3	6	46
$400-$500	4	3	3	1	26
$500-$600	1	5			14
$600-$700	3			1	9
$700-$800					
$800-$900	1	1			5
$900-$1000					
Over $1000					

Average monthly rates of pay for graduates at the time of survey

Under $400	3	1	1	2	16
$400-$500	2	1	1	1	12
$500-$600	3	4	3	2	29
$600-$700	2	3		1	14
$700-$800	3	1		1	12
$800-$900		2		1	7
$900-$1000	2		1		7
Over $1000	1				3

2855

The following information is the subject evaluation for the area of mathematics for automotive technology graduates associate degree programs.

Information asked for: (Please rate the degree of knowledge that you as an automotive technician feel is essential to do the type of work you are presently performing.

MATHEMATICS	Knowledge is Essential		Some Knowledge Necessary		No Knowledge necessary		No Response	
	#	%	#	%	#	%	#	%
Basic mathematics	35	76	10	22	1	2		
Algebra	15	13	17	36	15	32		
Trigonometry	6	13	16	38	25	53		
Calculus	0	0	9	20	37	80		
Slide rule use	7	15	13	28	27	57		
Graphical interp	16	34	19	41	12	25		
Vector Applications	5	11	15	32	27	57		
Fractions	28	58	13	27	7	15		
Logarithms	2	5	6	13	38	82		
Analytic Geometry	3	7	13	30	28	63		

2856

The following information is the use rating given the subject of mathematics by graduates from the Associate degree automotive technology programs.

Information asked for: (In general how would you rate the need for mathematics in your present job?)

DISTRICT	Heavy use (daily)	Medium use (weekly)	Light use (Monthly)	Never used
	#	#	#	#
4	2	12	2	
6	7	2	2	1
9	2	1	3	
12	3	4	2	
TOTALS	14	19	9	1

2857

SCIENCE

The following information is the subject evaluation for the area of science for the two year associate degree programs.

Information requested: Please rate the degree of knowledge that you as an automotive technician feel is essential to do the type of work you are presently performing.

General subject areas.

SCIENCE	Knowledge is Essential		Some Knowledge Necessary		No Knowledge Necessary	
	#	%	#	%	#	%
Chemistry	4	9	22	49	19	42
Physics	9	19.5	25	54.5	12	26
Basic Science	20	44.5	19	42	6	13.5
Specific subject areas						
Properties of liquids	13	28	26	56.5	7	15.5
Mechanics	31	67.5	13	28	2	4.5
Change of State	16	35	24	52	6	13
Heat	26	57	23	28	7	15
Light	13	29	23	51	9	20
Sound	11	24	26	56	9	19
Magnetism	23	51	17	38	5	11
AC and DC electricity	36	78	8	17.5	2	4.5
Refrigeration	20	42.5	19	40.5	8	17.0
Energy	15	33	21	47	9	20
Work Formulas	9	19.5	27	58.5	10	22
Electronic Theory	18	39	19	41	9	20

2858

The associate degree graduates indicate by their response to the various subjects, that very little but basic science is needed as far as performance on their jobs is concerned. Upon study of the proceeding chart it is apparent that most feel that some knowledge is necessary in almost all of the subjects mentioned. The following responses to the need rating for science also indicates that these graduates feel that the present courses are adequate and should be continued.

Question asked: How would you rate the need for science courses in curriculums of auto technology programs?

Need category	Number	Percent
Present courses are adequate	28	61%
More science is needed	13	28%
Less concentration on these courses is needed	4	9%
No science beyond High School	1	2%

The main comment of the students regarding the area of science was that many instructors fail to relate the various sciences to their main field of study. Some students suggest that the science needed could be taught by an individual well versed in automechanics.

GENERAL EDUCATION

The following information is the subject evaluation for the subject areas of General Education for the associate degree programs.

Information requested: Please rate the degree of knowledge that you as an automotive technician feel is essential to do the type of work you are presently performing.

Communications Skills	Knowledge is Essential		Some Knowledge Necessary		No Knowledge Necessary	
	#	%	#	%	#	%
Technical report writing	16	34	18	38	13	28
Speech	20	42.5	23	49	4	8.5
General English courses	16	35	29	63	1	2
Economics	8	17	27	57.5	12	25.5
American institutions	2	4.5	23	50	21	45.5
Human relations	10	43.5	21	45	5	11
Industrial organization	13	28	25	53	9	19

Report writing, speech and human relations are the courses that graduates feel are the areas of greatest importance. English rates very high in the some knowledge necessary catagory. American Institutions should be analysed with the possibility of removing it from the curriculumns considered.

The graduates were asked to rate the value of the general education and communications skills courses as they related to their present jobs.

Value rating	Number	Percent
Of great value	15	33%
Of some value	24	52%
Of little value	7	15%
Of no value	0	0%

The graduates were asked to rate these subjects as a group in relationship to how they affect them in their present jobs. The reaction seems to be that the courses are of some value in 52% of the cases and in 33% of the cases were considered of great value. There is a strong indication here that these courses should not only be continued but in some cases strengthened. The only exception to this indication is American Institutions. It is apparent that the graduates did not feel this particular course worthwhile.

2801

SALES AND MANAGEMENT

The following information is the subject evaluation for the subjects of sales and management. The respondents are from the associate degree programs.

Information requested: Please rate the degree of knowledge that you as automotive technician feel is essential to do the type of work you are presently performing.

Sales and Management	Knowledge is Essential		Some Knowledge Necessary		No Knowledge Necessary	
	#	%	#	%	#	%
Sales methods	16	35	19	41	11	24
Business Management	20	42.5	17	36	10	21.5
Marketing	9	19.5	20	43.5	17	37
Insurance	9	19.5	15	32.5	22	48
Finance	8	18	18	41	18	41
Government Regulations	9	19	26	55.5	12	25.5
Wholesale Selling	10	23	20	45	14	32
Retail Selling	11	25.5	18	42	14	32.5
Interview Techniques	12	26	20	43.5	14	30.5
Customer Relations	34	74	10	22	2	4
Service Management	27	59	15	33	4	8
Public Relations	27	59	18	39	1	2

METALS, MATERIALS AND PLASTICS

The metals, materials and plastics areas are studied by the associate degree graduates. At times subjects are studied as they relate to the automotive field and at times they are studied as they relate to their own particular field. The worth of these subjects for the automotive associate degree program can best be measured by how the graduates and their employers feel about the subjects worth.

Information requested: Please rate the degree of knowledge that you as an automotive technician feel is essential to do the type of work you are presently performing.

Metals Materials Plastics	Knowledge is Essential		Some Knowledge Necessary		No Knowledge Necessary	
	#	%	#	%	#	%
Machine shop	30	64	13	27.5	4	8.5
Welding	31	66	13	27.5	3	6.5
Forging	4	8.5	32	68	11	23.5
Foundry	4	8.5	31	64.5	13	27
Plastic molding processes	5	10	21	44	22	46
Die casting processes	5	10	29	60.5	14	29.5
Metallurgy	14	29	29	605	5	10.5
Heat treatment	17	35.5	25	52	6	12.5
Properties of Materials	27	56.5	18	37.5	3	6

2863

METALS, MATERIALS AND PLASTICS(cont)

The graduate was asked to rate the amount of use that he had for these subjects. He could check daily, weekly, monthly and never. The following chart represents the choices of the graduates. The chart gives the total number answering and also the percent that number represents.

	Number	Percent
Daily	21	46.5%
Weekly	17	38%
Monthly	5	11%
Never	2	4.5%
Totals	45	100%

The statistics indicate, that in general, the graduates feel that these types of courses are of value to themselves and their work. Some areas such as forging, foundry, plastic molding and die casting processes are not of prime importance and should be de-emphasized.

2864

RELATED AUTO SUBJECTS

Related auto subjects are those subjects that are considered part of the automotive curriculms, but are usually separated out and taught as special classes. The amount of knowledge that a graduate needs in these areas to do an effective job of being an automotive technician is one way that the value of these subjects to our programs can be judged.

Information requested: Please rate the degree of knowledge that you as an automotive technician feel is essential to do the type of work you are presently performing.

Related Auto Subjects	Knowledge is Essential		Some Knowledge Necessary		No Knowledge is Necessary	
	#	%	#	%	#	%
Parts Dept. Procedures	17	36	26	55.5	4	8.5
Used and New Car Preparation	14	30	22	47	11	23
Technical Drafting	6	13	26	54	16	33
Air Conditioning	22	46	19	39.5	7	14.5
Accessories	31	66	11	23.5	5	10.5
Fluid power (hydraulics)	27	56	19	40	2	4
Auto Production	12	26	25	54.5	9	19.5
Auto body repair	9	19.5	25	54.5	12	26

The above subjects are not the only ones offered in the auto technical programs of our State. The subjects were choosen to get a feel of how the graduates embrace these type of subjects. It is apparent that although they feel that some knowledge is necessary in most case, they do not feel that most of these subjects are essential to the programs.

RELATED AUTO SUBJECTS (cont)

The graduates were asked to rate the subjects of parts department procedures, used and new car preparation, technical drafting, air-conditioning, accessories, fluid power, auto production techniques and auto body repair. They were asked which of these subjects they considered most important. They listed the three they considered most important. The results are listed in the order reported most important by the graduates. A point rating system was used to determine the degree of importance the graduates assigned to each subject. A first place rating was equal to three, a second place rating was equal to a two and a third place rating was equal to a one.

	Rating
Fluid power(hydraulics)	69
Accessories	62
Air-conditioning	33
Parts department procedures	25
Technical drafting	23
Auto production techniques	18
Used and new car preparation	16
Auto body repair	15

The ratings received by fluid power and accessories make them the undeniable choice of the graduates. It would seem to indicate that the graduates prefer these two subjects to be taught in some depth and consider that most of the other subjects need only be touched on.

The graduates were asked about their involvement in the foreign car market and foreign car repairs.

Question asked: Does your present job include any involvement with the foreign car market?

23 graduates or 50% of those answering said yes.

23 graduates or 50% of those answering said No.

Question asked: If you checked yes, did your program put enough emphasis on foreign car repairs?

10 graduates or 42% of those answering said yes.

14 graduates or 58% of those answering said No.

No definite conclusions can be drawn from these answers, but it would be wise of our schools to keep abreast of the needs of organizations servicing foreign cars.

The graduates were asked the following two questions:

What subjects would you suggest should have been added to your program to make it of more value to your job and yourself?

What subjects would you feel should be deleted from the auto technology program?

The chart on the following page indicates the number of students suggesting that a course should be added or deleted. It is interesting to note that most students indicated that courses should be added (59). Only 23 times did students suggest that courses should be deleted.

The following chart represents the courses that graduates suggested should be added or deleted from their programs.

Associate Degree

SUBJECT	DELETE	ADD
Human relations	1	
English	2	
American Institutions	8	
Physics	4	3
Psychology	2	
Chemistry		1
Metallurgy		1
Strength of Materials		1
Machine Shop		3
Welding		6
Drafting		2
Diesel Engines		2
Tune up-Carburetion		6
Electrical Systems		4
Body		6
Engine Theory	1	
Mathematics	3	1
Economics	2	
Air-conditioning		3
Engine rebuilding		1
Automatic Transmissions		3
Frt. end alignment		2
Emission Controls		3
Parts		1

2868

AUTOMOTIVE SUBJECTS

Automotive subjects are naturally an important part of any automotive program. It is, however, important to get the feel of how the graduate thinks these subjects are helping him in the jobs that he has had or has.

Information requested: Please rate the degree of knowledge that you as an automotive technician feel is essential to do the type of work you are presently performing.

Automotive Subjects	Knowledge is Essential		Some Knowledge Necessary		No Knowledge Necessary	
	#	%	#	%	#	%
Brakes and Steering	40	89	4	9	1	2
Wheel alignment and Balance	35	76	9	19.5	2	4.5
Engine Principles	42	89	4	9	1	2
Engine repair Techniques	39	87	5	11	1	2
Cooling Systems	39	87	5	11	1	2
Std. Transmission and Clutches	37	80.5	8	17.5	1	2
Automatic Transmissions	34	74	10	22	2	4
Tune up Theory	40	87	5	11	1	2
Tune up Practice	41	89.5	4	8.5	1	2
Electrical Systems	43	93.5	2	4.5	1	2
Fuel Systems	41	89	4	9	1	2
Rear Axles	38	81	8	17	1	2

JOB ACTIVITIES

Degree of proficiency that associate degree graduates feel is needed, based on work experience.

Job Activity	Proficiency is Essential		Some Proficiency Advisable		No Proficiency Necessary	
	#	%	#	%	#	%
Align front axles	25	54	16	35	5	11
Balance wheels	25	55.5	14	31	6	13.5
Replace front end components	30	64	13	28	4	8
Diagnose front end problems	35	74.5	8	17	4	8.5
Tune engines	41	87	4	8.5	2	4.5
Test electrical Units	35	74.5	7	15	5	10.5
Repair electrical units	31	66	12	25.5	4	8.5
Diagnose elect. & ignition prob.	36	78	5	11	5	11
Operate chasis dynomometer	15	32.5	23	50	8	17.5
Repair standard transmissions	25	54	16	35	5	11
Repair automatic Transmissions	23	50	15	32.5	8	17.5
Diagnose trans.& driveline prob.	32	69.5	12	26	2	4.5
Repair rear axle assemblies	26	56.5	14	30.5	6	13
Grind valves	26	59	14	30	5	11
Overhaul or rebuild engines	32	68	10	21	5	11
Diagnose engine problems	39	85	5	11	2	4
Light body repair	13	29	19	42	13	29
Service & repair emission controls	27	59	12	26	7	15
Sell merchandise	9	20	24	53.5	12	26.5
Manage a department	16	35.5	22	49	7	15.5
Deal with customers	31	67.5	9	19.5	6	13
Operate the business	17	37	18	39	11	24
Do manufacturing processes	6	12.5	21	45	20	42.5
Supervise Manufacturing	6	13	19	41	21	46

SELECTED ACTIVITIES

The graduates were asked to rate the amount of involvement they might have with these selected activities.

Associate Degree

Activity	Always (daily)		Frequently (weekly)		Occasionally (monthly)		Never	
	#	%	#	%	#	%	#	%
Work with an engineer as an assistant	5	11.5	3	7	8	18	28	63.5
Work for a manufacturer doing technical work	7	16	1	2	4	9	32	73
Use test equipment to diagnose problems	24	52.5	13	28	3	6.5	6	13
Solve customer complaints	27	58.5	12	26	3	6.5	4	9
Sell merchandise	14	32	8	18	7	16	15	34
Act as a service writer	11	24	7	15	10	22	18	39
Prepare repair estimates	11	24	4	9	9	20	21	47
Maintain equipment	16	40	11	27	9	23	4	10
Help design products	6	13	5	11	11	24	24	52
Do mechanical repairs to cars	28	63	5	11	5	11	7	15
Work as a mechanic	26	67	5	14	2	5	6	15
Write technical reports	9	20	1	2	10	22	26	56
Work on an assembly line	5	13	1	2.5	2	5	33	80
Do quality control work	8	19	4	9	7	16	24	56

(continued)

SELECTED ACTIVITIES (cont)

Activity	Always (daily)		Frequently (weekly)		Occasionally (monthly)		Never	
	#	%	#	%	#	%	#	%
Run your own Business	3	6.5	3	6.5	4	8.5	36	78.5
Manage an entire business	8	18	2	4.5	5	10.5	31	67
Act as a sales manager	5	11	1	2	5	11	35	76
Work for a parts department	4	9	5	11	8	18	27	62
Manage a parts dept.	2	5	4	9	0	0	39	86
Do drafting work	2	4.5	3	6.5	9	20	31	69
Do used or new car prep	5	11	7	15	8	18	26	56
Maintain production Machinery	6	13	3	6	8	17	30	64
Work as an inspector	6	14	2	4	3	7	33	75
Work as a jobber salesman	1	2	0	0	4	9	40	80
Work for a mfg as a service rep.	1	2.5	1	2.5	3	7	38	88
Work as an auto service Manager	3	7	4	9	5	11	32	73

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COMMENTS

Mathematics:

"The ability to read and understand precision measuring instruments and being able to add and subtract decimals really is essential."

"There is no real value to an auto mechanic unless he would go on to school."

Science:

"More emphasis should be placed on electricity and electronics as they are becoming more complex and more common in todays automobile."

Communication skills:

"Being able to communicate with people and getting them to understand what they are trying to say or what you are trying to tell them is very important in my job."

"Ability to communicate with all types of people with varying backgrounds and salesmanship is a very essential part of my work."

Automotive subjects:

"All of these subjects are very essential in my work. I think the schools electrical and automatic transmission courses could have been longer."

Sales and Management:

"Being a salesman is part of my job, as is knowing how to deal with the customer as well as the men in the shop. I feel most of the sales and management courses arent really necessary, altho some of them are nice to know a little bit about."

General:

"Dear sir: The questionnaire arrived today after being forwarded. Immediately after graduation my son went into the U.S. Air Force. He felt this branch of the service would offer him opportunities in his chosen field. He has been overseas for the past 16 months, but has written often that his previous training he recieved at Oshkosh tech Institute Has been of great value."

SUMMARY AND CONCLUSIONS

RECOMMENDATIONS

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SUMMARY

During the spring and summer of 1972, a survey of the automotive technology and automotive mechanics were reviewed by means of a survey. The employers of graduates from these programs were also included in the survey. The survey was handled through the cooperation of Madison Area Technical College and the Wisconsin State Board Of Vocational, Technical and Adult Education. The primary purpose of the survey was to determine if the automotive programs of our state are meeting the needs of the employers and the graduates. The one and two year diploma programs and the associate degree programs are included in the survey and the report.

The material to be surveyed was determined by inspection of present curriculums and courses, suggestions of automotive instructors, suggestions of Wisconsin State Board of Vocational, Technical and Adult Education staff members and by direct contact with employers.

It is recognized that the data collected is subject to the limitations of the of the data received and the limitations of the size of the sample. In no way can the results be considered absolutley accurate. Some of the varibles involved would be that many of those not responding to the survey are undoubtedly in the group of people who have not had success through training in any of the automotive programs. The findings are further limited by the reluctance of some respondents to answer various questions.

With the above limitations in mind, the following includes a brief summary of the resulting conclusions and recommendations. These conclusions and recommendations are from all sections of the survey study.

SUMMARY OF THE FINDINGS

1. The employers and graduates surveyed were quite evenly spread throughout the State. The number graduates surveyed was substantial. The number of employers surveyed left something to be desired. Out of State employers was not a major consideration.

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2. The size of the employers varied with one employer having over 1,000 employees to businesses having only 1 employee. The average employer employed 22 persons. The true average is something less than 22 due to the fact that some companies seemed to have indicated all their employees, not just mechanics as asked for.

3. The types of business employing the graduates varied to the point that the only conclusion that can be drawn is that a business that employes auto mechanics graduates can be just about any business that transports their own products or any business that is involved with the sale or service of autos.

4. The jobs that most of the graduates perform are directly related to their training they have received. Most graduates feel that their programs were of great value to them in their jobs.

5. Generally speaking, the employers of the graduates were satisfied with the type of training of the people they are getting from our programs. Their main criticism is usually that the graduate lacks some specific skill or that the graduate wants to become more deeply involved in some repair areas than the employer feels he is capable of.

6. Many of the graduates feel that more hours of training is needed for the general areas of their automotive training and also for some of the specialty areas such as accessories, hydraulics and air-conditioning.

7. The greatest concern of the graduates, as it relates to the specific course, is that these courses should be somehow directly related to the areas of automechanics. This need is heard throughout the report and is not restricted to any one program or district.

8. The average automechanic program graduate tends to hold his job for twenty four months or more. In most cases he indicates that he likes his job. In many cases he plans to move up in the organization he is in or move on to another job.

9. On of the biggest problems identified by this survey is that the graduates are getting sub-standard wages when they are able to find the job that they want. In some cases the starting wage is below two dollars per hour. Many graduates that change jobs are doing so because of the low wages they are receiving. The average graduate starts working for below four hundred dollars per month and at the time of the survey the average graduate was only making four to five hundred dollars per month. It is amazing that we are able to attract anyone into this highly complex trade.

10. The subjects that both employers and employees feel are essential for employment are all of the major automotive subjects, plus a strong desire on both parties part to have good training and background in human and public relations. The subjects that received strong ratings can be reviewed by going to the charts in the employer and employee sections of the report.

11. The job activity most often incicated was doing mechanical repairs on cars. Other areas of job activities were sales, maintaining equipment, use of test equipment and solving customer complaints. The knowledge necessary to perform many of the activities listed does not come from training programs, but instead comes from experience.

12. The small number of graduates being placed by schools is an indication that the liaison between the schools and the businesses doing the employing is very weak. Most graduates found their own jobs. No plan to place graduates could be identified.

CONCLUSIONS AND RECOMMENDATIONS.

Most of the conclusions and recommendations can be found along with the various charts and grafts. It was felt that these statements would mean more at these locations than in a lengthy summary. A short summary follows.

1. It is recommended that better communications and placement programs be developed between industry and our automotive training programs.

2. It is concluded that wages of the graduates is toolow to attract the qualified men we need in this industry. It is recommended that our programs help promote items that will help wage rates and better working conditions for the graduates. This could be in the form of licensing programs etc.

3. It is recommended that a strong emphasis be made to make the related subjects, such as, English, mathematics and science become more related to the automotive subjects that the students are studying.

4. Because employers demand experience of the graduates, methods of finding part-time employment for the students should be investigated.

5. The number of hours of actual automotive training for these programs should be reviewed. An attempt to have people teaching subjects such as related science work with automotive instructors to avoid repeating of material should be attempted.

6. It is the general conclusion that the programs of automotive training programs of our State are doing the job for which they were intended. The employers are fairly satisfied and so are the graduates. This is not reason to assume we do not need improving. It should be our aim to be constantly on the lookout to find ways to improve.

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APPENDIX

APPENDIX A

I am willing to participate in a personal interview. _____

I am unable to participate in a personal interview but will respond to the questionnaire and return it by May 10th. _____

I am unable to respond to the questionnaire by May 10th. _____

If you agree to an interview, please check dates which you believe you will be available for the interview:

Day of week: Mon ___ Tues ___ Wed ___ Thur ___ Fri ___ Sat ___

Approximate time of day: _____

Place and address of interview: _____

_____

Since I would like to telephone you to arrange a specific time for the interview, would you provide the following information:

Your name: _____

Business address: _____

City: _____

Business telephone number: _____

Home telephone number: _____

THANK YOU FOR YOUR IMMEDIATE RESPONSE.

State of Wisconsin \ BOARD OF VOCATIONAL, TECHNICAL & ADULT EDUCATION

EUGENE I. LEHRMANN
State Director
137 EAST WILSON STREET
MADISON, WISCONSIN 53703

APPENDIX B

To: Employers of Automotive Graduates

Our office is conducting a comprehensive study of the automotive programs in the Wisconsin Vocational, Technical and Adult Education system.

We are pleased that you have employed graduates from one of our vocational-technical schools.

Because our schools are interested in providing employers with highly qualified graduates, we are asking you to help us evaluate our automotive curriculums.

Would you please take time from your busy schedule to complete the enclosed questionnaire and return it in the enclosed self-addressed envelope to Mr. Melvin Seamens by May 10, 1972. All the information you furnish will be treated confidentially.

Thank you for your cooperation.

Sincerely,

Eugene Lehrmann

Eugene Lehrmann
State Director

db

Enc.

MADISON AREA TECHNICAL COLLEGE
211 NORTH CARROLL, MADISON, WISCONSIN 53703 · 608 257-6711

NORMAN P. MITBY
District Director

April 25, 1972

APPENDIX C

Enclosed is a survey questionnaire relating to a study of Automotive Mechanics or Automotive Technicians curriculums of the various Vocational and Technical schools throughout the State of Wisconsin.

This study is being performed for the Wisconsin Board of Vocational, Technical and Adult Education and they will attempt to use this information to upgrade the various Automotive programs in the State.

The questionnaire takes between 15 to 30 minutes to complete and I hope you can find time in your schedule to complete it promptly and return it to me in the self-addressed and stamped envelope enclosed.

The people being surveyed include all Auto Mechanics and all Auto Technology graduates for the years 1967-1971. We think that your training and work experience make you the best qualified people to judge the curriculums of our schools.

Sincerely,

Melvin Seamans

Melvin Seamans, Coordinator
Auto Technology Program

MS:bs
encl

AREA BOARD OF VOCATIONAL, TECHNICAL AND ADULT EDUCATION DISTRICT NO. 4
Marvin E. Brickson, Chairman Dr. Ray Rueckert, Vice Chairman George Hall, Secretary John F. Misfeldt, Treasurer
Walter Brink Francis E. Kohn Robert Utley

APPENDIX D

AUTOMOTIVE MECHANICS' EMPLOYERS SURVEY

EMPLOYER DATA

Name of Business: _____

Address: _____
Street City State

Name of Person Responding to Questionnaire:

_____
Last First Middle

Position Title: _____

Number of Automotive Mechanics Employed: _____

What percent of your automotive mechanics are employed on half-time or less basis? _____

Approximately what percent of your automotive mechanics are employed directly from the vocational schools? _____

By what means did you initially communicate with the automotive mechanic employees who came directly from the vocational schools?

_____

_____

_____

What is the monthly rate of pay for your new automotive mechanics coming directly from the vocational schools? _____

SUBJECT MATTER EVALUATION

In the remainder of this survey we are asking you to rate the value of various subjects and activities. Rate them as to what knowledge and skills you think a new apprentice automotive mechanics employee should have after graduating from a vocational school in the field of auto mechanics. We welcome comments at the end of each section to help us evaluate the subjects.

MATHEMATICS	Knowledge is Essential	Some Knowledge Necessary	No Knowledge Necessary
Basic mathematics	____	____	____
Formulas	____	____	____
Fractions and decimals	____	____	____
Systems of measuring angles	____	____	____
Horsepower calculations	____	____	____
Shop geometry and layout	____	____	____
Graphs and charts related to auto	____	____	____
Business math	____	____	____
Calculate areas and volumes	____	____	____
Payroll calculations	____	____	____
Repair order breakdowns	____	____	____
Parts make-up	____	____	____
Bookkeeping and accounting	____	____	____
Algebra	____	____	____
Powers and roots	____	____	____
Job estimates	____	____	____
Inventory control	____	____	____
Ordering parts and supplies	____	____	____
Income Tax	____	____	____
Percentages	____	____	____
Ratios	____	____	____
Bills and billing	____	____	____
Wages and wage plans	____	____	____

In general, how would you rate the need for mathematics for the automotive mechanics?

Heavy use (daily) ____ Medium use (weekly) ____ Light use (monthly) ____ Never used ____

Comments:

MECHANICAL DRAWING	Knowledge is Essential	Some Knowledge Necessary	No Knowledge Necessary
Blueprint reading	____	____	____
Shop sketches	____	____	____
Drafting instruments	____	____	____
Use of automotive symbols	____	____	____

In general, how would you rate the need for mechanical drawing for the automotive mechanics?

Heavy use (daily) ____ Medium use (weekly) ____ Light use (monthly) ____ Never used ____

Comments:

SCIENCE

General Subject Areas			
Basic Chemistry	____	____	____
Basic Physics	____	____	____
Basic Science	____	____	____
Specific Subject Areas			
Properties of liquids	____	____	____
Change of state	____	____	____
Heat	____	____	____
Light	____	____	____
Sound	____	____	____
Magnetism	____	____	____
AC and DC electricity	____	____	____
Refrigeration	____	____	____
Work and energy formulas	____	____	____
Electronic theory (beyond basic electricity)	____	____	____
Basic fluids and laws	____	____	____
Gases, paints, lacquers, etc.	____	____	____
Plastic, glass, fabrics, etc.	____	____	____
Salts, acids, and bases	____	____	____
Batteries	____	____	____
Symbols and equations	____	____	____
Basic electricity	____	____	____

In general, how would you rate the need for science for the automotive mechanic?

Need more science ____ Present knowledge is sufficient ____
Little to No science is needed ____

Comments:

	Knowledge is Essential	Some Knowledge Necessary	No Knowledge Necessary
GENERAL EDUCATION			
General English courses	_____	_____	_____
Speech	_____	_____	_____
Report writing	_____	_____	_____
Economics	_____	_____	_____
Human Relations	_____	_____	_____
Reading and understanding technical data	_____	_____	_____

Please rate the value of general education courses as they relate to the automotive mechanic doing his job.

Of great value _____ Of some value _____ Of little value _____
No value _____

Comments:

SALES AND MANAGEMENT			
Sales methods	_____	_____	_____
Business management	_____	_____	_____
Marketing	_____	_____	_____
Insurance	_____	_____	_____
Finance	_____	_____	_____
Retail selling	_____	_____	_____
Customer relations	_____	_____	_____
Public relations	_____	_____	_____
Shop management	_____	_____	_____
Government regulations	_____	_____	_____
Interview techniques	_____	_____	_____
Wholesale selling	_____	_____	_____
Service writing	_____	_____	_____
Customer relations	_____	_____	_____
Service management	_____	_____	_____
Public relations	_____	_____	_____
Operate the business	_____	_____	_____
Service sales	_____	_____	_____
Factory service	_____	_____	_____

In general, would you like to see more of these types of courses taught or would you rather see them taught less in the schools for the automotive mechanics?

More _____ Less _____

Comments:

METALS AND PLASTICS	Knowledge is Essential	Some Knowledge Necessary	No Knowledge Necessary
Machine shop	____	____	____
Gas welding	____	____	____
Arc welding	____	____	____
Welding aluminum	____	____	____
Brazing	____	____	____
Cutting metal with gas	____	____	____
Forging	____	____	____
Plastic molding processes	____	____	____
Die-casting	____	____	____
Heat treatment	____	____	____
Properties of metals	____	____	____

In general, the automotive mechanics use the above

Daily _____ Weekly _____ Monthly _____ Never _____

Comments:

RELATED AUTO SUBJECTS			
How to obtain technical information & specifications	____	____	____
Use of trade manuals	____	____	____
Union and Labor organization	____	____	____
Apprenticeship and journeymen	____	____	____
Retirement and insurance	____	____	____
Dealership organization	____	____	____
Further schooling for advancement	____	____	____
Parts department procedures	____	____	____
Used and new car preparation	____	____	____
Auto production techniques	____	____	____
Sell merchandise	____	____	____
Auto body repair	____	____	____
Accessories	____	____	____
Air conditioning	____	____	____
Light body repair	____	____	____

In general, how do you consider the above for the automotive mechanic in this present position or in an advance position?

Major importance ____ Minor importance ____ Of no importance ____

Comments:

AUTOMOTIVE SUBJECTS	Knowledge is Essential	Some Knowledge Necessary	No Knowledge Necessary
Brakes			
Theory of brakes and friction	____	____	____
Brake construction	____	____	____
Self energization	____	____	____
Hand brakes	____	____	____
Power brakes	____	____	____
Adjustment of brakes	____	____	____
Flushing and bleeding	____	____	____
Brake relining	____	____	____
Drum and shoe grinding and fitting	____	____	____
Cylinder overhaul and repair	____	____	____
Disc brakes	____	____	____
Chassis and Ride Control Theory			
Springs	____	____	____
Shock absorbers	____	____	____
Wheel alignment theory	____	____	____
Wheel alignment visual inspection	____	____	____
Wheel alignment road test	____	____	____
Wheel alignment service	____	____	____
Lubrication	____	____	____
Fluid system	____	____	____
Lubrication inspection and service	____	____	____
Rear independent suspension system	____	____	____
Wheel balancing theory	____	____	____
Balancing wheels (static and dynamic)	____	____	____
Diagnosis of suspension problems	____	____	____
Tire tread and wear	____	____	____
Plies and tire size	____	____	____
Radial tire design	____	____	____
Tire care	____	____	____
Tire service	____	____	____
Tire construction	____	____	____
Tire rotation	____	____	____
Differentials theory	____	____	____
Rear axle theory	____	____	____
Description of axle types	____	____	____
Wheels	____	____	____
Drive lines	____	____	____
Leaf springs	____	____	____
Front end suspension system	____	____	____
Clutches	____	____	____
Standard transmissions	____	____	____

	Knowledge is Essential	Some Knowledge Necessary	No Knowledge Necessary
Engine Principles of Operation			
Component parts	____	____	____
Tolerances of components	____	____	____
Theory of internal combustion	____	____	____
Detonation	____	____	____
Preignition	____	____	____
Engine efficiencies	____	____	____
Trouble shooting engine troubles	____	____	____
Lubrication system theory	____	____	____
Cooling System Theory			
Heat exchangers	____	____	____
Heat transfer	____	____	____
Troubleshooting	____	____	____
Repair and service	____	____	____
Automatic Transmission Theory			
Basic principles of operation	____	____	____
Torque specifications	____	____	____
Torque converters	____	____	____
Hydraulic systems	____	____	____
Transmission gearing	____	____	____
Removal of major units	____	____	____
Power flow at various shift positions	____	____	____
Adjustments	____	____	____
Be familiar with several manufacturing types (Ford, GM, etc.)	____	____	____
Tune-Up Theory, Practice, and Procedure	____	____	____
Theory of Basic Electricity	____	____	____
Electrical Systems			
Standard ignition	____	____	____
Transistorized ignition systems	____	____	____
Timing advance mechanism	____	____	____
Starter (GM, Chrysler, Ford)	____	____	____
Alternator charging systems (Ford, Chrysler, GM, etc.)	____	____	____
Generator charging systems (Ford, Chrysler, GM, etc.)	____	____	____
In-depth theory in the above electrical systems	____	____	____
Trouble shooting the electrical systems	____	____	____
Servicing the electrical systems	____	____	____

	Knowledge is Essential	Some Knowledge Necessary	No Knowledge Necessary
Fuel Systems			
Theory on fuels and carburetion	_____	_____	_____
Combustion process	_____	_____	_____
Additives	_____	_____	_____
Fuel feed systems	_____	_____	_____
Component parts	_____	_____	_____
Pressure and temperatures	_____	_____	_____
Principles of carburetion	_____	_____	_____
Carburetion accessories	_____	_____	_____
Types of carburetors	_____	_____	_____
Fuel injection	_____	_____	_____
Purpose of supercharging	_____	_____	_____
Effects of altitude	_____	_____	_____
Trouble shooting the fuel system	_____	_____	_____
Servicing the fuel systems	_____	_____	_____
Theory of emission control systems	_____	_____	_____
Electrical control of the emission systems	_____	_____	_____
Principles of operation of the various makes of emission control systems	_____	_____	_____

How would you rate the subject knowledge and skills of employees who come from the vocational schools?

	Strong	Moderate	Weak
Brakes	_____	_____	_____
Chassis and Ride Control Theory	_____	_____	_____
Engine Principles of Operation	_____	_____	_____
Cooling Systems	_____	_____	_____
Automatic Transmission	_____	_____	_____
Theory of Basic Electricity	_____	_____	_____
Electrical Systems	_____	_____	_____
Tune-Up Theory, Practice, and Procedure	_____	_____	_____
Fuel Systems	_____	_____	_____

Does your place of business include involvement with the foreign car market?

Yes _____ No _____

If yes, do your mechanics have sufficient background to do foreign car repairs?

Yes _____ No _____

What subjects would you consider need emphasizing in the vocational/ technical schools in order that the employees, who come from these schools, would be of more value to you and their job responsibilities?

1. _____

2. _____

3. _____

4. _____

5. _____

JOB ACTIVITIES

Based on knowledge and work experience with the automotive mechanics, please rate the degree of proficiency you feel the apprentice automotive mechanic needs to do a good job as a mechanic fresh out of school.

	Proficiency is Essential	Some Proficiency is Advisable	No Proficiency is Necessary
Align front axles	____	____	____
Balance wheels	____	____	____
Replace front end components	____	____	____
Diagnose front end problems	____	____	____
Tune engines	____	____	____
Test electrical units (generators, etc.)	____	____	____
Repair electrical units	____	____	____
Use test equipment to diagnose electrical and ignition problems	____	____	____
Operate chassis dynomometer	____	____	____
Repair standard transmissions	____	____	____
Repair automatic transmissions	____	____	____
Diagnose transmission and driveline problems	____	____	____
Repair rear axle assemblies	____	____	____
Grind valves	____	____	____
Overhaul or rebuild engines	____	____	____
Light body repairs	____	____	____
Sell merchandise	____	____	____
Manage a department	____	____	____
Operate the business	____	____	____
Do manufacturing processes	____	____	____
Repair or replace driveline parts	____	____	____
Brake drum turning	____	____	____
Carburetor overhaul	____	____	____

JOB ACTIVITIES (Cont.)	Proficiency is Essential	Some Proficiency is Advisable	No Proficiency is Necessary
Operate engine overhaul machines	____	____	____
Others (please specify)			
_____	____	____	____
_____	____	____	____
_____	____	____	____

SELECTED ACTIVITIES

Listed below are a number of activities which the automotive mechanic might be involved in over a period of time. Please check the amount of involvement you believe the average mechanic experiences in the activities listed.

	Always (daily)	Frequently (weekly)	Occasionally (monthly)	Never
Use test equipment to diagnose problems	____	____	____	____
Solve customer complaints	____	____	____	____
Sell merchandise	____	____	____	____
Act as a service writer	____	____	____	____
Prepare repair estimates	____	____	____	____
Maintain equipment	____	____	____	____
Do mechanical repairs to cars	____	____	____	____
Write technical reports	____	____	____	____
Work on an assembly line	____	____	____	____
Run your own business	____	____	____	____
Manage a business for someone	____	____	____	____
Work for a parts department	____	____	____	____
Do used or new car prep	____	____	____	____
Maintain production machinery	____	____	____	____
Work as a jobber salesman	____	____	____	____
Work as an auto service manager	____	____	____	____
Other (please specify)				
_____	____	____	____	____
_____	____	____	____	____
_____	____	____	____	____

APPENDIX E

AUTOMOTIVE TECHNOLOGY SURVEY

PERSONAL DATA

NAME _____ DATE OF GRADUATION _____
Last First Middle Initial

ADDRESS: _____
(Where we can reach you) Street City State

EMPLOYMENT DATA

What is your present employment status?

Full Time _____ Part Time _____ Military Service _____ Unemployed _____

If you checked Full-time, Part-time, or Military Service, How well does your automotive training relate to your present job?

Directly related _____ Somewhat related _____ Not related _____

What jobs have you held since graduation?
(List all jobs after graduation to present)

Where employed	Job Title (mechanic, technician, etc)	Length of job (in months)

Was your initial automotive job obtained before your graduation date? Yes _____ No _____

What assistance did you have in obtaining your initial job? (who or what)

Friend _____ Parent _____ School guidance and placement _____

Teacher _____ Dept. head _____ Wisconsin Employment Service _____

Newspaper Ad _____ Other _____

What was your monthly rate of pay when you were initially employed? (your first job)
(check correct amount)

under $400_____ $400-$500_____ $500-$600_____ $600-$700_____

$700-$800_____ $800-$900_____ $900-$1000_____ over $1000

What is your present monthly rate of pay?

under $400_____ $400-$500_____ $500-$600_____ $600-$700_____

$700-$800_____ $800-$900_____ $900-$1000_____ over $1000_____

What is your exact job title and duties?_____
_____ Use other side if necessary.

How do you like your present job?

I am very pleased_____, I am fairly satisfied_____, I am satisfied, but plan to move up or change type of work_____, I dislike my job, will definitely change jobs_____.

SUBJECT MATTER EVALUATION:

In the remainder of this survey we are asking you to respond to various questions dealing with the importance of certain subjects and activities that you as an employee in the automotive field experience. We are asking you to rate your degree of involvement in these areas, so that we may find the extent that our schools should teach these subjects. At the end of some of the catagories there is a place to comment. We would like your comments to help evaluate the worth of the subject areas.

Please rate the degree of knowledge that you as an automotive technician feel is essential to do the type of work you are presently performing.

MATHEMATICS	Knowledge is Essential	Some Knowledge Necessary	No Knowledge Necessary
Basic mathematics	( )	( )	( )
Algebra	( )	( )	( )
Trigonometry	( )	( )	( )
Calculus	( )	( )	( )
Slide rule use	( )	( )	( )
Graphical interpretations	( )	( )	( )
Vector applications	( )	( )	( )
Fractions	( )	( )	( )
Logarithms	( )	( )	( )
Analytic geometry	( )	( )	( )

In general, how would you rate the need for mathematics in your present job?
Heavy use_____ (Daily) Medium use_____ (Weekly) Light use_____ (Monthly) Never used_____

COMMENTS:

SCIENCE:

	Knowledge is Essential	Some Knowledge Necessary	No Knowledge is Necessary
GENERAL SUBJECT AREAS			
Chemistry	( )	( )	( )
Physics	( )	( )	( )
Basic Science	( )	( )	( )
SPECIFIC SUBJECT AREAS			
Properties of liquids	( )	( )	( )
Mechanics (pulleys-levers-etc.-	( )	( )	( )
Change of State	( )	( )	( )
Heat	( )	( )	( )
Light	( )	( )	( )
Sound	( )	( )	( )
Magnetism	( )	( )	( )
AC and DC (electricity)	( )	( )	( )
Refrigeration	( )	( )	( )
Energy	( )	( )	( )
Work Formulas	( )	( )	( )
Electronic Theory	( )	( )	( )

In general, How would you rate the need for science courses in curriculums of Auto Technology programs. (please check one)

Present courses are adequate_____ More science is needed_____ Less concentration on these courses is needed_____ No science beyond High School_____

COMMENTS:

COMMUNICATIONS SKILLS (oral and written) GENERAL EDUCATION

	Knowledge is Essential	Some Knowledge Necessary	No Knowledge is Necessary
Technical report writing	( )	( )	( )
Speech	( )	( )	( )
General English courses	( )	( )	( )
Economics	( )	( )	( )
American Institutions	( )	( )	( )
Human Relations	( )	( )	( )
Industrial Organization	( )	( )	( )

Please rate the value of the general education courses as they relate to your present job.

Of great value_____ Of some value_____ Of little value_____ No value_____

COMMENTS:

SALES AND MANAGEMENT

	Knowledge is Essential	Some Knowledge Necessary	No Knowledge is Necessary
Sales Methods	( )	( )	( )
Business Management	( )	( )	( )
Marketing	( )	( )	( )
Insurance	( )	( )	( )
Finance	( )	( )	( )
Government regulations	( )	( )	( )
Wholesale Selling	( )	( )	( )
Retail Selling	( )	( )	( )
Interview techniques	( )	( )	( )
Customer Relations	( )	( )	( )
Service Management	( )	( )	( )
Public Relations	( )	( )	( )

In general, would you like to see more of these type of courses taught or would you rather see them taught less?

More_____ Less_____ Same_____

Comments:

METALS, MATERIALS AND PLASTICS

	Knowledge is Essential	Some Knowledge Necessary	No Knowledge is Necessary
Machine shop	( )	( )	( )
Welding	( )	( )	( )
Forging	( )	( )	( )
Foundry	( )	( )	( )
Plastic molding processes	( )	( )	( )
Die casting processes	( )	( )	( )
Metallurgy	( )	( )	( )
Heat treatment	( )	( )	( )
Properties of Materials	( )	( )	( )

How much use do you have for the processes taught in these programs?

Daily_____ Weekly_____ Monthly_____ Never_____

Comments:

RELATED AUTO SUBJECTS

	Knowledge is Essential	Some Knowledge Necessary	No Knowledge is Necessary
Parts Department procedures ---	( )	( )	( )
Used and New car preparation --	( )	( )	( )
Technical drafting ----------	( )	( )	( )
Air-conditioning ----------	( )	( )	( )
Accessories ----------	( )	( )	( )
Fluid Power (hydraulics) -------	( )	( )	( )
Auto production techniques -----	( )	( )	( )
Auto body repair ----------	( )	( )	( )

Please rate in order of importance the three that you consider most important. Write your responses in the blanks below.

1. _____

2. _____

3. _____

Comments:

AUTOMOTIVE SUBJECTS

	Knowledge is Essential	Some Knowledge Necessary	No Knowledge is Necessary
Brakes and steering ----------	( )	( )	( )
Wheel alignment and balance ---	( )	( )	( )
Engine principles ----------	( )	( )	( )
Engine repair techniques ------	( )	( )	( )
Cooling systems ----------	( )	( )	( )
Standard transmissions and clutches ------	( )	( )	( )
Automatic Transmissions ------	( )	( )	( )
Tune up theory ----------	( )	( )	( )
Tune up practice ----------	( )	( )	( )
Electrical systems ----------	( )	( )	( )
Fuel Systems ----------	( )	( )	( )
Rear axles ----------	( )	( )	( )

If you had a special problems option in your studies, how would you rate its value?

Good_____ Fair_____ Bad_____

Comments;

Does your present job include any involvement with the foreign car market?

Yes_____ No_____

If you checked yes, did your program put enough emphasis on foreign car repairs?

Yes_____ No_____

What subjects would you suggest should have been added to your program to make it of more value to your job and yourself?

1. _____

2. _____

3. _____

What subjects would you feel should be deleted from the auto technology program.

1. _____

2. _____

3. _____

JOB ACTIVITIES

Based on your work experience, please rate the degree of proficiency you feel you need for each activity listed.

	Proficiency is Essential	Some Proficiency is Advisable	No Proficiency is Necessary
Align front axles ----------	( )	( )	( )
Balance wheels ----------	( )	( )	( )
Replace front end components --	( )	( )	( )
Diagnose front end problems ---	( )	( )	( )
Tune engines ----------	( )	( )	( )
Test electrical units (generators)	( )	( )	( )
Repair electrical units --------	( )	( )	( )
Use equipment to diagnose electrical and ingntion problems -	( )	( )	( )
Operate chasis dynomometer ---	( )	( )	( )
Repair standard transmissions --	( )	( )	( )
Repair automatic transmissions-	( )	( )	( )
Diagnose transmission and driveline problems ----------	( )	( )	( )
Repair rear axle assemblies ---	( )	( )	( )
Grind valves ----------	( )	( )	( )
Overhaul or rebuild engines ----	( )	( )	( )
Diagnose engine problems -----	( )	( )	( )
Light body repairs ----------	( )	( )	( )

JOB ACTIVITIES: (CONT)

	Proficiency is essential	Some proficiency is advisable	No proficiency is necessary
Service and repair emission controls	( )	( )	( )
Sell merchandise	( )	( )	( )
Manage a department	( )	( )	( )
Deal with customers	( )	( )	( )
Operate the business	( )	( )	( )
Do manufacturing processes	( )	( )	( )
Supervise manufacturing proc.	( )	( )	( )

SELECTED ACTIVITIES:

Listed below are a number of selected activities which you might be involved with during a normal work day. Please check the amount of involvement you have in the activities listed.

	Always (daily)	Frequently (weekly)	Occasionally (monthly)	Never
Work with an engineer as an assistanc	( )	( )	( )	( )
Work for a manufacture doing technical work	( )	( )	( )	( )
Use test equipment to diagnose problems	( )	( )	( )	( )
Solve customer complaints	( )	( )	( )	( )
Sell merchandise	( )	( )	( )	( )
Act as a service writer	( )	( )	( )	( )
Prepare repair estimates	( )	( )	( )	( )
Maintain equipment	( )	( )	( )	( )
Help design products	( )	( )	( )	( )
Do mechanical repairs to cars	( )	( )	( )	( )
Work as a mechanic	( )	( )	( )	( )
Write technical reports	( )	( )	( )	( )
Work on an assembly line	( )	( )	( )	( )
Do quality control work	( )	( )	( )	( )
Run your own business	( )	( )	( )	( )
Manage an entire business for someone	( )	( )	( )	( )
Act as a sales manager	( )	( )	( )	( )
Work for a parts department	( )	( )	( )	( )
Manage a parts dept	( )	( )	( )	( )
Do drafting work	( )	( )	( )	( )
Do used or new car prep	( )	( )	( )	( )
Maintain production machinery	( )	( )	( )	( )
Work as an inspector	( )	( )	( )	( )
Work as a jobber salesman	( )	( )	( )	( )
Work for a mfg. as a service representative	( )	( )	( )	( )
Work as an auto Service Manager	( )	( )	( )	( )
Other: (please specify)	( )	( )	( )	( )
1. _____	( )	( )	( )	( )
2. _____	( )	( )	( )	( )
3. _____	( )	( )	( )	( )

APPENDIX F

AUTOMOTIVE MECHANICS SURVEY

PERSONAL DATA

Name: _____ Date of Graduation _____
Last First Middle Initial

Address: _____
(Where we can reach you) Street City State

EMPLOYMENT DATA

What is your present employment status?

Full Time_____ Part Time_____ Military Service_____ Unemployed_____

If you checked Full-time, Part-time, or Military Service, How well does your automotive training relate to your present job?

Directly related_____ Somewhat related_____ Not related_____

What jobs have you held since graduation?
(List all jobs after graduation to present)

Where employed	Job title (mechanic, technician, etc.)	Length of job (in months)

Was your initial automotive job obtained before your graduation date? Yes_____ No_____

What assistance did you have in obtaining your initial job? (who or what)

Friend_____ Parent_____ School guidance and placement_____

Teacher_____ Dept. head_____ Wisconsin Employment Service_____

Newspaper Ad_____ Other_____

What was your monthly rate of pay when you were initially employed? (first job)
(check correct amount)

Under $400_____ $400-$500_____ $500-$600_____ $600-$700_____

$700-$800_____ $800-$900_____ $900-$1000_____ Over $1000_____

What is your present monthly rate of pay?

Under $400_____ $400-$500_____ $500-$600_____ $600-$700_____

$700-$800_____ $800-$900_____ $900-$1000_____ Over $1000_____

How do you like your present job?

I am very pleased_____. I am fairly satisfied_____, I am satisfied, but plan to move up or change type of work_____, I dislike my job, will definitely change jobs_____.

SUBJECT MATTER EVALUATION

In the remainder of this survey we are asking you to rate the value of various subjects and activities. Rate them as to the value they have for your job. At the end of some of the areas there is a place to comment. We would like your comments to help us evaluate these subjects.

Please rate the amount of knowledge that you as an automotive mechanic feel is essential to do the type of work you are presently performing.

MATHEMATICS	Knowledge is Essential	Some Knowledge Necessary	No Knowledge Necessary
Basic mathematics	( )	( )	( )
Algebra	( )	( )	( )
Slide rule use	( )	( )	( )
Fractions	( )	( )	( )
Powers and roots	( )	( )	( )

In general how would you rate the need for mathematics in your present job?

Heavy use_____ (daily) Medium use_____ (weekly) Light use_____ (monthly) Never used_____

COMMENTS:

General Subject Areas	is Essential	Knowledge Necessary	is Necessary
Chemistry	( )	( )	( )
Physics	( )	( )	( )
Basic Science	( )	( )	( )

Specific Subject Areas			
Properties of liquids	( )	( )	( )
Change of state	( )	( )	( )
Heat	( )	( )	( )
Light	( )	( )	( )
Sound	( )	( )	( )
Magnetism	( )	( )	( )
AC and DC electricity	( )	( )	( )
Refrigeration	( )	( )	( )
Work and energy formulas	( )	( )	( )
Electronic Theory	( )	( )	( )

In general, how would you rate the need for science courses in the auto mechanics programs. (please check one)

Present courses are adequate_____ More science is needed_____ Less Science is needed_____ No science beyond High School_____

COMMENTS:

GENERAL EDUCATION

	Knowledge is Essential	Some Knowledge Necessary	No Knowledge is Necessary
General English courses	( )	( )	( )
Speech	( )	( )	( )
Report writing	( )	( )	( )
Economics	( )	( )	( )
Human Relations	( )	( )	( )

Please rate the value of general education courses as they relate to your present job.

Of great value_____ Of some value_____ Of little value_____ No value_____

COMMENTS:

SALES AND MANAGEMENT

	Knowledge is Essential	Some Knowledge Necessary	No Knowledge is Necessary
Sales methods	( )	( )	( )
Business management	( )	( )	( )
Marketing	( )	( )	( )
Insurance	( )	( )	( )
Finance	( )	( )	( )
Retail selling	( )	( )	( )
Customer relations	( )	( )	( )
Public relations	( )	( )	( )

In general, would you like to see more of these type of courses taught or would you rather see them taught less?

More_____ Less_____

COMMENTS:

METALS AND PLASTICS

	Knowledge is Essential	Some Knowledge Necessary	No Knowledge is Necessary
Machine shop	( )	( )	( )
Welding	( )	( )	( )
Forging	( )	( )	( )
Foundry	( )	( )	( )
Plastic molding processes	( )	( )	( )
Die-casting processes	( )	( )	( )
Heat treatment	( )	( )	( )
Properties of metals	( )	( )	( )

How much use do you have for the processes taught in these programs?

Daily_____ Weekly_____ Monthly_____ Never_____

COMMENTS:

	Knowledge is Essential	Some Knowledge Necessary	No Knowledge is Necessary
Parts department procedures	( )	( )	( )
Used and New car preparation	( )	( )	( )
Air-conditioning	( )	( )	( )
Accessories	( )	( )	( )
Fluid power (hydraulics)	( )	( )	( )
Drawing interpretation	( )	( )	( )
Auto body repair	( )	( )	( )

Please rate in order of importance the three that you consider most important.

1. _____

2. _____

3. _____

COMMENTS:

AUTOMOTIVE SUBJECTS

	Knowledge is Essential	Some Knowledge Necessary	No Knowledge is Necessary
Brakes	( )	( )	( )
Wheel alignment and balance	( )	( )	( )
Engine principles	( )	( )	( )
Cooling systems	( )	( )	( )
Standard transmissions and clutches	( )	( )	( )
Automatic transmissions	( )	( )	( )
Tune up theory and practice	( )	( )	( )
Electrical systems	( )	( )	( )
Fuel systems	( )	( )	( )
Rear axles	( )	( )	( )

Does your present job include any involvement with the foreign car market?

Yes_____ No_____

If you checked yes, did your program put enough emphasis on foreign car repairs?

Yes_____ No_____

What subjects would you suggest should have been added to your program to make it of more value to your job and yourself?

1. _____

2. _____

3. _____

What subjects would you feel should be deleted from the auto mechanics program that you received?

1. _____

2. _____

3. _____

JOB ACTIVITIES

Based on your work experience, please rate the degree of proficiency you feel you need for each activity listed.

	Proficiency is Essential	Some Proficiency is Advisable	No Proficiency is Necessary
Align front axles	( )	( )	( )
Balance wheels	( )	( )	( )
Replace front end components	( )	( )	( )
Diagnose front end problems	( )	( )	( )
Tune engines	( )	( )	( )
Test electrical units (starters etc)	( )	( )	( )
Repair electrical units	( )	( )	( )
Use test equipment to diagnose electrical and ignition problems	( )	( )	( )
Operate a chassis dynomometer	( )	( )	( )
Repair standard transmissions	( )	( )	( )
Repair automatic transmissions	( )	( )	( )
Repair or replace drive line parts	( )	( )	( )
Diagnose transmission & driveline problems	( )	( )	( )
Repair rear axle assemblies	( )	( )	( )
Grind valves	( )	( )	( )
Overhaul or rebuild engines	( )	( )	( )
Do light body repairs	( )	( )	( )
Sell merchandise	( )	( )	( )
Operate the business	( )	( )	( )
Do manufacturing processes	( )	( )	( )
Manage a department	( )	( )	( )

SELECTED ACTIVITIES

Listed below are a number of selected activities which you might be involved in during a normal work day. Please check the amount of involvement you have in the activities listed.

	Always (daily)	Frequently (weekly)	Occasionally (monthly)	Never
Use test equipment to diagnose problems	( )	( )	( )	( )
Solve customer complaints	( )	( )	( )	( )
Sell merchandise	( )	( )	( )	( )
Act as a service writer	( )	( )	( )	( )
Prepare repair estimates	( )	( )	( )	( )
Maintain equipment	( )	( )	( )	( )
Do mechanical repairs on cars or trucks	( )	( )	( )	( )
Write a report	( )	( )	( )	( )
Work on an assembly line	( )	( )	( )	( )
Run your own business	( )	( )	( )	( )
Manage a business for someone	( )	( )	( )	( )
Work for a parts department	( )	( )	( )	( )
Do used or new car prep	( )	( )	( )	( )
Maintain equipment	( )	( )	( )	( )
Work as a jobber salesman	( )	( )	( )	( )
Work as a service manager	( )	( )	( )	( )

Others: (please specify)

1. _____	( )	( )	( )	( )
2. _____	( )	( )	( )	( )
3. _____	( )	( )	( )	( )

VT 019 113
Seamans, Melvin
An Evaluative Study of Auto Mechanics and Automotive Technology Programs and Curricula.
c. 1

DATE	ISSUED TO

VT 019 113

c. 1

The evaluation instrument to this document is located in a separate file under the same VT number

VT 019 290
BAILEY, FLOYD P.; HAYSLIP, JOSEPHINE
CAREER EDUCATION, A POSITION PAPER.

NEW HAMPSHIRE STATE DEPT. OF EDUCATION, CONCORD.
MF AVAILABLE IN VT-ERIC SET.
PUB DATE - JUL72 12P.

DESCRIPTORS - *CAREER EDUCATION; EDUCATIONAL PROGRAMS; DROPOUT PREVENTION; SCHOOL HOLDING POWER; JOB SKILLS; SECONDARY GRADES; *COMPREHENSIVE PROGRAMS; *STATEWIDE PROGRAMS; *EDUCATIONAL OBJECTIVES; *EDUCATIONAL PHILOSOPHY; ELEMENTARY GRADES
IDENTIFIERS - *NEW HAMPSHIRE

ABSTRACT - CAREER EDUCATION IS A CONCEPT OF EDUCATION CENTERED ON THE INDIVIDUAL WHICH PREPARES HIM FOR ECONOMIC INDEPENDENCE. THE DEVELOPMENT OF THIS CONCEPT IS A LIFELONG PROCESS INVOLVING A SERIES OF EXPERIENCES, DECISIONS AND INTERACTIONS THAT HELP THE INDIVIDUAL ACHIEVE SELF-UNDERSTANDING, BOTH VOCATIONALLY AND AVOCATIONALLY. STATISTICS ON THE LARGE PERCENTAGE OF SCHOOL DROPOUTS IN NEW HAMPSHIRE IN 1970-71 INDICATE THAT THE NEED FOR A RELEVANT CAREER EDUCATION PROGRAM WAS NOT BEING MET. AN ADEQUATE PROGRAM MUST USE A COMPREHENSIVE STUDENT-CENTERED APPROACH AND MUST EXTEND FROM PRE-KINDERGARTEN THROUGH ADULTHOOD, THUS PROVIDING ALL STUDENTS THE OPPORTUNITY TO OBTAIN ENTRY LEVEL MARKETABLE SKILLS BEFORE LEAVING SCHOOL. A PROPOSED SEQUENCE OF CAREER EDUCATION IS: (1) CAREER AWARENESS FOR GRADES K-6, (2) CAREER EXPLORATION FOR GRADES 7-10, (3) PRE-TECHNICAL AND VOCATIONAL EDUCATION FOR GRADES 11-12, AND (4) TECHNICAL EDUCATION AND COLLEGE AS A FINAL STEP. (AUTHORS/KH)

VT 019 290

U.S. DEPARTMENT OF HEALTH
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C A R E E R E D U C A T I O N

A POSITION PAPER

BY

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July, 1972

2909

PS 1

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Career Education is a concept of relevant and accountable education centered on the individual which provides the opportunities for educational experiences, curriculum, instructions, and counseling leading to preparation for economic independence. The development of this concept is a lifelong process which involves a series of experiences, decisions and interactions that provide the means through which one's self-understanding can be implemented, both vocationally and avocationally.

Dr. Kenneth B. Hoyt* defines Career Education as the total effort of public education and the community aimed at helping all individuals become familiar with the values of work-oriented society and to integrate these values into their personal value systems and to implement these values into their lives in such a way that work becomes possible, meaningful, and satisfying to each individual.

*Dr. Kenneth B. Hoyt is Professor of Education and Director of Specialty Oriented Student Research Programs at the University of Maryland.

Dr. Sidney Marland, Jr., the United States Commissioner of Education, has designated Career Education as the major priority for all education. The rationale for this priority is a national concern that realistic needs and desires of students are not being fulfilled by present curriculum.

On a national level nearly 2,500,000 students leave the formal educational system of the United States each year without adequate preparation for careers. In 1970-71 there were 850,000 students dropping out of elementary and secondary schools; many of these students left school because of irrelevant school programs. In addition, 750,000 general curriculum high school graduates did not attend college but were unprepared for specific occupations. Also, in 1970-71, there were 850,000 high school students who entered college in 1967 but did not complete the baccalaureate or an organized occupational program.

The school year 1970-71 enrollment data indicates a total of 163,703 in the public schools of New Hampshire. At the close of school in 1971, there were 9,119 completing the 12th grade. At the same time during the same school year, nearly 3,000 dropped out of the secondary schools of the state. Thus, approximately 25 percent of those who complete elementary school in New Hampshire do not complete the secondary curriculum requirements.

Figures from the United States Department of Labor predict that for the next thirty years about 17 percent of the jobs in the nation will require a four year college degree.

At present, most secondary schools in New Hampshire offer a curriculum which offers a very narrow choice between college preparatory subject matter and that which is classified in some other manner.

Sixty percent of our students are receiving general education.

The annual cost of education per student averages approximately $1,000.

Approximately $100,000,000 per year is being spent in New Hampshire preparing our students for nothing specific in the way of job entry.

These statistics indicate a need for continuous content change and process change for continued improvement in the results of the New Hampshire educational effort. Investigations by the New Hampshire State Department of Education show that the concepts of Career Education supported by Commissioner Marland and many others include provision for such change to take place. These concepts lead toward realistic individual self assessment and preparation for potential employment. The major conclusions of these conferences are listed on the following pages.

1. A major part of career education is understanding oneself and how the self relates to other people.

2. Career education must give the individual flexibility; the ability to change and adapt comfortably.

3. Career education needs an identification of underlying skills such as creativity, decision making, planning, and communicating.

4. Career education requires an open-minded acceptance of the background and culture of children as a part of their learning and growth.

5. Career education should be a student-centered program where evaluation is performance based.

6. Career education is comprehensive involving study from the general to the specific.

7. Career education must be a total educational experience; not just occupational information, field trips, simulations, and vocational training.

8. Career education must be a comprehensive program extending from pre-kindergarten through adulthood and must use a student-centered approach.

9. Career education must operate with an open-door policy at all ages and at all levels - elementary, secondary, and post-secondary.

10. Career education requires an identification of common aptitudes, skills, and interests so that any individual may move within and between related careers both vertically and horizontally.

11. Career education requires a sincere effort to regionalize and localize career education practices resulting in meaningful and worthwhile lives for every individual.

12. Career education requires a provision for follow-up on placement to insure success for the student and/or the program.

13. Career education should enable all students to have an opportunity to obtain entry level marketable skills before leaving school.

14. Career education should be open-ended on entry and exit.

15. Career education involves teacher renewal efforts to redefine teacher roles as managers of learning.

16. Career education involves total local educational and community involvement.

17. Career education should be a part of total education of all students in all schools.

18. Career education requires the re-structuring of teacher education processes in teacher training institutions.

19. Career education includes a responsibility for outreach activities on the part of school communities and employers in part-time training and employment.

The purpose of elementary and secondary education should be to prepare all students as well-informed people ready for successful entrance into a job or some form of post-secondary education, whichever they choose, as soon as they leave the elementary-secondary system. Young people need to be prepared for entry level into the work force at the completion of formal schooling. The person who does not function in the usual school program and needs to leave before the 12th year should be prepared with an entry-level skill at whatever year he/she leaves the public school experience.

A sequence worthy of consideration is:

K - 6	Career Awareness
7 - 10	Career Exploration
11 - 12	Pre-Technical and Vocational Education
13 and beyond	Technical Education and College

Career Education is the total effort of public educators and the community aimed at helping all individuals to become familiar with a work-oriented society, to integrate these values into their personal value systems, and to implement these values in their lives in such a way that work becomes possible, meaningful, and satisfying to each individual.

VT 019 375
LAWRENCE DEVELOPMENTAL CAREER EDUCATION, K-12.

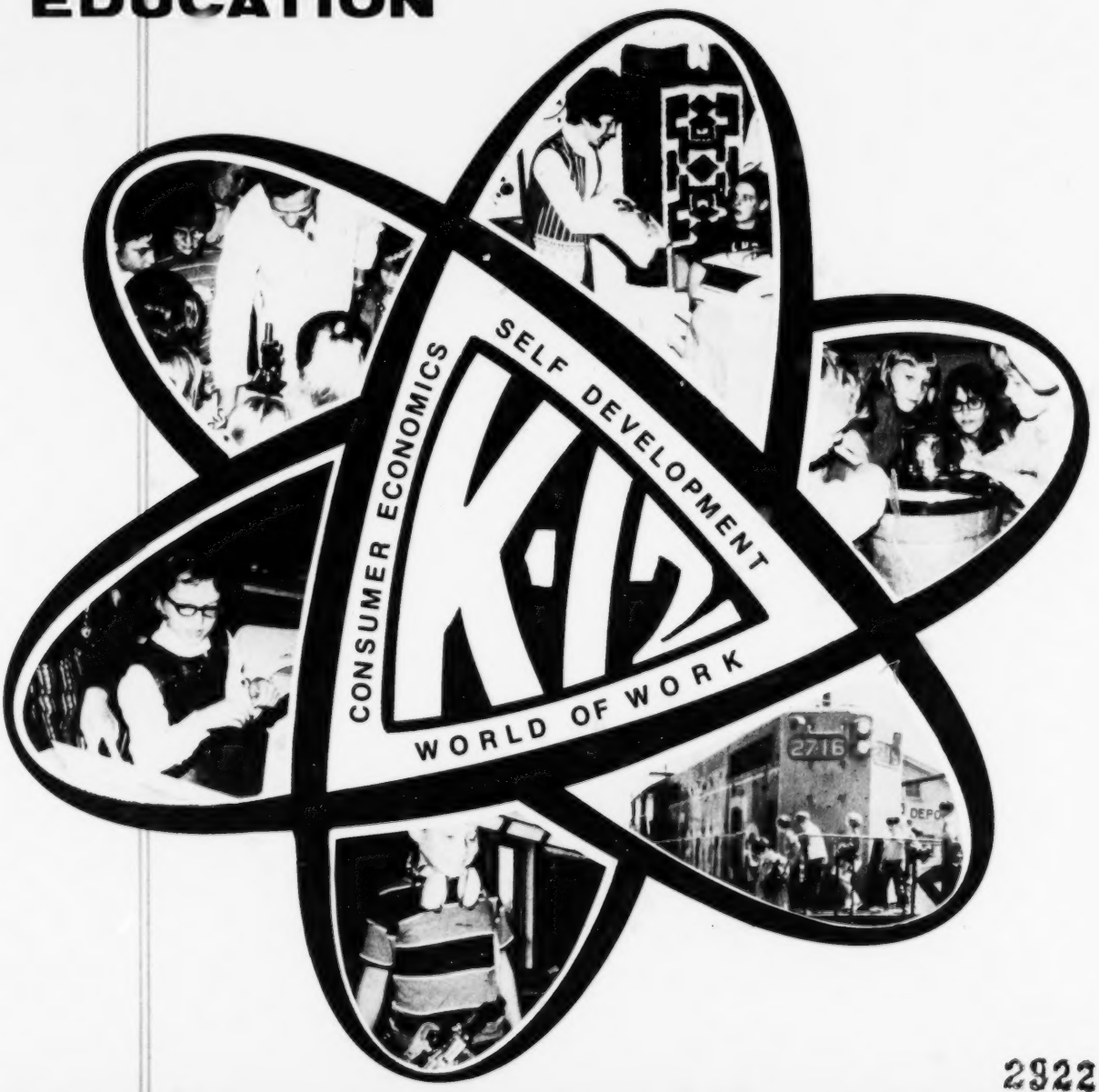
LAWRENCE UNIFIED SCHOOL DISTRICT 497, KANS.; KANSAS STATE UNIV., MANHATTAN.; KANSAS STATE DEPT. OF EDUCATION, TOPEKA.
MF AVAILABLE IN VT-ERIC SET.
PUB DATE - 72 42P.

DESCRIPTORS - *CAREER EDUCATION; ELEMENTARY GRADES; SECONDARY GRADES; *COMPREHENSIVE PROGRAMS; *MODELS; *PROGRAM DESCRIPTIONS; PROGRAM EVALUATION; *EDUCATIONAL PROGRAMS; INTEGRATED CURRICULUM
IDENTIFIERS - *KANSAS; LAWRENCE UNIFIED SCHOOL; CAREER AWARENESS

ABSTRACT - THE CAREER EDUCATION PROGRAM IN THE LAWRENCE, KANSAS SCHOOLS IS DESIGNED TO BENEFIT ALL STUDENTS, THOSE WHO GO TO WORK BEFORE OR IMMEDIATELY AFTER GRADUATION AS WELL AS THOSE HEADED FOR FURTHER EDUCATION. TO HELP STUDENTS PREPARE FOR USEFUL CITIZENSHIP, THE PROGRAM EMPHASIZES THREE AREAS: (1) THE WORLD OF WORK, (2) CHARACTER DEVELOPMENT, AND (3) CONSUMER ECONOMICS. IN THE ELEMENTARY PROGRAM, "REAL-LIFE" EXPERIENCE THROUGH RESOURCE SPEAKERS, BUSINESS TOURS, AND SIMULATION ACTIVITIES ARE PROVIDED. CONTINUING EXPOSURE TO MANY OCCUPATIONAL CLUSTERS AT THE JUNIOR HIGH LEVEL ENABLES STUDENTS TO MAKE BETTER JUDGMENTS CONCERNING JOB PREPARATION COURSES TO BE TAKEN IN HIGH SCHOOL. CAREER EDUCATION FOR THE SENIOR HIGH STUDENTS INVOLVES A CAREER INFORMATION CENTER AND MANY ON-THE-JOB TRAINING PROGRAMS BESIDES THE REGULAR ACADEMIC PROGRAM, TO HELP STUDENTS ACQUIRE MARKETABLE SKILLS. INCLUDED IN THIS PROGRAM DESCRIPTION ARE TYPES OF INSERVICE WORKSHOPS FOR TEACHER TRAINING AND A BRIEF EVALUATION OF THE PROGRAM. (KH)

VT 019 375

LAWRENCE CAREER EDUCATION



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LAWRENCE K-12 DEVELOPMENTAL CAREER EDUCATION

Lawrence Unified School
DISTRICT 497 • LAWRENCE, KANSAS

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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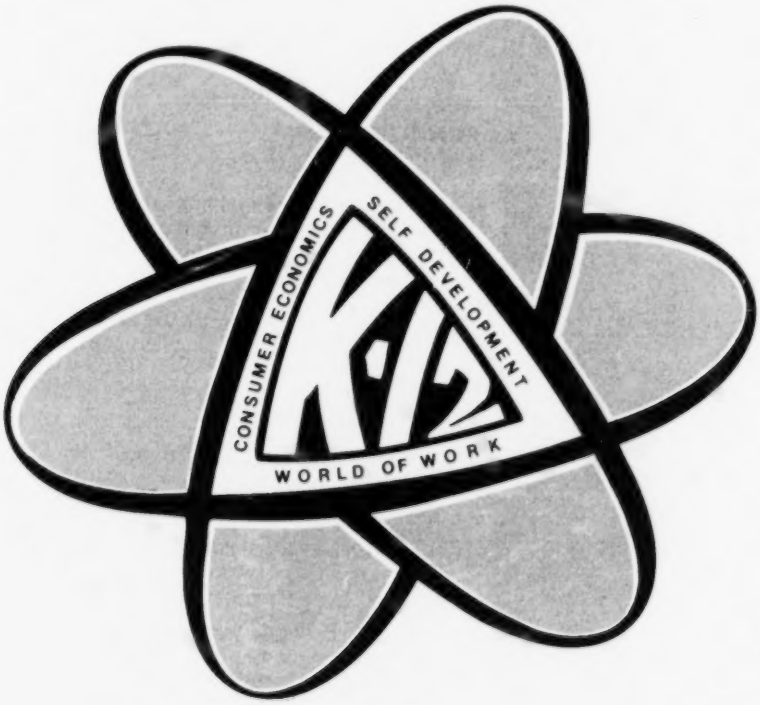
LAWRENCE DEVELOPMENTAL CAREER EDUCATION



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Lawrence USD No. 497

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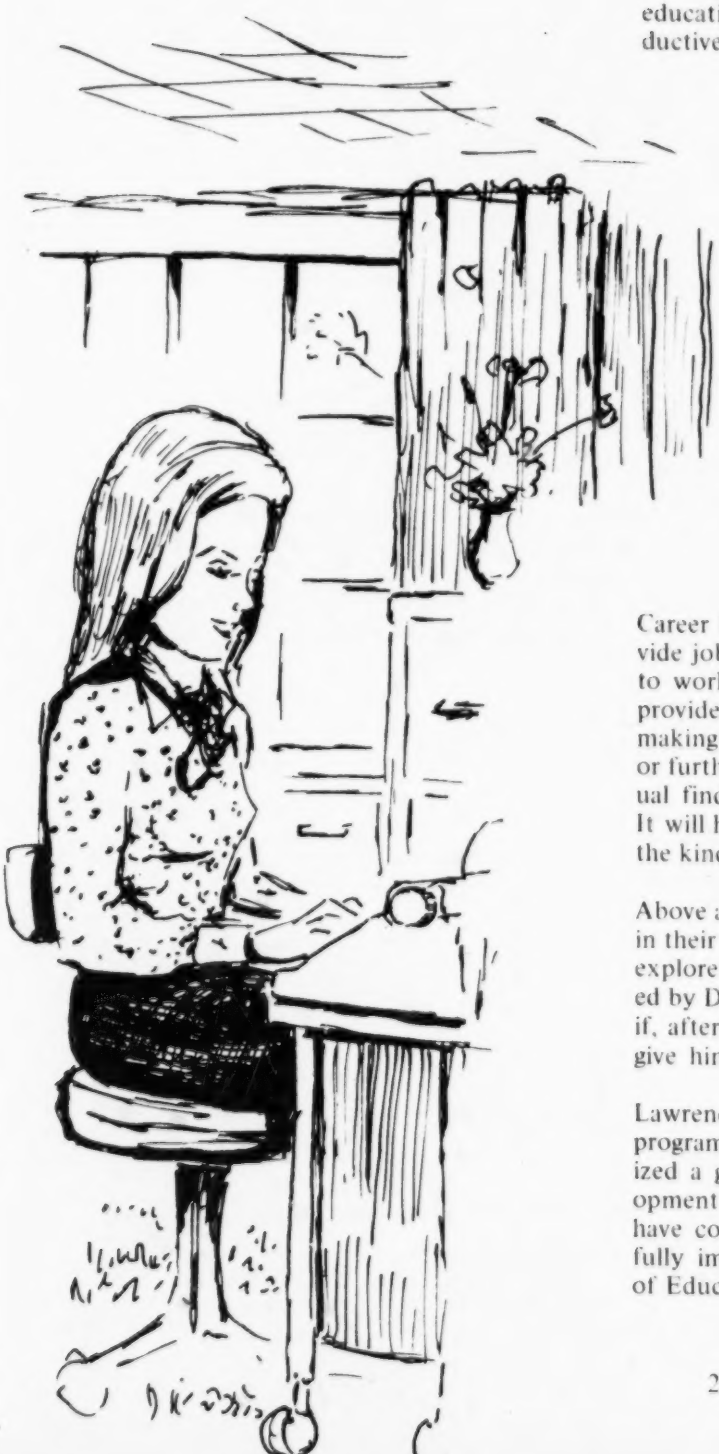
LAWRENCE

K - 12

CAREER EDUCATION

Career Education is here to stay! In Lawrence, we are in our second exciting year of a K-12 exemplary program. We are trying to gear our educational program always to our end product: the students as they exit our system and face the needs of the "real world". What must they know as they take their next step in life? The fundamental of education must be to prepare each individual to live a productive and rewarding life.



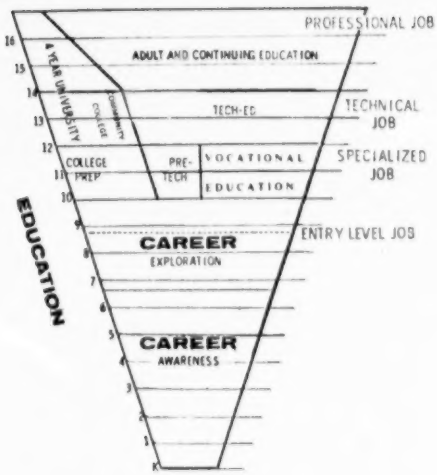
Career Education is for 100% of our students. It will provide job training and preparation for the student who goes to work before or immediately after graduation. It will provide the exploration and background for career decision making for all students including those headed for college or further education and training. It will help each individual find the kind of work most satisfying to his interests. It will help all students to be aware of and to appreciate all the kinds of work in our society.

Above all, our students must realize that they have a choice in their life's work. Then public education must help them explore the many opportunities and prepare. As expressed by Dr. Kenneth Hoyt, it would indeed be a "cruel hoax" if, after we have given the individual the desire, we do not give him the competency he needs for his chosen work.

Lawrence has found that the rationale for its three-point program has strengthened over the year, and we have realized a gradual refinement of these concepts: Self-Development, World of Work, and Consumer-Economics. We have continued a concerted effort over the year to more fully implement the three stage model of the U.S. Office of Education.

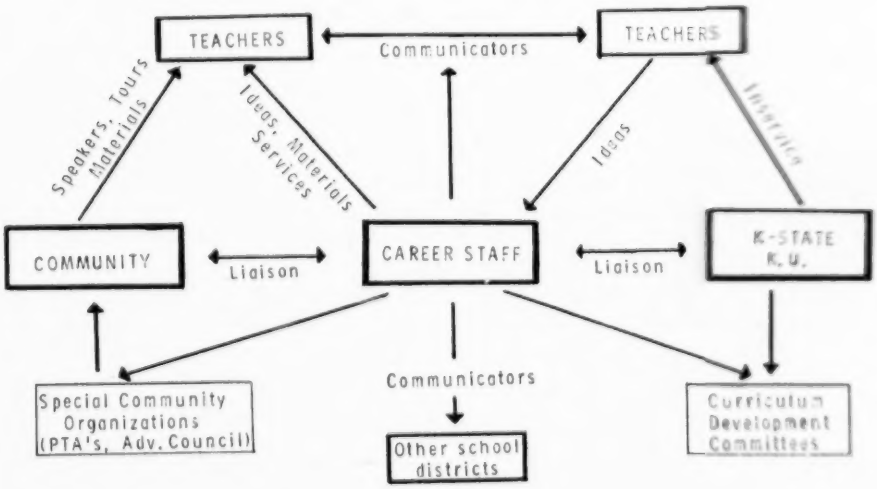
Equipping students for the world of work

CAREER EDUCATION



Also, through the year, the Career Education staff role has become even more defined. The original orientation toward service to teachers, helping them with resource speakers, field trips, activities and ideas, has continued to be successful. Beyond this, the staff has more fully realized its role as communicators and liaisons with the community. The real possibilities for implementation of this program are unlimited including the innovative ideas from teacher, as well as tremendous community and administrative support.

LAWRENCE CAREER EDUCATION



2926

Lawrence USD # 497

Elementary Career Education Concepts

2927

MARY ASHBY
ELEMENTARY CONSULTANT

ELEMENTARY CAREER EDUCATION PROGRAM

WORLD OF WORK

K. Family, Community, Self
1. Family and Familiar Community Workers
2. Local Community Workers - Neighborhood Interdependence
3. Urban Workers
4. State Workers
5. Workers in the United States
6. World Workers and Self Study to Careers

CHARACTER DEVELOPMENT

K. Responsible School Behavior
1. Self Awareness - - Others
2. Classroom Responsibilities and Implications
3. Attitudes Toward Work and Others
4. Personal Attributes to Performance
5. Personal Attributes to Employability Factors
6. Personal Attributes to Occupational Interests

CONSUMER ECONOMICS

K. Personal Wants and Choices
1. Values and Goals - Community Economics
2. Producer and Consumer and Decision-Making
3. Specialization and Division of Labor
4. Interdependency of Businesses - Family Income
5. Interdependence of States - Nations - Savings
6. Comparative Economics - Profit Sharing

2928

ELEMENTARY

This year students have become excited, teachers have become challenged, classroom atmospheres have been electrified and parents have become involved in their schools with the implementation of this program. Career Education at the elementary level has expanded rapidly this year as teachers have begun to realize the possiblilities for implementation. They are bringing occupational information into the curriculum currently being studied in order to broaden the students' occupational awareness and they have found that this new emphasis will enhance any area of the curriculum.

Bringing "real life" into the school experience through resource speakers, tours into businesses and industries and a variety of activities have proved to be most effective. Although this emphasis can be included in connection with any area of the curriculum, social studies has proved to be the most convenient vehicle for world of work.

Respect for all occupations continues to be a vital part of the program as well as the development of a positive self image for each student and guidance in decision-making skills. The development of the elementary wheel has given definite direction to the K-6 program. Although it is still in the developmental stage, definite concepts have been established as important to the development of each individual student. The three areas of the wheel follow the model developed by the Lawrence career education program with broad concepts presented at each grade level. These are still further redefined and specified in another document.

Special projects and activities in the classrooms have continued to be an exciting tool for teachers. They have done a variety of activities as they have adapted this emphasis to their location and classroom. Teachers throughout the district have begun to recognize that career education can help to meet the need and help to challenge 100% of today's modern students.

An elementary curriculum to be used in conjunction with the social studies has been developed by a committee of Lawrence elementary teachers and principals. It was thought that the development of some type of curriculum was a necessity in order to insure an organized approach to career education, to insure a continuation of the emphasis as new teachers are brought into the district, to insure an exciting approach to career education each year, and to help develop the broadest base possible for the students to later make a vocational choice.

"How does the weather affect your job as a truck driver ?" The owner of the van lines came several times into the Lawrence schools to tell about his job. This new avenue to approach was utilized when a teacher invited in this resource speaker during a unit on weather. Career Education can be included in all kinds of ways!

Research has shown that students may later make vocational decisions based on hobbies they have had in their elementary years. This student is evidence of the way an "avocation" can become a "vocation" as he is working his way through college making candles which is a fascinating occupation. Here he helped these sixth graders make candles as a Christmas present for their parents.

Outdoor Education Days are a blast - just ask these students! In connection with their three day camping trip the students saw many resource people including an ecologist, marine biologist, folk singer, rock band, and a helicopter pilot who flew the helicopter into the Lone Star Lake Area. The fall excussion was so successful that they repeated again this spring. Would they do it again? You bet!

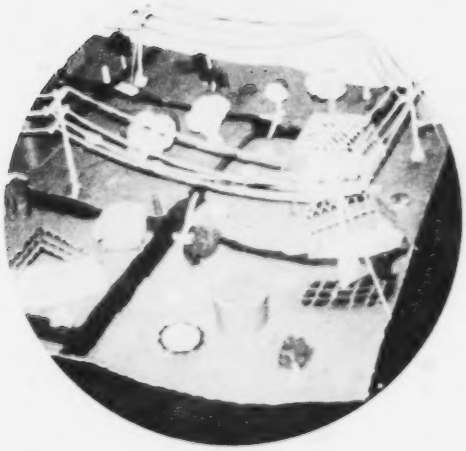
2930

Being in a dentist's chair isn't always that bad! Tours are an exciting learning experience for students of all ages. These kindergarteners are at Haskell Junior College which has been a valuable and cooperative resource for the teachers in Lawrence.

CITIES AND ECOLOGY GO TOGETHER

"Why did the town turn out to be so large?" The development of a city is always fascinating. At the fourth grade level, Worthenville developed with a 4-year college, junior college and many businesses. The children's analysis revealed that in order to adequately support two colleges in the community, you need many businesses.

Each student made several businesses and placed them in accordance with their zoning department. A direct result of this unit was a study of ecology in connection with the city and the effect of certain industries on the residential and commercial area.



The city planner came to this sixth grade class after they had built several three-demensional cities like this. The students had some pertinent questions to ask about needed improvements for their area. To culminate this unit the students shot movie footage in the specific locations needing immediate attention to be taken to the city commission. A positive interest in their school community was only one of the side benefits from this study.

WORLD OF WORK IN AND OUT OF THE CLASSROOM

Role playing is an excellent activity for the primary grades. Here the "Doctor" checks the lungs of a patient the same way his father does.

Since the "Domestic Engineer" will always be an important part of the world of work this little homemaker demonstrates her mother's full-time job. Parental interest and cooperation in this project were exceptionally demonstrated!

Actual participation in the world of work was part of an exciting day for several classes of sixth graders throughout the district. Not all of the students were able to go with their parents so businessmen in the community took a student(s) for ½ day. This young lady went to the local school of beauty, went to classes with the girls, washed brushes, and then she was given a wash, set and manicure to complete her morning. Needless to say, interest on the part of the students and community people was high.

WOW DAYS

A unique idea for the rural school was implemented by dividing all the students into 8 interest groups; students of levels 1-6 were in each group. They met for one day each week for a period of 5 weeks. Students studied such things as oceanography, music, stewardess, photography, cooking and model rocketry. Here these rocketeers are industriously putting their rockets together for the "blast off" which occured as a culmination to their unit.

The "Pampered Pet Botique" was a fascinating tour for the group studying animals. Each interest group worked independently and could take tours, have resource speakers in or do activities. Parental involvement and interest was an exciting by-product of this school project.

"Now you look through here at all your classmates . . " Another school combined their first and second grade classes into interest areas to implement their WOW days. The students' enthusiasm far exceeded any expectation on the part of the teachers. They would invariably get the question, "Is this WOW?" Areas studied through this were creative dance, theater, photography, music, carpentry and sports. This is such an exciting project that the idea seems to be spreading throughout the district.

2933

AN AVOCATION CAN BECOME A VOCATION . . .

"This candle holder should be cut . . . ." Instructions were given by a local sales representative for Stanley Tool Company as he worked with this fifth grade class to produce candle holders for their Christmas bazaar. Hobbies which could be developed into vocations were stressed and 30 different items were produced. Was it a success? Would you believe a $165 profit?

This food factory was hard at work making popcorn balls a specific diameter inorder to make 1½ cents on each one. By trial and error they discovered how to make a profit. This particular project involved many parents and many areas of the curriculum. The other factories running concurrently were candlemaking, flower, doll house and sewing. Orders were taken, total production costs, day to day costs, and factory costs were each figured. Since orders outstripped production capabilities, a halt was finally called at Christmas time.

Because mass production is such an important component of our economy, this sixth grade class set up a food factory. Flow charts were made for job distribution and production costs were figured for each sales day. The class made around $50 as a result of their weekly sales and by the way, the food was delicious!

2934

CORPORATIONS AND MASS PRODUCTION

Corporations? In a classroom? How about two in the classroom–competing against each other! Boards of directors were chosen. These students then decided on a food product to be produced, sold stocks to their classmates for capital, interviewed for the jobs to be filled and went into business. Since the more successful company could absorb the profits of the other one–and then decide on the use of the money–interest and competition were keen! Advertising gimmicks played an important part in the sales.

The sales resulted in $70 profit after the shares and dividends were paid! The students bought a hockey set for their school as well as contributing toward the purchase of the school camera.

"They're involved–everyone is busy doing something!" Fourth graders had a great learning experience in mass producing bird houses. Production was an essential part of the unit. Materials were provided by the career education monies and donations from a local lumber company.

"When can we work on it?" The fourth grade class in the same school also mass produced the base for a standing ball hoop. The two classes followed the same basic development of the unit, but the project chosen was entirely different.

2935

CAREER DAYS FOR FOURTH GRADERS

"Please sign this too! Can I have your address and phone number?" A K.U. football player came into the school in connection with their Career Day at the fourth level. Because of the students' excited questions, he could barely get a word in edgewise!

Respect for all occupations can begin with the school community as this school secretary tells about her fascinating job. The Career Days were held once each month for a thirty minute period each. Interest was always high on the speakers as well as the students.

Would you believe 46 resource speakers for Career Days this year?! Here a veterinarian who also happens to be the President of the Board of Education is showing surgical instruments used in his profession. The cooperation received from people in the community plus the support of the Board of Education members and our Administration has helped to insure success in our career education program.

Activities of this nature have taken organization and advanced planning but it has been worth it to watch the involvement and enthusiasm of the students as these people came to the classroom.

HEALTHFUL LIVING IS IMPORTANT FOR THE WORLD OF WORK

Healthful living includes good grooming as this cosmetologist showed in many classrooms throughout the district this past year. The students seemed to learn much better from an "expert" than from earnest appeals of their teacher or parent. This has been one of the major advantages of having resource speakers in the classrooms.

Germs spread that fast?" A plate was brought into the classrooms by a bacteriologist during a science unit and a health unit. The necessity for cleanliness was especially apparent and applicable to the health unit which the students were studying.

"This looks especially nice with . . ." Healthy living can also include careful grooming in our clothing. Here a representative from a local clothing store gave a fashion show using the students themselves as models. She challenged them to dress smartly, use their budget as a guide, keep their clothes neat, and keep themselves well-groomed at all times.

A MINI-HOUSE CAN BE FUN

Building a mini-houe in a sixth grade class was a year-long project. Different resource people including several parents were brought into the classroom in connection with this study. This contractor was helping the students as they tried to drive the large nails. It was fun to watch the other guy bend the nail . . .

The students took a tour out to various house sites to note the different stages of construction - foundation being dug, framing, wiring and final completion of a house. Visiting with the carpenters, electricians and plumbers was a great experience.

The completed house boasted ten rooms with wallpaper, paint and carpeting completing the interior. The removable roof helped to make this an ideal doll-house - what a great present for the primary classes!

2938

CAREER EDUCATION–SECONDARY SCHOOL LEVEL

The Lawrence Career Education program at the secondary school level has as its primary goal the development of students who upon leaving the secondary school will have acquired the skills necessary for job entry or will have developed skills and attitudes necessary to be successful in the pursuit of further training and education within a chosen career. Students also should have developed decision-making abilities and consumer skills that will enable them to effectively manage their resources.

At the junior high level we are broadening our exploratory courses to enable students to explore many occupational clusters. Upon completion of junior high school, the students are not expected to have acquired sufficient skills to be at the job entry level, but they will be familiar with the problems and methods of many occupations and of the interdependent roles of people in all careers. With these experiences, the students should be able to better evaluate the opportunities and requirements for a career and to make better judgments concerning the course they should take in high school to prepare themselves.

At the senior high level a career information center has been developed for student use and a number of teachers are bringing career education concepts into their respective academic curriculums. High school on-the-job-training programs–TRADES, OE, DE, and CIT–which existed before exemplary federal funding, provide opportunities for the student to prepare for entry into the world of work. Following, is a more specific discussion of junior high and senior high school programs.

2939

SECONDARY ACTIVITIES

This seventh grade common learnings class learned about our free enterprise system in a unique way. The students individually or in small groups produced, advertized and marketed their own products. Many attractive and clever handicraft items were the result, and students learned first hand some of the basic components of our economic system.

A junior special education class participated in an extended and varied study of transportation, including "what modes of transportation can I use to get to work" and "what are the jobs of transportation worker." This motorcycle salesman is showing the students his newest product - - a Honda car!

During this study, students talked to the local bus company owner, as well as a service station owner who demonstrated some basic car maintenance techniques. This wrecker truck driver certainly has his audience interested in his job!

2940

individual study of specific careers is a part of the ninth grade social studies curriculum in Lawrence. Students used a variety of meaas to do research. Here a student is consulting jobs briefs in aa occupatioaal exploration kit in order to obtain needed information.

In this study of careers, the students in several classes interviewed people in the community to further explore particular career interests. In other classes, resource speakers such as this fashion illustrator talked to the students.

Centron Film Corporation is a favorite touring spot in Lawrence. Two junior high common learnings classes took this field trip and found out how the Centron social studies films they had viewed had been made. The same tour can be taken oa differeat levels for defferent purposes. After a classroom field trip to Centron, a high school student produced his own film!

2341

SPEAKERS

WEIGHT WATCHER SCHOOL DIETITIAN SCHOOL NURSE DOCTOR HOME EXTENSION AGENT SCHOOL COOK STEWARDESS KANSAS POWER AND LIGHT HOME ECONOMIST CATERER VENDING MACHINE SALESMAN FLORIST PODIATRIST WAITRESS TEST KITCHEN REPRESENTATIVE COMMUNITY FOODS REPRESENTATIVE CAKE DECORATOR INTERNATIONAL FOODS REPRESENTATIVE CONSUMER SPECIALIST F D A RESTAURANT MANAGER CHEF LUNCHEON SUPERVISORY AIDE CAMP COUNSELOR OR DIRECTOR ETCETERA

FIELD TRIPS

Spa Haskell kitchen K U Food Service Bakers Dairy Butcher Grocery Store Health Food Store Coca-Cola Bottling Company Stokley Van Camp Foreign Food Restaurant Frozen Food Distributor Fruit Market China Department School Cafeteria Etcetera

SPEAKERS

CHILDREN'S LIBRARIAN FOSTER PARENT HEAD START TEACHER PEDIATRICIAN RECREATION PROGRAM DIRECTOR OR AIDE CHILDREN'S CLUB LEADER PROFESSOR OF ELEMENTARY EDUCATION ELEMENTARY SCHOOL COOK MOTHER SCHOOL NURSE RED CROSS REPRESENTATIVE HOSPITAL VOLUNTEER CLASSROOM TEACHER AIDE COUNTY HOME EXTENSION AGENT PHYSICAL THERAPIST NURSERY SCHOOL TEACHER EMPLOYMENT AGENCY REPRESENTATIVE ETCETERA

FIELD TRIPS

Day Care Center Nursery School Grade School Children's Clothing Factory Children's Clothing Store Etcetera

SPEAKERS

SOCIAL WELFARE WORKER HOME EXTENSION AGENT SMALL WORLD REPRESENTATIVE WELCOME WAGON LIFE INSURANCE AGENT PLANNED PARENTHOOD REPRESENTATIVE CREDIT BUREAU REPRESENTATIVE FINANCE COMPANY REPRESENTATIVE MANAGER OF CREDIT DEPARTMENT MARRIAGE AND FAMILY COUNSELOR MINISTER SCHOOL COUNSELOR ADVERTISING LAYOUT DESIGNER BANK REPRESENTATIVE PARENTS ETCETERA

FIELD TRIPS

Mental Health Clinic Bank

SPEAKERS

APARTMENT MANAGER REAL ESTATE AGENT ARCHITECT MAID CARPENTER HOUSE BUILDER CARPET CLEANER APPLIANCE REPAIRMAN HOME SERVICE REPRESENTATIVE INTERIOR DECORATOR JANITOR PAINTER UPHOLSTERER EXECUTIVE HOUSEKEEPER FURNITURE REFINISHER ETCETERA

FIELD TRIPS

Antique Shop Furniture Store Linen Department Garden Center Low-Rent Housing Florist Housing for Elderly Mobile Home Used Furniture Store Candle Making Factory Craft Shop Etcetera

SPEAKERS

FASHION ILLUSTRATOR MERCHANDISER RETAILER CLERK WHOLESALE REPRESENTATIVE TAILOR SEWING MACHINE REPAIRMAN WEAVER TEXTILE PRINTER PATTERN COMPANY REPRESENTATIVE NOTIONS COMPANY REPRESENTATIVE ETCETERA

FIELD TRIPS

Fabric Store Boutique Clothing Factory Clothing Retail Store Etcetera

SPEAKERS

BEAUTICIAN COSMOTOLOGIST MANICURIST PHYSICAL EDUCATION TEACHER NURSE MODELING SCHOOL REPRESENTATIVE DENTAL ASSISTANT HOME EXTENSION AGENT DRESSMAKER PHYSICIAN ETCETERA

FIELD TRIPS

Dry Cleaners Commercial Laundry Beauty School Modeling School Etcetera

Lawrence USD# 497

Junior Highs' Home Living Concepts

2942

JUNIOR HIGH HOME LIVING

Home Economics in the Lawrence Junior High Schools consists of three different courses including those activities and units of instruction which will serve the exploratory function to meet the home and family-life needs of students. The program provides practical learning experiences with a variety of goods, services, and equipment used in the home and community. The program is concerned with assisting individuals to develop the ability to carry their respective personal responsibilities in relation to food, shelter, clothing, child care, health, home care of the sick, and personal and family relationships. The junior high teachers over a year's time have developed a new and exciting approach to Home Economics for their students.

Designs for Living is a full-year, required course taught at the seventh grade level. Interwoven into each unit is a study of career and consumer education, along with principles of management and decision-making. Units covered are Kitchen Caper, Focus on the Family, Bedroom Beauty, Project You, Seam Schemes, and Talent With Tot.

A visit to a children's garment factory sparked new ideas for the traditional seventh grade apron project. Why not make them on an assembly line?

Flow charts and factories designed for each step in the construction process demonstrate division of labor.

343

Aprons do get finished—especially on an assembly line. Did they ever have to wait for others? Did it get boring doing the same job over and over? Which one will be my apron!

Even studying nutrition is enjoyable when students have an opportunity to share their ideas with others. Here seventh grade girls are presenting a puppet show to primary students. Nutritious cookies served to these second graders disappeared in a hurry! Nutrition can be fun!

A skit on nutrition to intermediate grades was followed by a flannel-board presentation including audience participation. The Home Living students presented these programs to a total of seven elementary classrooms!

2944

Topics for Teens I is an elective one-semester course offered to eighth and ninth grade students. The course is designed to help students form more mature relationships with age-mates, develop better coordination, and explore values as they relate to personal behavior and money management. Other areas available for exploration in Topics for Teens I are Food - - Our Business, Creative Homes, and Get Ready - Get Set - Sew.

These students are watching a home economist from a local utility demonstrate a product. Later, students developed demonstrations of their own to "try-on" this role.

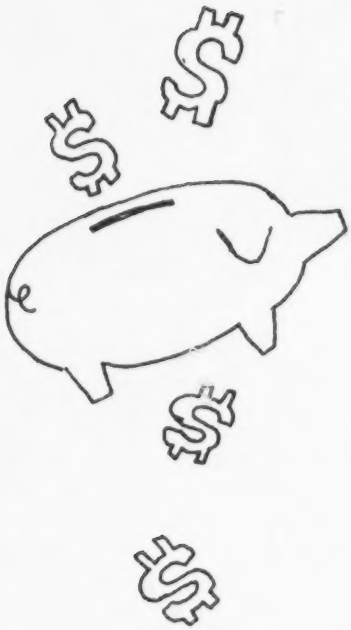
Topics for Teens II is an exploratory semester course which may be elected by ninth grade students. In the food unit, students will have the opportunity to plan and carry out different types of entertainments they may later attempt to their own homes of the future. They may relate the clothing unit directly to their personal needs by analyzing their own clothing studying their activity and interest patterns, and creating a wardrobe plan that meets their needs. By this time, their figures are more stablized so they can discover ways to enhance them. A unit called Figures and Fabrics is designed to help with this task. Besides these units, others included are Shopping Sense, Sharing and Caring for Homes, and Career and Vocational Planning.

This ambitious ninth grader is using sewing skills as part of an interiors unit designed to develop projects to enhance the school. Here, drapes are being made for the school library,

and in this picture, we can appreciate an effective window treatment for the school cafeteria. Other students chose to redecorate a teachers' lounge including painting the walls, making drapes, and designing room accessories.

The junior high teachers feel that after each student has completed these courses, he or she should be able to assess her interests in the various areas of home-living and to analyze the vocations to which these interests may lead. Students will also have fulfilled certain developmental tasks toward family life goals and have a broader background of knowledge on which to build at the senior high school level.

2946



As a consumer, all of us are called upon at one time or another to be amateur accountants, mechanics, dieticians, or engineers in the selection and use of products and services. Yet, how often do we have the information or the skills necessary?

Children in the elementary grades already have a limited background of experiences that can be used to develop economic understanding. Students at this age are beginning to realize they cannot have all the things they want, and they can begin to recognize and understand that this problem is common to all people. Establishing priorities based on personal values is the only way to develop effective decision-making ability regarding these wants and needs.

Consumer economics is a term much used and often little understood. Often, we limit the scope of the word "consumer" to those concepts based on financial management rather than seeing the consumer in his broad role as a user of all resources, i.e. time, energy, money, our environment, community resources, and the individual potential.

Consumer and economic concepts flow through most activities designed for career education. For instance, we can not separate the process and concepts of saving (an economics concept) from the jobs of the workers in savings institutions, (world of work) or from students' attitudes toward planning saving (self-development).

These busy second-graders are learning about savings accounts from a local banking representative. She stresses that their current occupation is school and that money in savings makes money for the owner. Through a simulation activity, each child had the opportunity of opening his own savings account; and ballons and cookies demonstrated the advantages of "money" earned from "money" invested.

2997

How much can we buy with 30 cents, $1, $5, $10? A variety of differently priced toys and sporting equipment helped students determine some short and long-range goals regarding spending and saving.

Baseball gloves are always a popular item in the spring and when Kansas University's baseball coach is showing them, it's even more interesting! These third graders also discussed the cost of uniforms and other baseball equipment as well as the attitudes a coach appreciates in his players.

How many pennies are in a nickel? How many nickels in a dime? What could we buy for a penny? one . . . two . . . three . . .four . . . five . . . This bank representative helped these kindergarteners decide that a dime was understandable after all! And, woefully, a penny wouldn't buy too much!

2948

WORLD OF CONSTRUCTION

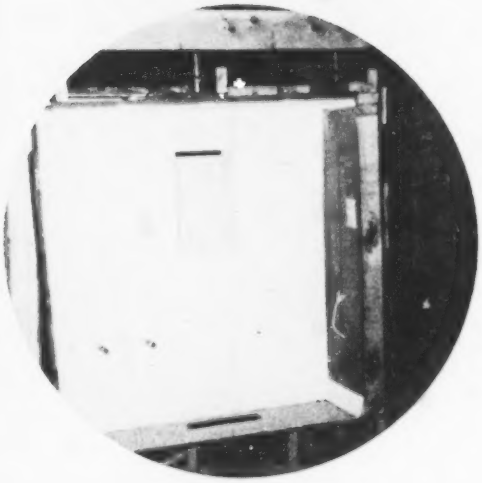
One section of the Lawrence Career Education Program involved improvement of the junior high school industrial arts program. In the fall of 1972, all three Lawrence Junior High Schools began using the new IACP Program (Industrial Arts Curriculum Project) at the seventh grade level. The seventh grade phase is titled "The World of Construction." "The World of Construction" program is not intended to teach skill development. Students at the seventh grade level lack the maturity to be concerned about such qualities as accurateness, which is an important facet of skill training. Instead, the program is designed to give students experience with general concepts. Students usually know very little about construction at this level. However, studies have shown that after taking this course, many students know enough about the construction trades to appreciate the great degree of training necessary to perform the various skills. While all students are exposed to practical knowledge and concepts of the working world, some decide to further explore careers in construction. In the new program students learn actual construction on concepts such as plumbing, roofing, wiring, duct and sheet metal work, masonry, painting and drafting, plus some concepts connected with management including pricing and quality control. In the IACP Program, students generally work on activities in "crews" of about 4-6 students each. At the beginning of an activity, a foreman is elected or appointed. The foreman then delegates work to be performed by each crew member.

At one point in the school year, labor-management negotiations develop. Half of the class is termed "labor" while the other half is "management." Mid-way through the negotiations, when the "battle" becomes very active, the teacher calls a halt and the students reverse sides. Although this experience may prove frustrating, it is a very informative and realistic lesson about the world of work.

2949

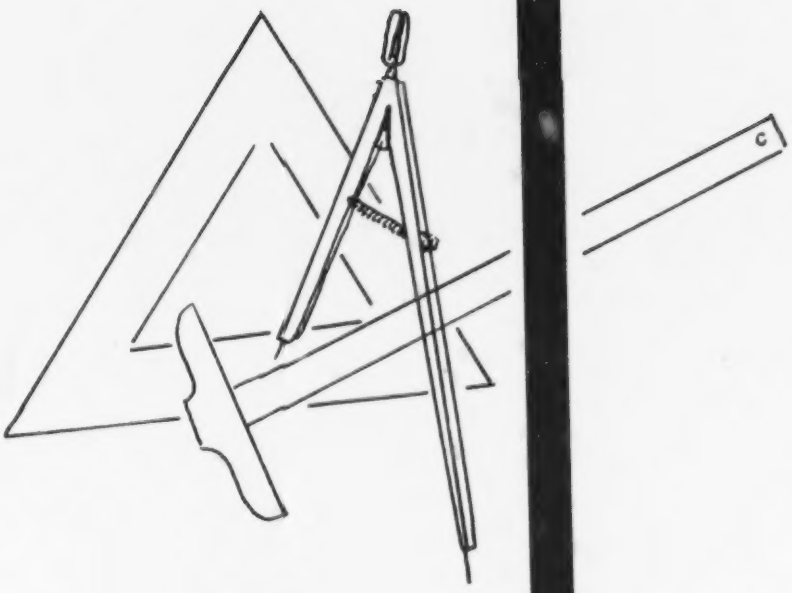
Students participate in construction activities to learn the concepts of the industry which includes proportioning and mixing cement to use in footings and pillars for home and building construction.

One of the activities used to develop the students concept of wood frame home construction is the building of a scale model wall construction is the building of a scale model wall section for a typical home. This activity introduces the student to plumbing, heating, sheet metal, and electrical applications.



The finishing touches are added to the "home" which included trimming, painting, and roofing.

2950



The concept of home design and community planning is studied through the construction of a student's "dream" model home which the class used to plan and lay out a model community.

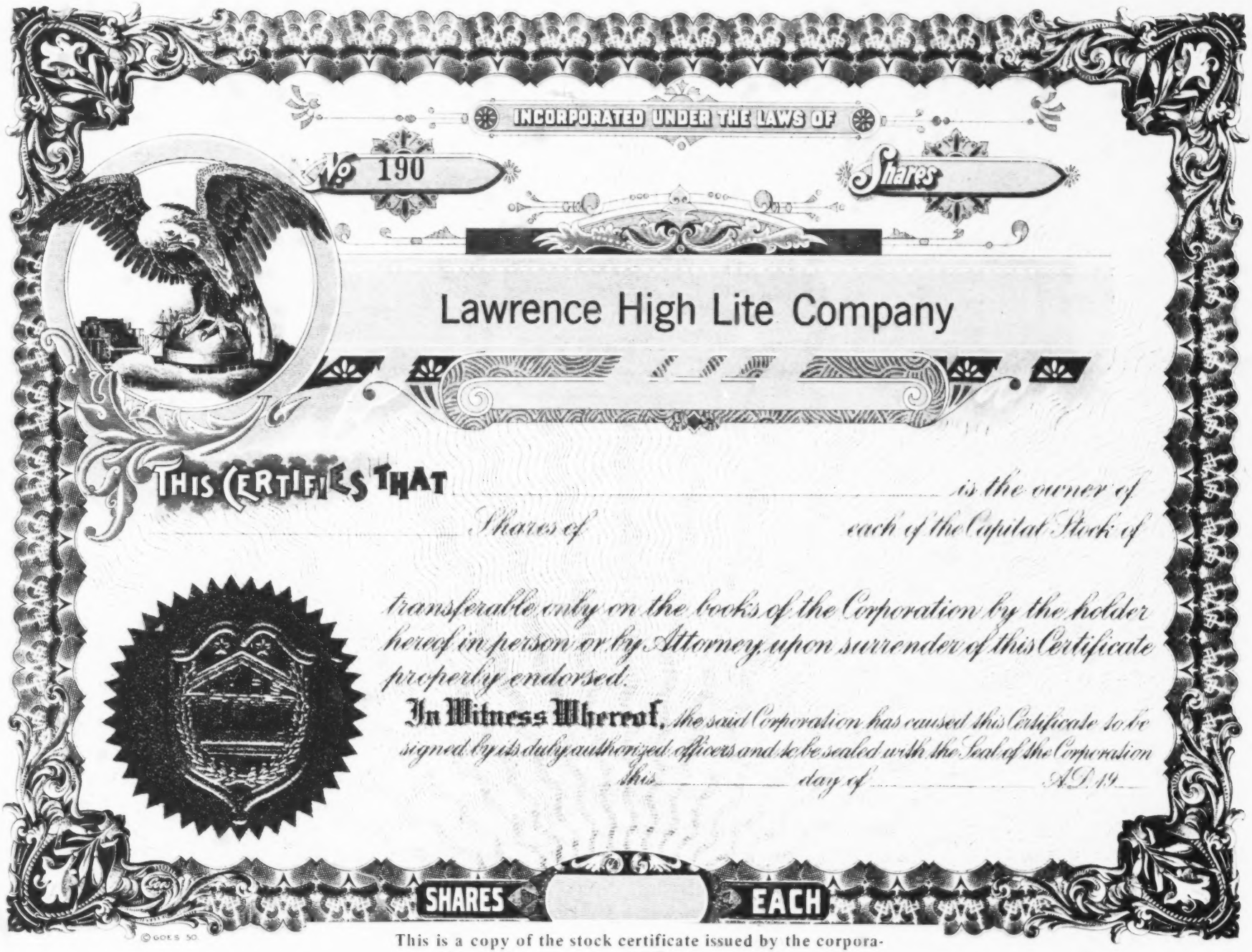
2951

A new course introduced at the senior high school level is entitled Manufacturing Processes.

This course is designed to introduce to each student the aspect of mass production; beginning with corporation organization, selection of a product, design and development, tooling-up for mass production, production and assembly, and finally sales and distribution of the product. A student should have one or more semesters of any of the following classes: Drafting, Wood Technology, Machine Tool Processes, Electronics, Welding, or Sheet Metal Fabrication.

This course was authored and developed by Fred Schultz and Lyle Hoover at Lawrence High School.

2952



This is a copy of the stock certificate issued by the corporation which was formed by the students in the course "Manufacturing Processes" to finance its operation.

.353

SPECIAL EDUCATION WORK–STUDY PROGRAM

During the 1971-72 school year, the Lawrence High School Work-Study Program for the educable mentally retarded (EMR) had the following involvement with the Vocational Exemplary Grant:

1. Funding of a full-time On-The-Job-Training (OJT) Coordinator to serve the thirty EMR students enrolled in the program.

2. Purchase of equipment for the establishment of a laundry.

The Lions' Laundry is responsible for laundering all towels used by the athletic and physical education departments of the high school and uniforms of the auto mechanics and athletic departments. Special education students, under the supervision of the OJT Coordinator, operate the laundry on one hour shifts, five days a week, from seven in the morning until three or four o'clock in the afternoon. The students are responsible not only for the laundering of an average of 1900 towels and 35 uniforms a week but must also maintain the laundry area, pick-up and deliver the laundered items, keep student time sheets, record delivered items, and attend work evaluation sessions regarding the operation of the laundry. Funds for salaries and supplies are obtained by charging the department who used the services of the laundry on a price per item basis.

The duties of the OJT Coordinator include the location, placement, supervision and evaluation of job stations for all high school EMR students. Job stations are divided into two categories–Campus Work Experience and OJT.

The campus work enrollment was composed of twelve cafeteria workers, eight laundry workers, one building maintenance worker, and one ditto service operator. Salary ranged from 75 cents to $1.00 an hour. Students worked for a period of time of one hour or two hours a day.

Eighteen students worked from two through eight hours daily on community job stations for OJT credit. Those students on OJT earn from $1.60-$2.50 an hour on jobs such as grocery sacker/carry-apprentice, landscaping, housekeeping, custodial aides, dairy farming, and assistant equipment manager for university athletic department.

From September through April, over seventy-five guest or observers toured the program. There were a total of fifteen community resource people used in the classrooms and twelve field trips taken by small groups of students to relate their academic experiences with the unique resources of the Lawrence community.

Classroom experiences, at all times, are structured to provide a transfer of academic skills to the adult world of work and independent living. Those areas stressed include communication skills, business math, government, social sciences, and general vocational.

2955

TRADES PROGRAM

The TRADES Program was designed to meet the special needs of students who are classified as disadvantaged. TRADES is a "self contained" program including work in language arts, social science, and the skill instruction. Students graduate with a regular diploma.

The educational assistant section of the 1971-72 Program was financed by Exemplary monies. The class was composed of 21 students (5 males, 16 females). The course content included: pre-school to mid years Child Development study; 300 word vocabulary covering the Child Development presentation; researching, and producing educational bulletin boards and art projects; making a card file of 350 educational activities; review of manuscript printing and numbers. Instruction on the role of the teacher aide was continuous.

The students worked in the classrooms two hours a day in nine public schools and on Headstart Day Care Center. At least once a week, the TRADES educational aide instructor visited the student on duty. The next day, in classtime, comments were made to the student including praise as well as suggestions for improvement. The instructor also conferred with the cooperating teacher on the student's progress. A sample of assignments completed by the teacher aides are: made bulletin boards; graded papers; helped with lunchroom; helped with milk serving; tutored reading, math and science, both group and ivdividually; helped on the playground; prepared and ran duplicated materials; prepared teaching materials; such as paints, construction paper, etc. Of course, clean up duties were done.

Of this group of 21 students, 3 males and 13 females have completed the year. Five are graduates.

By: Mrs. Daryl Jehle
Director of TRADES Program

2956

INSERVICE

Inservice as a necessary component of a new Career Education program has been very evident in Lawrence. Through the generous cooperation of Kansas State University in Manhattan and now Kansas University in Lawrence, we have been able to give the teachers an opportunity to work for graduate credit through inservice workshops and courses. We see inservice as an opportunity for teachers to integrate career education concepts into their thinking, learn more about community resources, and work on curriculum development for their classrooms.

WORLD OF WORK WORKSHOP – June, 1971

Thirty-two elementary teachers and principals from all grade levels and schools participated in our first Career Education workshop. By staggering four small groups during the week, each participant was able to hear two resource speakers, take two tours, and spend two days with instructional materials and curriculum development. On the last day the entire group went on a bus tour of the community. Each teacher developed a project for the classroom, and through sharing, took many ideas back to the classroom.

CONSUMER EDUCATION WORKSHOP – June, 1971

Thiry-five elementary and secondary educators participated in this one week workshop. Interesting resource speakers were heard all week on the subjects of: low income families, advertizing, credit unions, banking, stocks, consumer fraud, protection services including the FDA, and career education. Each person developed a project for the classroom.

OCCUPATIONS EDUCATION CLASS – Fall, 1971

Sixty elementary and secondary personnel participated in a graduate class for three hours each Thursday evening for 14 weeks. Participants received 3 hours of graduate credit from Kansas State University. Activities of the class included:

- Lectures by faculty of the Dept. of Adult and Occupational Education, K.S.U.
- Speaker on "Positive Self–Image"
- State Dept. Speaker on "Writing Behavioral Objectives"
- Presentation by other state career education programs
- Released time for visitation of Career Education library
- Tour to Area Vocational-Technical School
- Released time to attend Careers Fair for secondary students
- Released time for Mini-tours to businesses after school
- Panel on Post-High School educational opportunities
- Sharing and Projects

2957

WEEKEND WORKSHOP March, 1972

Teachers received one hour of graduate credit and participated in many hours of group dynamics related to Career Education directed by Kansas State University staff. Also preview presentations on two workshops were given.

BUSINESS, INDUSTRY, AND EDUCATION WEEK (B.I.E.) April, 1972

This annual business, industry and educators exhange was expanded and changed this year. By proclamation of the mayor, the week was declared Career Education Week. Teachers had the opportunity to participate in a total of 16 tours on four different days after school. A special feature this year was "The Shop Talk Forum", where representatives from business, the school district, and the university participated in discussion and group dynamics. The school district also set aside a time for community patrons to tour the Career Education program.

WORLD OF WORK WORKSHOP June, 1972

Teachers received one hour of graduate credit for one week of activities in the morning. This workshop was directed toward teachers with less then 3 hours credit in Career Education.

Format:

1- Group Dynamics directed by K.S.U.
2- Presentation by Lawrence teachers of career education activities in their classrooms. Slides of activities in the district. Review of Career Education library and other materials.
3- Development of Careerpacs directed by K.S.U.
4- Teacher tours and resource speakers presentations
5- Demonstration by elementary students of projects Sharing and Evaluation

2958

SIMULATION LEARNING WORKSHOP – Summer, 1972

Teachers in grades 5 through 9 were eligible to attend a two week afternoon session for two hours gradute credit. Dr. Richard Shusler, Kansas University conducted the following activities:

Introduction and rationale for games;
Examination and experimentation with games already developed.
Development of career education games for the classroom.

ECONOMIC EDUCATION WORKSHOP – June, 1972

All teacners in the district were eligible to receive three hours graduate credit for attending three weeks of afternoon sessions. Co-sponsored by the Kansas Council of Economic Education, the relationship of the economic world to the world of work and the consumer's world was stressed. Format:

Week 1- Economic Concepts-Dr. Olson, K.U.

Week 2- Curriculum Development-Dr. John Guenther, K.U.

Week 3- Curriculum and Materials-Mr. Vincent Patrick, Tulsa

02959

FIFTEEN CAREER EDUCATION PROJECTS HAVE BEEN CHOSEN NATIONALLY

In June, 1972, Lawrence USD # 497 was informed that its Career Education program was one of the fifteen projects selected from the forty-one on-site visitations by the National Center for Occupational Education, North Carolina State University at Raleigh, North Carolina, to be published and disseminated by the National Center for Education Communication, U.S. Office of Education. The forty-one on-site visitations were completed from approximately 250 projects identified across the nation.

The fifteen projects were selected because they represent geographic distribution; population distribution; population distribution; urban, rural, and suburban areas; city, county, and consolidated administrative units; programs planned for continuation after new and limited monies expire; and programs with definitve elements of K-12 career education.

Those programs selected are listed alphabetically below:

1. Anne Arundel County Career Development, Annapolis, MARYLAND
2. Ceres Unified School District, Ceres, CALIFORNIA
3. Cobb County Occupational and Career Development Program, Marietta, GEORGIA
4. Helena Public Schools, Helena, MONTANA
5. Holyoke Schools, District RE-IJ, Holyoke, COLORADO
6. Kershaw County School District, Camden, SOUTH CAROLINA
7. Knox County Schools, Knoxville, TENNESSEE
8. Lawrence Unified School District # 497, Lawrence, KANSAS
9. Lebanon Union High School, District # 1, Lebanon, OREGON
10. Mid-Hudson Career Development and Information Center, Plesant Valley, NEW YORK
11. New Albany School District, New Albany, MISSISSIPPI
12. Pontiac City Schools, Pontiac, MICHIGAN
13. Renton School District # 403, Renton, WASHINGTON
14. Springfield Public Schools, Springfield, OREGON
15. Toledo City Schools, Toledo, OHIO

FINANCIAL RESOURCES PROVIDED BY STATE AND FEDERAL FUNDS

LAWRENCE K-12 CAREER EDUCATION BUDGET FOR 3 SCHOOL YEARS

	1970-71	1971-72	1972-73
Administration - Salaries	$ 5,790	$ 7,173	$ 6,500
Secretarial - Salaries		1,672	1,500
Administration - Printing	945	998	1,000
Administration - Expenses	554	911	950
Instruction - Instructors & Resource Persons	25,136	42,543	38,700
Instruction - Aides		2,876	2,200
Instruction - Supplies	21,750	10,730	6,100
Instruction - Consultants	1,608	204	200
Staff Travel	1,266	1,263	1,000
In - Service Training	9,984	2,976	1,750
Transportation - Field Trips	22	921	1,250
Utilities	192	100	100
Fixed Charges - Social Security	1,520	1,756	District
Equipment - Rental or Purchase	4,545	499	450
Total Annual Budgets -	$72,986	$74,622	$62,000

LAWRENCE USD #497 SUMMARY OF STUDENTS AND PERSONNEL
September 15, 1971.

No. of Units	Organization	Enrollment	No. of Certified Personnel
16	Elem. K - 6	4,300	222
3	Jr. Higl 7 - 9	1,813	112
1	Sr. High 10 - 12	1,778	101
1	Administration Center		15
21		7,891	450

Classified Personnel	Full Time	Part Time		
Clerical and Secretarial	40	8		
Custodial	37	22		
Maintenance	13	1		
Food Service	60	13		
Transportation	1	5		
Teacher Aides	7	1		
Federal Programs	0	5		
	158	55	=	213
				663

OCCUPATIONAL SURVEY

The following table shows the occupational profile for Lawrence and for the State of Kansas. There is an unusually large precentage of "professional, technical and kindred" workers among the population of Lawrence. This percentage is almost twice the statewide average and probably reflects the influence of the University of Kansas on the community work force.

Occupational Category	Percent of Work Force In Each Category: Lawrence	Statewide
Professional, Technical and Kindred	27.1	14.3
Managers and Administrators, except Foremen	7.4	9.4
Sales Workers	7.3	7.5
Clerical and Kindred	19.5	16.6
Craftsmen, Foremen and Kindred	10.4	13.3
Operators, except Transportation	6.3	9.7
Transportation Equipment Worker	2.3	3.5
Laborers, except Farm	3.8	4.2
Farmers and Farm Managers	0.2	6.4
Farm Laborers and Foremen	0.6	1.8
Service Workers, except Private Household	13.6	12.0
Private Household Workers	1.5	1.3
	100%	100%

Source: 1970 Census

2961

EVALUATION OF PROGRAM

Strengths of the Lawrence Career Education program as preceived by the visitation teams, the career education staff and USD # 497 administrators:

1. The support of the community, parents, the University of Kansas, and the Administration of the local district. This is evident in the cooperation of these groups in providing resource speakers, hosting tours, participating in career fairs and World of Work days and in sponsoring the Business-Industry - Education Week.

2. The operation of the program encourages the career education staff serving as consultants to provide teachers with information, ideas, and other services on a voluntary request basis.

3. The development of a strong elementary program. Although participation is voluntary, it is estimated that approximately 75% of the elementary teachers participated.

4. The implementation of the IACP curriculum in industrial arts and the planned curricular revisions in home economics at the junior high school level.

5. The development of the Career Information Center in the high school library. This is a student oriented browsing center for career education and vocational guidance.

6. The emphasis on consumer education and economics.

7. The strong program of in-service training that was developed in cooperation with Kansas State University, Manhattan, Kansas.

8. The good working relationships that have developed among the staff and its director, and the dedication of the staff to career education.

9. The involvement of special education in the exemplary program to provide on - the - job experience for the educable mentally retarded students.

10. The research done of evaluation instruments to be used for measuring student outcomes at the elementary level.

11. The development of occupational awareness on the part of students and parents and the acceptance by parents that college preparation may not be the best answer for all students.

12. The progress made in developing a respect and tolerance for all types of occupations.

13. The support of the State Division of Vocational Education and the assistance furnished by the staff of the colleges and universities in Kansas.

Perceived Weaknesses. The following were seen as weaknesses in the career education exemplary program.

1. Improving the understanding of the career education program to help make more progress at the secondary level is essential. Many academic teachers and counselors at the junior and senior high school levels do not appear to fully understand the relevance of career education in their areas.

2. There is some concern that the limited resource persons of the community may lead to an overuse of resource speakers and tours.

3. Improvement of the effectiveness of the method of disseminating information about career education throughout the district is needed. Teachers in one school are not always informed about new ideas and approaches being used in other schools of the district.

4. Space limitations in the individual classrooms tend to limit certain types of activities. More work needs to be done in correlating the space requirements of projects with the space available.

5. There should be closer communications between the career education staff and the vocational education staff.

16 mm films produced in collaboration with Career Education Project

Jobs in the City – DISTRIBUTION
Jobs in the City – CONSTRUCTION
Jobs in the City – SERVICES
Jobs in the City – MANUFACTURING
Jobs in the City – WOMEN AT WORK
Jobs in the City – MASS MEDIA
Jobs in the City – MEDICAL & HEALTH

For more information Contact:
CENTRON EDUCATIONAL FILMS
1621 West Ninth Street
Lawrence, Kansas 66044

02962

1972 - 73 Visitation Form

K - 12 CAREER EDUCATION PROGRAM

LAWRENCE, KANSAS

Return at least 2 weeks prior to planned visitation to:
Lawrence USD No. 497
Administration Center
Atten: Ernest J. Coleman
2017 Louisiana
Lawrence, Kansas 66044
Telephone Number: 913-842-6222 or 913-842-7394

SCHOOL DISTRICT _____

Address _____

Individual Making Request _____

Position _____ Telephone Number _____

DATE OF TOUR REQUEST: (Visitation schedule will begin Wednesday, September 20, 1972 and will be every Wednesday except during vacations or another day with special arrangements to and including May 16, 1973.

1st choice - Wednesday _____

2nd choice - Wednesday _____

Time of Arrival _____

Time of Departure _____

Number visiting Lawrence _____

Career Education Visitations will be scheduled from approx. 9:30 a.m. through 2:00 p.m. Lunch may be scheduled for the group (Dutch Treat) at a school or local restaurant.

TOUR POSSIBILITIES: (Please check specific area(s) of interest and indicate the number interested in each.)

_____ Elementary Career and Consumer Education Activities

_____ Junior High Career Exploratory Programs

_____ Senior High Store Front Trades Program and Special Education Commercial Enterprise Classes

_____ Senior High Career Emphasis Areas

_____ Other Junior High Activities. Please specify: _____

_____ Other Senior High Activities. Please specify: _____

Please give your reason(s) for requesting a visit to the Lawrence Career Education Program:

002963

VT 019 379
YOUNG, WILLIAM G.
AN EXEMPLARY PROGRAM FOR OCCUPATIONAL PREPARATION. INTERIM REPORT (1972).

NEW ORLEANS PUBLIC SCHOOLS, LA.
BUREAU OF ADULT, VOCATIONAL, AND TECHNICAL EDUCATION (DHEW/OE), WASHINGTON, D.C.
MF AVAILABLE IN VT-ERIC SET.
OEG-0-70-4783(361)
PUB DATE - JUL72 167P.

DESCRIPTORS - *DEVELOPMENTAL PROGRAMS; PILOT PROJECTS; *VOCATIONAL EDUCATION; *MODELS; *PROGRAM EVALUATION; *OCCUPATIONAL GUIDANCE; EDUCATIONAL OBJECTIVES; ELEMENTARY GRADES; SECONDARY GRADES; OUT OF SCHOOL YOUTH
IDENTIFIERS - *LOUISIANA; CAREER AWARENESS; EMPLOYMENT SKILLS

ABSTRACT - DESIGNED TO CHANGE STUDENTS' ATTITUDES CONCERNING THE DIGNITY OF WORK AND TO PROVIDE VOCATIONAL GUIDANCE AND JOB ENTRY TRAINING, THIS EXEMPLARY PROGRAM INVOLVED STUDENTS AT 4 EDUCATIONAL LEVELS: (1) ELEMENTARY SCHOOL, WHERE WORLD OF WORK ACTIVITIES WERE INTRODUCED, (2) MIDDLE SCHOOL, PROVIDING SOME SEMI-SKILLED TRAINING, (3) HIGH SCHOOL, WHERE PRACTICAL JOB TRAINING AND EXPERIENCE WERE OFFERED, AND (4) OUT-OF-SCHOOL YOUTH LEVEL, PROVIDING EVENING TRAINING IN INDUSTRIAL TRADES. THREE FULL-TIME COUNSELOR-COORDINATORS WERE EMPLOYED TO OVERSEE THE PROGRAM. AT THE TIME OF THIS REPORT COVERING THE 1971-72 SCHOOL YEAR SIGNIFICANT POSITIVE RESULTS OF THE PROGRAM ARE MANIFESTED IN THE IMPROVED OCCUPATIONAL AWARENESS OF TEACHERS AND STUDENTS. THE BODY OF THE REPORT CONTAINS A SUMMARY OF THE ACTIVITIES AND ACCOMPLISHMENTS AT EACH INSTRUCTIONAL LEVEL. INCLUDED IN THE RECOMMENDATIONS ARE: (1) MORE COMMUNITY AWARENESS OF AND INVOLVEMENT IN THE PROGRAM, (2) MORE INTERCHANGE OF IDEAS WITH SIMILAR PROGRAMS, AND (3) AN EXPANDED AND REVISED CURRICULUM. THE APPENDIXES CONTAIN SAMPLES OF MATERIALS USED IN THE INSTRUCTIONAL PROGRAM. (KH)

VT 019 379

Interim Report

Project No. 0-361-0125
Contract No. OEG-0-70-4783(361)

An Exemplary Program for Occupational Preparation

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

William G. Young
New Orleans Public Schools
703 Carondelet Street
New Orleans, Louisiana 70130

July, 1972

VT019 629

2965

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
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An Exemplary Program for Occupational Preparation

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

The project reported herein was performed pursuant to a contract with the Bureau of Adult, Vocational, and Technical Education, Office of Education, U. S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

William G. Young
New Orleans Public Schools
703 Carondelet Street
New Orleans, Louisiana 70130

July, 1972

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2907

SUMMARY

Time Period covered by the report
July 1, 1971 through June 30, 1972

Goals and Objectives of the Project

A. Objectives

Change students' attitudes concerning the dignity of work and to provide vocational guidance and job entry training for disadvantaged youth, and,

Illustrate a workable plan to the Orleans Parish Schools and other agencies for achieving the above.

B. Goals

Develop within each student the ability to:

1. Think about a wide range of occupations.
2. Appreciate the dignity of work.
3. Make their own occupational choices.
4. Become ambitious.
5. Know how to find and hold jobs.
6. Become interested in school.
7. Have ability to earn while in school.
8. Have employable skills upon terminating their schooling.
9. Relate schooling to chosen occupations.
10. Put their skills to work through on-the-job experiences.
11. Become employable through adult night trade training courses.

Procedures

1. Elementary School Level

Introduce the World-of-Work through field trips, enrich studies related to job choices, and develop sound attitudes towards vocations.

2. Middle School Level

Broaden the World-of-Work concepts formed at the elementary level and offer semi-skilled training for some.

3. High School Level

Use skills acquired in industrial education courses in on-the-job training; afford practical and simulated experiences in office work, practical nursing and nurses aide. Maintain guidance, job placement, and follow-up for graduates with assists from local manpower agencies.

4. Out-of-School Youth Level

Provide training in basic auto mechanics and mechanical drawing or specialized areas in each of those fields for out-of-school youth at night.

One elementary school advisor serves the teachers and students of four elementary schools. In an advisory role, he seeks to stimulate the teachers to include occupational orientation topics in the instructional program. One middle school advisor is responsible for facilitating three semi-skilled classes for over-aged potential dropout students and to stimulate the teachers to include world of work information into their instruction.

In the senior high school, one vocational counselor and one-the-job training coordinator serves students enrolled in the clerical blocks, health occupations and industrial arts classes. He engages these students in guidance sessions on salient topics related to securing jobs and job performance. This individual served the following:

Classes served by O. J. T. Coordinator
and Vocational Counselor

Course	Class	Enrollment
Office Simulation Block	1	34
Clerical Office Block	2	44
Practical Nursing I	2	40
Practical Nursing II	1	18
Mechanical Drawing	6	159
Electricity/Electronics	4	61
Woodworking	5	134
Small Engines	3	63

This coordinator was also available to work with other students in the school who expressed an interest in vocational counseling.

The program coordinator, with an office in the same school, assisted on numerous occasions with individual counseling sessions. The program coordinator filled in when the O.J.T. coordinator was in the field.

It should be noted that the E.P.O.P. staff was closely involved with a relatively large teaching staff and student population on a continuing basis.

Results and Accomplishments

The Exemplary Program for Occupational Preparation has had a positive influence on the students of the component schools. Essentially, each program component has progressed in the direction of the stated objectives. The final evaluation of this program should demonstrate a large measure of progress or success.

In the elementary component, a significant increase in activities was recorded during the year. Many students gained increased knowledge of occupations and awareness to the world of work. Field excursions, demonstration lessons, visiting resource workers and role playing were high in the priority of activities leading to the results achieved.

It is safe to project that many students in this component are anticipating more experiences of this type as they continue to express their satisfaction.

In the middle school component the greatest measure of activity was manifested from a program of only one semi-skilled carpentry class and occupational orientation, sessions reaching only 20 classes at the beginning of the year, the component achieved full implementation. By the end of the year, all classes were receiving vocational orientation through the weekly Career days, and three semi-skilled course areas (Carpentry, Food Handling, Child Care) were operational and fully enrolled. Staff and teacher cooperation was very high. This fully demonstrates the school accepting the challenge to achieve the E.P.O.P. objectives.

In the senior high school, progress was shown by the increased number of O.J.T. slots obtained and the interest shown by students in the vocational guidance sessions.

Improved occupational awareness on part of teachers and students provided a basis for planned curriculum change. Course addition or revision will lead to greater opportunities for the students of this level. Interest is manifested through the fact that students are thinking in terms of a broader range of alternatives in their future.

The Out-of-School Youth component operated in conjunction with the Model Cities funded Carver Community School in the evening. Through excellent support and guidance improved enrollment and attendance in the E.P.O.P. Automotive Mechanics and Blue Print Reading classes was observed. The need for offering more alternative skill-training opportunities continues to exist.

The progress achieved by the E.P.O.P. program as of the end of this reporting period is significant and the staff is enthusiastic to work toward the implementation of the recommendations and its continued growth.

Evaluation

The major portion of the evaluation is composed of an introduction and a section covering the results and accomplishments of each division. The evaluation is actually a resume of the activities performed in the three instructional levels covered by the project as related by the individual coordinators at each level.

With the exception of a brief statement with reference to a definite change, positive in nature, relative to the attitude of administrators, counselors and teachers as result of a pre-administration and a post-administration of a Vocational Information Questionnaire; and an analysis of pre-test and post-test results of the Attitude Toward Work Survey administered to the elementary and middle school students, there is little toward initiating and determining whether the activities being carries on are producing or not producing the desired results.

Nowhere do the conclusions and recommendations reflect whether or not the program or project is accomplishing its objectives and to what degree these objectives are being met or not being met.

It is almost impossible to summarize the Evaluation Report as it, in itself, is a summary of the activities of the project.

Conclusion and Recommendations

The Exemplary Program for Occupational Preparation is very much needed in this Desire Area to provide a more revelant area to the curriculum. More persons within and without the schools do not have an informed, effective orientation to the world of work and are thereby relegated to lower ranks of our economy.

The vocational thrust is not in competition with basic college preparatory instruction, but rather serves to help each individual decide for himself where in terms of his interests and abilities, he will enter the job world. Very clearly students need more alternatives as they progress through school. It is the mission of E.F.O.P. to broaden their capabilities to make wise intelligent decisions and foster success in any choices they make.

Recommendations submitted here are for serious consideration to help the Exemplary Program for Occupational Preparation achieve its objectives. The following recommendations are listed:

1. More community and advisory committee involvement in project functions.

2. More dissemination of project materials in other local schools in order to expand the influence of the program.

3. More community awareness of E.P.O.P. activities and objectives through newspaper articles, T.V., etc.

4. More in-service programs for teachers involved with E.P.O.P. including greater usage of outside resource persons.

5. More intervisitation with programs similiar with E.P.O.P. to exchange ideas and discuss problems common to all.

6. The evaluation design be rewritten to incorporate measurable product and process objectives.

7. More effort exerted to secure upper echelon commitments favorable to the continuation of the program.

8. To continue curriculum expansion and/or revision to include such courses as IACP (World of Construction, World of Manufacturing), General Maintenance, Career English and Applied Mathematics.

9. To reinstitute the Nurse Assistant course into the Health Occupations component with a more sophisticated selection procedure.

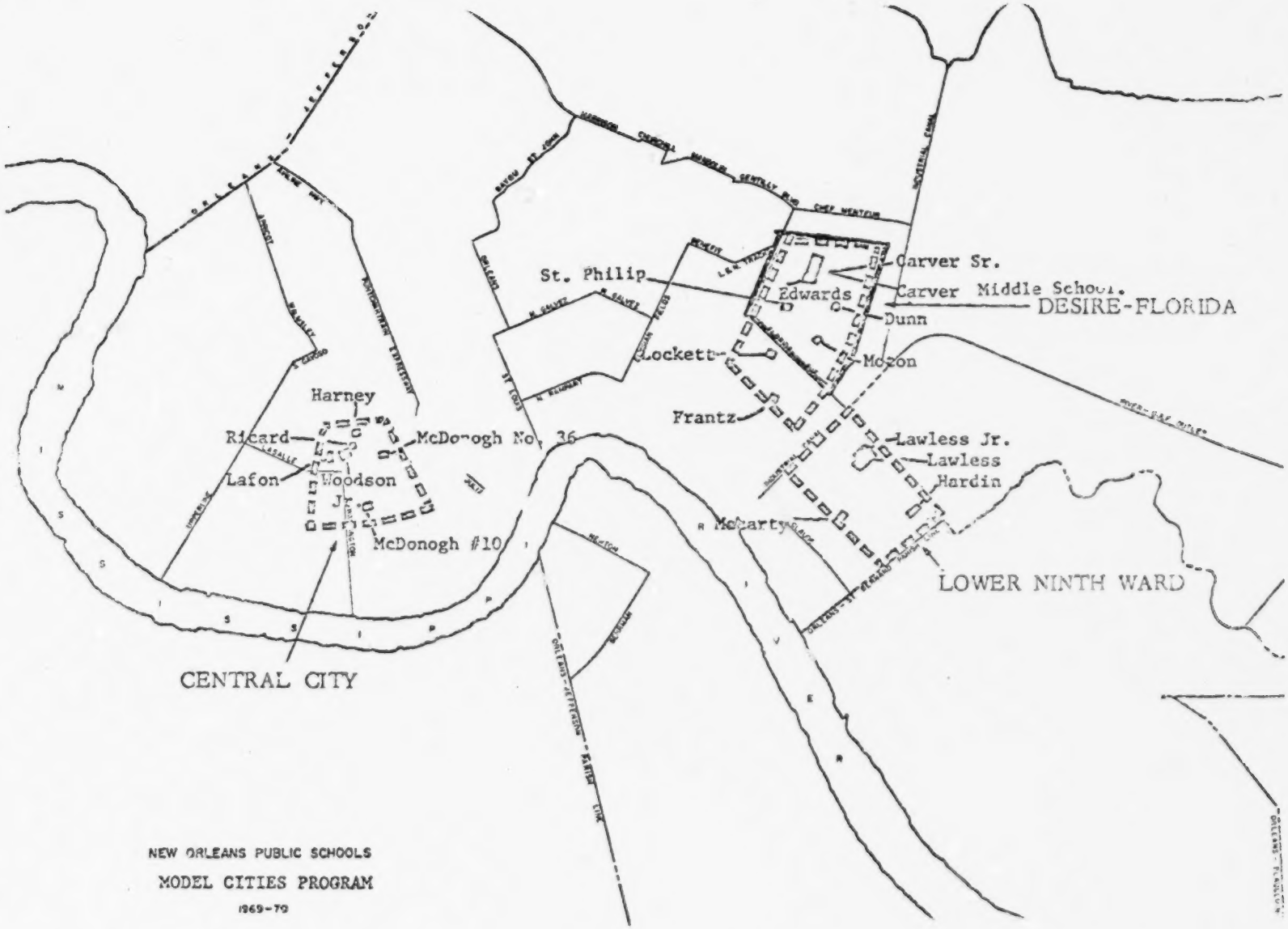
THE PROBLEM

Eight thousand children attend elementary and secondary schools in the section of New Orleans known as the Desire area. The Problem Analysis and the Statistical Profile of the Model Cities Preliminary Community Renewal Program Report on Population indicate that the Desire area has become identified in the minds of the residents and the community at large as a ghetto, the inhabitants of which are socially, economically and physically isolated from the mainstream of community life. Cut off from the remainder of the city by railroads, canals, and a corridor of industrial uses, the Desire section encompasses the city's largest public housing project and is predominately Negro. Nearly three-fourths of the employed males and four-fifths of the employed females work in low-paying, unskilled jobs. The situation is illustrated by the fact that 61 percent of the families in Desire earn less than $3,000 annually. Indices such as the relative dependence on public welfare, the juvenile crime rate, and the low level of educational attainment delineate distressed conditions warranting remedial action.

Children attending Moton, Dunn, Edwards or St. Philip the Apostle elementary schools will later attend Carver Middle School and Carver Senior High School. Together, the schools comprise the "Carver Complex," all are ESEA Title I schools and serve the severely economically disadvantaged population of the Desire neighborhoods (see map). The proposed exemplary program will, during the initial year, serve the children attending these six schools.

At the elementary level, ghetto children come to school with negative self concepts of their ability to function in the world of grammar, books or work. Their home experiences are not tied to the written word or the utilization of academically learned skills and they often have no successful role model upon whom to pattern behavior and aspirations. Generally, they know nothing about vocational options open to them, as they experience little but the world of the welfare check, or hand-to-mouth existence supported by a parent who works on a day-to-day basis, if at all.

At the secondary level, students are often over-age and mark time until they may legally leave school at age 16. Carver Middle School and Carver Senior High School each reported the highest percentage of dropouts for their respective grade levels in the entire New Orleans public schools system in 1969. Not included in dropout figures are those students placed on indefinite suspension. If such students do complete their secondary education, it is generally not backed by salable skills. Too often, the high school graduate discovers he is just as unemployable as his friend who dropped out of school.



NEW ORLEANS PUBLIC SCHOOLS
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Many students graduating from the Carver complex cannot afford to attend college or commercial trade school.

It is the intent of this exemplary program in occupational preparation to adequately prepare low-income students, beginning with the elementary grades, for a responsible and productive life by providing a realistic viewpoint about the dignity of work and knowledge concerning possible vocational choices, and to complement such occupational awareness on the secondary level with skills salable on the New Orleans job market.

Building on the World of Work occupational orientation, this program will continue to broaden occupational aspirations and opportunities for youths at the secondary level by establishing training opportunities for the dropout-prone, over-aged teenagers at Carver Middle School.

The secondary program will also create for the disadvantaged youth attending Carver Middle School meaningful and observable bridges between school and earning a living. Curriculum designed especially in support of the three trades to be introduced at Carver Middle School will enable the students to see the direct role core academic subjects play in relation to their chosen occupational field.

Through participation in the on-the-job industrial arts component (to be administered through the cooperation of local business and industrial leaders), Carver Senior High School students will be provided the opportunity to directly experience educational training which will lead to employment.

Students interested in pursuing clerical occupations will participate in vocationally centered simulated office training, individually programmed typewriting instruction, and/or pre-cooperative clerical instruction. Economically disadvantaged students at Carver Senior High School who previously enrolled in the Cooperative Office Education program (which provides on-the-job experiences with local employers) were not sufficiently prepared to enter the labor market. The pre-COE program will provide the needed preparation. The individually programmed typewriting instruction program is designed to better meet the needs of disadvantaged students, who did not achieve job entry typewriting levels through the traditional lock-step methods which inhibited individual progress. The simulated office experience in the proposed vocational office block will greatly increase the percentage of students who are able to obtain full-time employment in the clerical occupation for which they trained while in high school. A three-year study conducted by the Supervisor of Business Education of the New Orleans Public Schools indicates that an average of only 15 percent of the students completing the Carver clerical program were able to secure full-time employment soon after graduation. The poor placement record of such students is partially attributed to the fact that economically deprived

students find it difficult, if not impossible, to identify with office workers and they therefore are lost in the world of clerical employment applications and testing in a real office. The proposed simulated office situation will provide the needed orientation to realities of office environment.

The project will also include for high school students vocational skill training in the area of health occupations, a field currently suffering a critical shortage in New Orleans and one which will provide worthwhile and rewarding employment opportunities for Carver students once they have completed their secondary education. A simulated vocational environment, to be supplemented by field trips and visiting lecturers, is planned for students to be enrolled in new health occupations courses, thereby permitting such students to also benefit from concrete experiences in situations reflecting actual employment conditions.

Out-of-school youth, be they dropouts or unemployed high school graduates, abound in the Desire area. If adequately trained, such young people can become contributing members of society. This exemplary program will provide for such youth the opportunity to pursue skill training in the evening in drafting and auto mechanics. They will be also assisted in locating suitable employment and will receive vocational guidance.

All components of the proposed exemplary program for occupational preparation call for cooperation between the New Orleans Public Schools and local manpower agencies. Resources of the Louisiana Division of Employment Security and its Youth Opportunity Center are currently used to a great extent by the school system. Greater reliance on testing, vocational guidance and placement services of LDES and the YOC will result from this project. Additionally, a Business Advisory Committee, to be comprised of representatives of public and private manpower agencies (Louisiana Division of Employment Security, Youth Opportunity Center, New Orleans Metropolitan Area Committee, CAMPS, Concentrated Employment Program, Chamber of Commerce, etc.) was formed to assist with development of OJT slots for the industrial arts component, as well as to serve as a vital resource for project staff. It is anticipated that mutual cooperation and coordination between the New Orleans Public Schools and the manpower agencies will grow and be maintained through this exemplary program for vocational preparation.

The Desire area comprises one of three New Orleans Model Cities Neighborhoods. All three areas are characterized by significant degrees of physical and economic blight. It is the intention of the New Orleans Public Schools to expand the services of the proposed exemplary program to the Lower Ninth Ward Model Neighborhood and to the Central City Model Neighborhood (see map) in years two and three of program operation.

The proposed exemplary program for occupational preparation combines several successful features of previous research and development projects sponsored by the U. S. Department of Health, Education, and Welfare and U. S. Department of Labor. The program also includes refined features of the World of Work program currently operating in the New Orleans Public Schools through grants received from the Dansforth Foundation through the Plans for Progress national office.

A. Elementary Component: The Preliminary Report of Research Findings of the World of Work Project, 1967-1968, prepared by Dr. Glenn Hontz, Dr. Jack Sturgis, Mr. Robert Bermudez and Mr. Donald McCalister, indicates that inclusion of the World of Work activities at the elementary school level in the proposed exemplary program will be highly advantageous:

> ...of major interest...was the fact that the students in the experimental group performed equally well despite the fact that their field experiences removed them from the classroom and from the study of printed materials, thus providing an apparent advantage to the students in the control group who, in contrast, spent a greater portion of their time in the study of textbook and other similar materials. It would thus appear that the field experiences fully compensated for the lack of study time normally devoted to printed materials. This factor held true for both male and female students.
>
> A second major factor that was examined was the impact upon the students' career aspiration levels. Data revealed that the aspirations of students in both the experimental and control groups were higher following the treatment than they were prior to treatment. In the estimation of the research team, the increase in occupational aspirations at the beginning of the unit of study was higher than 'normal' for students of this age and background. Further, the increase in the level of their aspirations as recorded following their study of occupations was significant in terms of the standardized testing instrument administered. These data in combination with reactions provided by teachers and students clearly suggest that the study of occupations and career information tends to produce a generally high level of motivation, regardless of the particular method of study employed.
>
> The next factor tested was the degree to which students viewed certain specific factors as being important to them in choosing an occupation. The data

revealed that prior to treatment the students generally assigned a high importance to many job factors. After treatment, however, they tended to view these same factors as being relatively less important. This shift from an over-positive to a more moderate, and perhaps more realistic, reaction suggests that the students were exhibiting more mature reactions following their study of occupational information.

The fourth factor studied was related to changes in students' attitudes towards work, self, and education. It was found that approximately half of the students in both the experimental and control groups changed in their attitudes towards these three factors. Relatively more of the students who received the experimental unit changed to having a more positive attitude towards work, self, and education.

Briefly, and in summary, it would appear that the two methods of study did not produce appreciable changes in the acquisition of textbook content. However, a more mature attitude toward factors to be considered in selecting a job appeared to have resulted. Of greatest significance is the fact that the experimental treatment tended to be relatively more effective in producing positive attitudes towards work, self, and education. Further, the overall increase in motivation manifested in the rise in occupational aspirations of children in both groups did clearly suggest the desirability of including more opportunities throughout the curriculum for students to study this apparently exciting field of information.

Results of the following studies have been considered in the development of the elementary component of the proposed exemplary program:

1. Jeffries, D. "The Needs of Inner-City Children for Career Guidance," ELEMENTARY SCHOOL GUIDANCE AND COUNSELING, 1968.

2. Warner, T., Ed. "Needed Concepts in Elementary Guidance." Ohio State Department of Education, Columbus, 1969.

3. Whitfield, E. A. "Vocational Guidance in the Elementary School: Integration or Fragmentation?" THE SCHOOL COUNSELOR, 1968.

4. Jacobs, Leland B. "Books that Recognize the Joy of Work," INSTRUCTOR, 1969.

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5. Cook, Dr. Helen E. "Occupational Information Materials Project for Pupils in Grades 3-8." Atlanta Public Schools.

B. Middle School Component: The occupational information and guidance section of this component is based on the design developed and researched in the New Orleans World of Work project, as well as upon the following studies:

1. Bailey, J. A. THE RELEVANCE OF OCCUPATIONAL INFORMATION TO CAREER-CHOICE THEORY AND DECISION MAKING. American Personnel and Guidance Association, Washington, D.C., 1969.

2. O'Hara, R. P. A Theoretical Foundation for the Use of Occupational Information in Guidance. THE PERSONNEL AND GUIDANCE JOURNAL, 1968.

3. Barbula, P. M., and Isaac, S. W. CAREER SIMULATION FOR ADOLESCENT PUPILS, FINAL REPORT. BR-6-8744. San Diego County Dept. of Education, California, 1967.

4. CAREER DEVELOPMENT ACTIVITIES, GRADES 5, 6, 7. Abington School District, Pennsylvania, 1968.

5. Darcy, R. L. AN EXPERIMENTAL JUNIOR HIGH SCHOOL COURSE IN OCCUPATIONAL OPPORTUNITIES AND LABOR MARKET PROCESSES, FINAL REPORT. BR-5-1203. Ohio University, Athens, Ohio, 1968.

6. OCCUPATIONAL EDUCATION PROGRAM, IMAGE OF THE WORLD OF WORK, DESCRIPTION AND ANALYSIS OF TEACHER ORIENTATION ACTIVITIES (August, 1968) Rocky Mountain Educational Lab., Inc., Greeley, Colorado, 1969.

The results of the following studies have been employed in developing the semi-skill training component at the middle school level:

1. Center for Vocational Arts, Norwalk, Conn.; New York Univ., N.Y. Center for Field Research and School Services. A Pilot Project to Develop a Program of Occupational Training for School Alienated Youth. Appendix to Second Interim Report.

2. Cozine, June. "Approaches to Use in Assessing Needs for, Content of and Certain Factors to be Considered in Offering Home Economics Courses Preparing for Gainful Employment." Oklahoma State University, Research Foundation.

3. Konz, Stephan A., and Middleton, Raymona. "Work Instruction Programs for the Food Service Industry." Kansas State University, Manhattan, Agriculture and Applied Science.

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4. U. S. Office of Education, Washington, D. C. "A Pilot Project to Develop a Program of Occupational Training for School Alienated Youth." Interim Report and Statistical Evaluation. August, 1967.

C. Senior High School and Out-of-School Components: Individualized instruction for eleventh grade students enrolling in the Pre-Cooperative Clerical Block and for students in Typewriting I is to be included in the proposed exemplary program as a result of two U. S. Department of Labor Research and Demonstration projects performed in New Orleans in 1966-1967. The demonstration projects, operated through the auspices of Loyola University of the South (Special Extension Education for Secretarial and Agricultural Workers - Contract No.82-20-66-11) and through the auspices of St. Mary's Dominican College (Adult Education Center) were both deemed highly successful. Both projects provided secretarial skill training for disadvantaged persons, and both reported great reliance on instruction paced to meet the individual needs of each student. The Health Occupations Block is based on the same approach.

The Vocational Office Block approach, including the simulated office concept, has been used successfully throughout the country, particularly in those schools which participated in the Michigan State University Research and Development Grant #21-2502, Project #7029. Some of the material developed in the Michigan State University project will be utilized in this program component.

The following research results have been utilized in formulating the OJT vocational training component:

1. Cushman, Harold R., et al. "The Concerns and Expectations of Prospective Participants in Directed Work Experience Programs." State University of N. Y., Ithaca, New York, 1967.

2. A Guide: WORK EXPERIENCE EDUCATION AND EMPLOYMENT PLACEMENT PROGRAM. Los Angeles City Schools, California, 1969.

Methods developed in the Loyola University project already cited for recruiting and holding out-of-school youth in the proposed evening program will be employed. Intensive vocational counseling, testing and guidance, as well as individual instructional methods were cited in the Loyola Final Report (March, 1967) as crucial elements to the success of any such project, and will be included in the proposed exemplary program for vocational preparation.

GOALS AND OBJECTIVES

The overall objective of this project is to bring about a change in attitude concerning the dignity of work and to provide vocational guidance and job entry training that leads to employability for those youth living in a financially deprived, socially handicapped, and geographically isolated area of the city of New Orleans.

An underlying objective of the proposed program is to illustrate a workable plan to the Orleans Parish School Board and other public and private funding agencies for system-wide expansion and operation of the program components in future years.

Specific objectives at the different grade level divisions of the program are as follows:

A. Elementary School

1. Provide students with information about a variety of occupations and vocational options

2. Create a desirable attitude with regard to the dignity of work

3. Guide the students toward development of sound occupational aspirations

B. Middle School

1. Provide the over-aged student and potential dropout with semi-skilled training in order to:

   a. give him a practical interest in remaining in school

   b. provide him with a means of earning economic supplements while he is in school

   c. provide him with salable skills if he must terminate his schooling

2. Help this student see the relationship between core academic subjects and his chosen occupation field

3. Help the student to develop a desirable attitude with regard to the dignity of work through skill training and vocational guidance

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C. Senior High School

1. Through on-the-job training provide the student with experiences in the latest methods and machinery of industry

2. Provide job-entry skills and employability for students in areas of industrial arts, health occupations, and clerical occupations

3. To provide counseling designed to promote positive attitudes towards work and to improve the students' job-seeking techniques

4. To assist students in making vocational choices through self-evaluation of his/her skills, interests, aptitudes and accomplishments

D. Out-of-School Youth

1 Through night courses train youth who have left school by graduation or dropout in the marketable trades of auto-mechanics and mechanical drawing so that they can earn a living wage

GENERAL PROJECT DESIGN AND PROCEDURES

A. General Design: As illustrated in TABLE A, the general plan of the proposed project may be defined as a three-level approach to vocational preparation geared to the needs of economically deprived children in elementary, middle and senior high schools, respectively.

Emphasis at the elementary school level is placed on vocational guidance through expansion of the World of Work program, field trips, enriched curricula relating to occupational choice, and concurrent development of realistic attitudes toward occupation/vocation in society.

Program design for the middle school component provides World of Work curriculum dealing with occupational information and guidance, building upon concepts formulated at the elementary level. Additionally, over-aged and dropout-prone students in the middle school program will develop capabilities in three semi-skilled vocational training fields through three-hour daily course offerings which integrate and relate core academic courses with realities of skill training. Participants will thus be able to gain part-time after-school and summer jobs which, for many, will enable them to stay in school.

At the senior high school level, this program will provide intense job training through on-the-job training slots to be provided by local businesses or realistic, individually designed clerical or health occupational preparation designed to simulate the realities of the employment world. Out-of-school youth will be provided with the opportunity to learn a marketable skill through evening courses in two occupational fields and will benefit from occupational guidance and job placement services.

Functional components of the program may be listed as skill training, attitude development and motivation stimulation, vocational guidance, on-the-job placement, and utilization of local manpower resources.

The design is structured to facilitate student decision making regarding vocational options at both the middle and senior high school levels, and provides the framework for a continuum of growth of occupational awareness and skill development for all students in the Desire area, beginning at the elementary school level.

B. Participants:

1. Number of Participants

Six thousand one hundred and fifty-one children were

GENERAL DESIGN - AN EXEMPLARY PROGRAM FOR OCCUPATIONAL PREPARATION

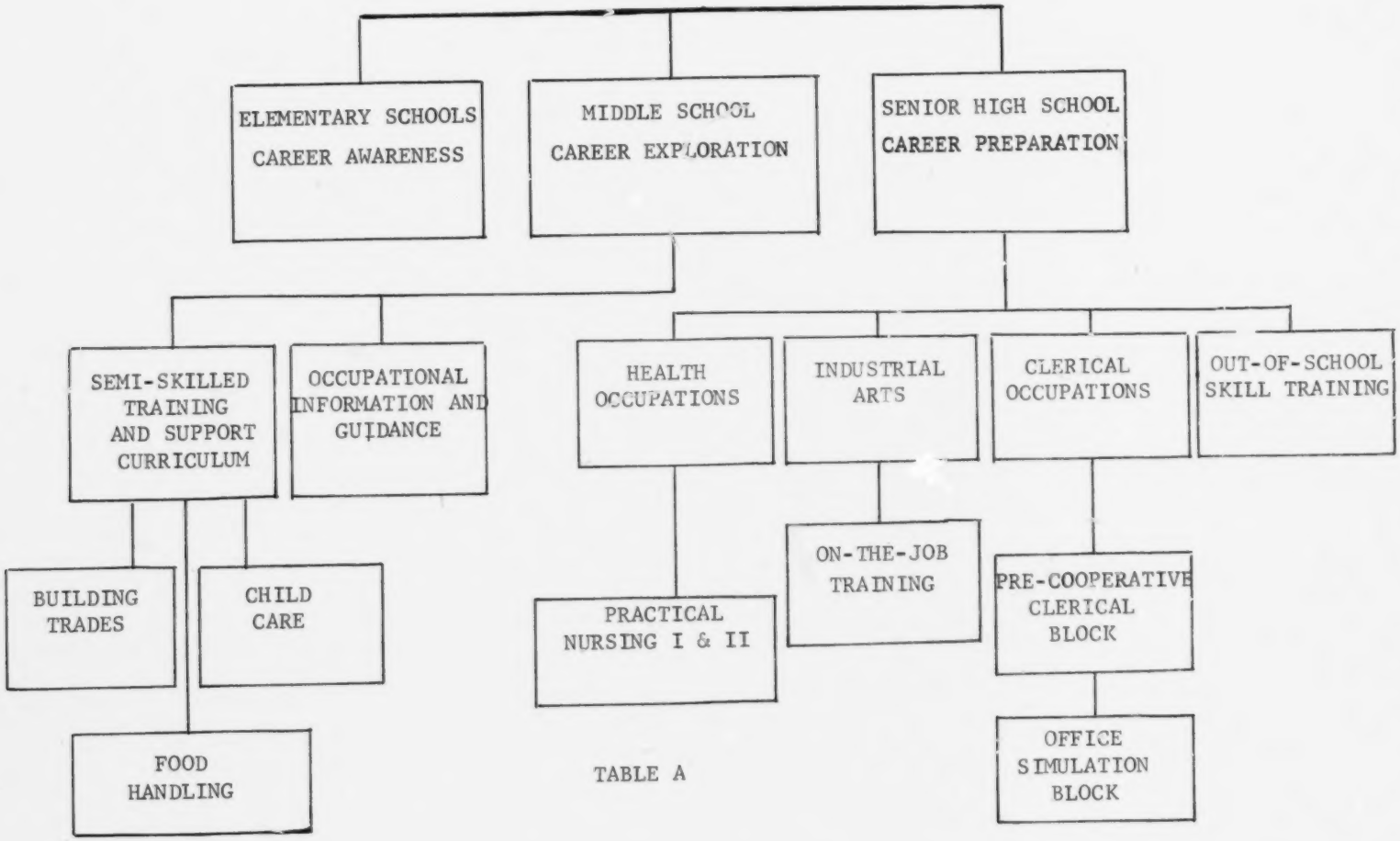

TABLE A

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served by four elementary and two secondary schools which comprise the Carver complex. Direct participation was extended to 4152 students, or over 50% of the student population, although all students were indirectly exposed to program activities.

At the elementary school level 3451 students took part in the program. At the middle school and high school levels, the second year of the program operation accommodated approximately 701 students in the following ways:

74 students in the comprehensive instructional unit emphasizing the semi-skilled trade of building construction

58 health occupations training

138 clerical-skill training

14 on-the-job training

417 Industrial Arts training

In addition to the participation of the school enrollees, 39 out-of-school youth were afforded the opportunity to enroll in night courses in auto-mechanics and mechanical drawing.

2. Criteria for Selection of Participants

All elementary students in the participating schools will automatically be included in the program. Students in the middle and senior high schools will be selected by referral from counselors, teachers, and principals. Over-aged students and those whose poor academic record, spasmodic attendance, or severe economic situation indicate the need for immediate skill training to prevent a dropout situation, will be encouraged to take advantage of the program. Those who do not plan to attend college will also be encouraged to enroll.

In the area of clerical training, the programmed instructional typewriting curriculum will be used in regular 12th grade typing classes; the Pre-Cooperative Clerical Block will be for 11th grade students only; and the Vocational Occupations Block requires that those participating be 12th graders planning to enter the work force after graduation from high school.

Participants in the out-of-school training program will be selected through application and/or interview and will be chosen on the basis of criteria developed by the Project Director, School Vocational Coordinator, and the Out-of-School Instructor.

3. Participation of Non-Profit Private Schools

The one parochial elementary school in the Carver complex

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participated in all phases of the elementary World of Work program. Its enrollment of 345 students is included in the number of participants discussed in Section 1 above.

C. Methods and Materials:

1. Elementary Level

The instructional materials developed in the World of Work project were adapted to each grade level in the elementary schools. This material was incorporated into the regular school program and enriched with additional material assimilated and distributed by the elementary vocational advisor.

2. Middle School Level

At the middle school level, project personnel assembled teaching materials for a core curriculum to support semi-skill training in building construction, food handling and child care. The core curriculum combined language arts, mathematics and science programs to correlate with the practical aspects of the occupational training field and with direct practical application through simulated work experience programs.

World of Work materials already developed for grades 6, 7, 8, and 9 were utilized and refined for this program component.

3. Senior High School Level

A vocational coordinator provided individual guidance expecially at the twelfth grade level, and secured on-the-job training slots in the community for students enrolled in industrial education classes.

Health occupations (practical nursing) instructors provided, through realistic job simulation situations, training in a field currently suffering severe personnel shortage in New Orleans.

The Pre-Cooperative Clerical Block for eleventh grade students was a two-hour block of time for students who wanted to enter the cooperative office education program. The main goal of the course was employability, by giving students an opportunity to determine their interests and qualifications and a chance to remedy individual problems prior to their entrance into the part-time world of work. Individualized instruction and guidance was utilized, including regular use of small packets of programmed instruction.

Individually programmed instruction was utilized in teaching Typewriting I to students in grades 10, 11, and 12. The

activities in the two typewriting classes included in the Individually Programmed Instruction (IPI) was primarily student-directed, as opposed to the traditional teacher-directed. The materials proposed were Basic Gregg Typing I and II by Ferguson and Nalipa and Basic Gregg Typing III by Wood and House.

The Vocational Office Block was a two-hour block of time combining Typewriting II and Clerical Office Practice. These courses were previously taught separately. In the VOB they were taught in one block so that previously learned skills and knowledges could be refined and strengthened and integrated with new information in the setting and through the activities of a simulated office environment. Conventional textbooks and materials were used for basic instruction and reference. Materials developed through the Michigan State University Research and Development Grant #21-2502, Project #7029, material developed by the New Orleans Public Schools and Dominican College Adult Education Center, and material supplied by publishers were utilized in the Vocational Office Block.

4. Out-of-School Level

Specially taught job entry skills in the field of drafting and automotive mechanics provided school dropouts and unemployed out-of-school youth with basic skills necessary to obtain employment. Both courses were taught three evenings per week - auto mechanics for a thirty-six week period, and drafting for an 18 week period. Services of the O.J.T. Coordinator for vocational guidance and job placement were made available to participants, who attended the classes near their homes at Carver Senior High School. Participants progressed at their own rate of speed, using materials available through the New Orleans Public Schools, including World of Work curriculum supplements.

D. Administration

See TABLE B for a schematic representation of The Administrative Structure of the Exemplary Program for Occupational Preparation.

As TABLE B indicates, the teachers and vocational advisors of the Exemplary Program are answerable to the School Vocational Coordinator who was in turn responsible to the Project Director. The Project Director of the exemplary program is also the Supervisor of Industrial Education for the New Orleans Public Schools. Because of this permanent position on the school staff, the Project Director could easily function within the priorities of the school system, could use the resources of the Division of Instruction, and could better coordinate the proposed exemplary program with the regular instructional organization.

Project activities required close coordination with the Assistant Superintendent for District III, and with regular school personnel in areas of elementary education, curriculum (especially in regard to the World of Work Program and to the development of core curriculum in the

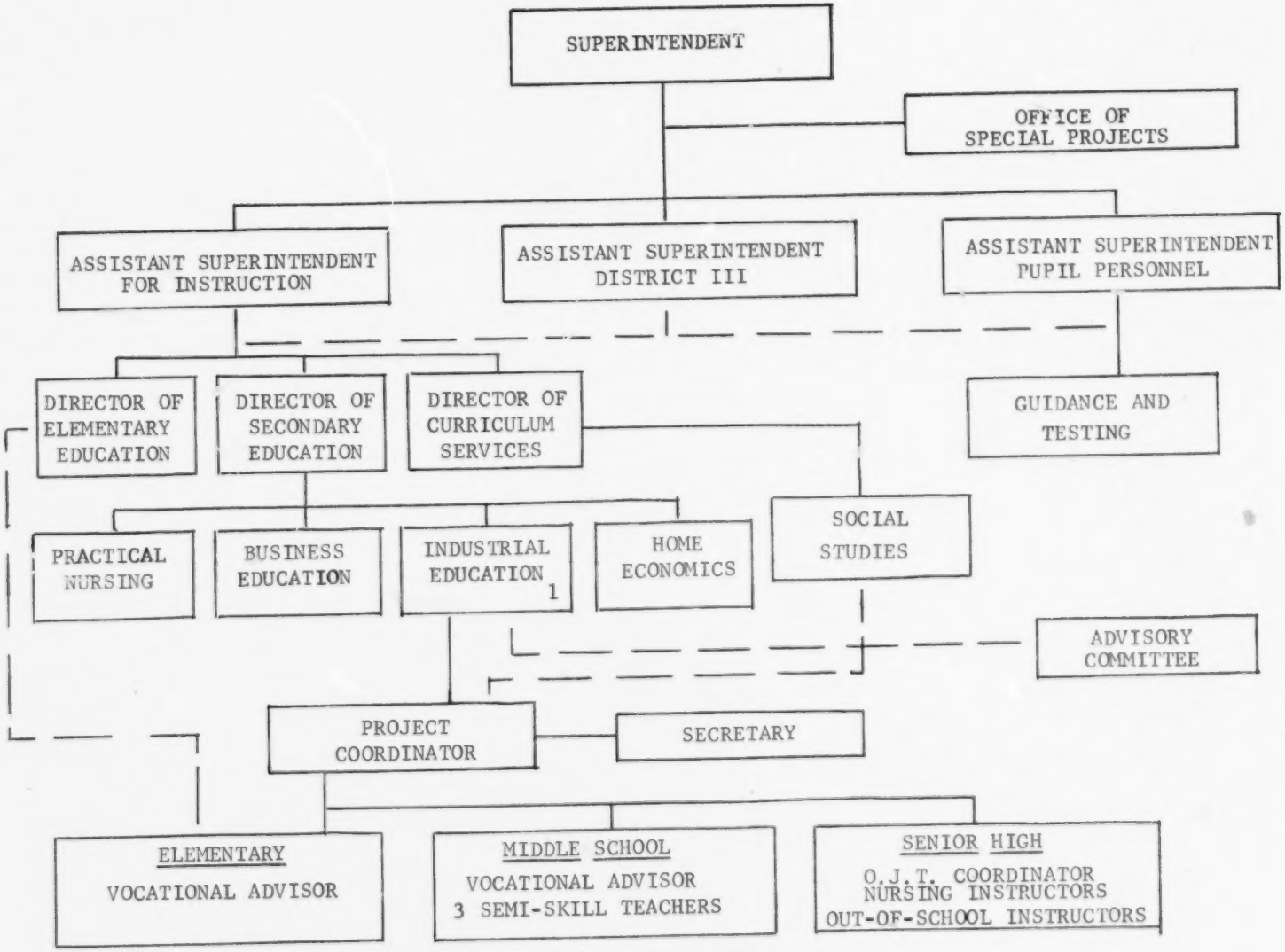

TABLE B

1 Project Director

THE ADMINISTRATIVE STRUCTURE OF THE EXEMPLARY PROGRAM FOR OCCUPATION PREPARATION

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middle school level), and in the vocational areas of practical nursing, business education, home economics and industrial education.

Since an important aspect of the proposed exemplary program was the guidance component, the Division of Pupil Personnel of New Orleans Public Schools, with its subdivision of Guidance and Testing, played an important supportive role in vocational guidance and in direct individual counseling with the students in the program.

In addition to support of the professional school staff, the Project Director kept in close contact with a two-pronged advisory committee which linked the project with the community and with the business world. The community was represented by one person from each of these groups: Title I Advisory Committee, Model Cities Committee in the Desire Area, and one parent group from each school, and the Desire Area Community Council (OEO Neighborhood Council). Business had one representative from each of these sources: Louisiana Division of Employment Security, Delgado Trade School, Cooperative Area Manpower Planning System, Concentrated Employment Program, Chamber of Commerce, and Orleans Area Vocational-Technical School.

RESULTS AND ACCOMPLISHMENTS

I Elementary Component

At this level, children come to school with negative self-concepts of their ability to function in the academic disciplines and in the world of work.

Although these students are exposed to vocations through the social studies units or work, (Community Helpers, etc.) their approach to vocational orientation is rather unorganized. This is due in part to the hit-and-miss effort of their instructors.

Our problem leads us to formulate a more organized approach in exposing students to vocational orientation. Increasingly, research indicates to us that many basic attitudes, values and aspirations are firmly shaped in a child's early years.

To achieve the desired results at the elementary level, and to build upon the activities performed last year, the following services were performed:

A. Development of increased entry into business and industry as a continuation of future fieldtrip excursions.

B. Seeking consultation for updating certain phases of the elementary testing instrument in order to achieve a more effective evaluation.

C. Pre-testing and post-testing of pupils in grades 2-4-6-8 in schools served by the E.P.O.P.

D. Administering a pre and post vocational questionnaire to teachers in classes where students were tested.

E. Establishing vocational centers in each of the four schools served.

F. Giving demonstration lessons; showing occupational films and filmstrips.

G. Planning with faculties; and, supervising excursions to business and industry as reinforcement of classroom activity.

H. Serving as panelist during American Education Week; attending business and vocational workshops, etc.

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I. Conducting "Career Days" activities culminated with walking tours of the vocational areas of the Carver Middle and Senior High Schools.

The instructional staff of the four elementary schools served by the Exemplary Program comprises one-hundred seven teachers. A numerical listing of teachers at each grade level in their respective schools is listed in Appendix A, Exhibit X.

The current student population of the four elementary schools served by the Exemplary Program is three-thousand-four hundred fifty one students (Kindergarten included). A numerical breakdown by school and grade is listed in Appendix A, Exhibit X.

At the beginning of the second year of operation, much effort and time was directed toward developing continued and increased entry into businesses and industries as a continuation of future fieldtrip activities. The greater majority of contacts were made on a face-to-face basis. This enabled the advisor to "sell" the program to those whom he contacted.

In addition to the number of fieldtrips taken last year, seven new entries were gained.

While in the field during this time, meetings were held with the Supervisor of Orleans Parish Elementary Schools to apprise her of the program's innovations for the coming year.

In concert with the other advisors of the E.P.O.P. staff the advisor sought the consultation of Dr. Jack Sturges, Department of Guidance, Tulane University regarding the effectiveness of using the same attitudinal test instrument for a second year. After much deliberation, several changes were discussed which met the approval of the programs coordinator and director.

Consideration was given to deleting the questions which proved confusing, thus reducing the number of items from twenty-five to twenty. Randomly reordering the items and testing only evenly numbered grades for two consecutive years was another innovation. Finally, deletion of the aspirational test instrument was considered. With these changes in effect, pre-testing of the above mentioned grades was completed. The students tested numbered approximately one-thousand, two-hundred, nine.

Additionally, administrators and staff members of the classes tested in the four component schools were asked to complete a vocational questionnaire which was provided. The objective of said questionnaire was to ascertain an opinion on some of the questions which have arisen concerning the use of vocational information in the elementary schools. Similarly, a post-test was also administered at the end of the school session. Results of the pre-tests and post-tests will be found in Appendix A, Exhibits VI & VII.

Funds were allocated for this advisor to establish vocational centers in each of the four component elementary schools. A centralized area in each school was used for housing the films, filmstrips, recordings and books which paralleled the units of social studies and occupational preparation. In addition to the above mentioned materials, staff members received a copy of The World of Work - a handbook on occupational vocational guidance in the elementary grades, written by Charleta J. Dunn, and Bill F. Payne.

There were other materials compiled and placed at the disposal of each classroom teacher. Among these were unit outlines designed for use at the primary and intermediate grade levels along with the booklet of Suggested Activities and Information on Career Development at the Elementary Level. As the titles implied, these materials recommended instructional objectives, procedures and activities for studying a host of community workers along with job training requirements for each different phase of work. It was the task of this advisor to assist and advise teachers in the utilization of these materials relative to daily course work and the world of work program. (See Appendix A, Exhibits III & IV for the materials placed in vocational centers).

The Elementary School Vocational Advisor maintained the same weekly schedule as was performed last year which permitted him to spend an entire school day in each of the four schools served by the program. A fifth day was reserved for staff meetings; making in-the-field contacts for resource personnel and fieldtrip excursions; or, revisiting particular schools or classes as needed.

In conducting demonstration lessons, a series of five filmstrips and one film was shown to six hundred sixty-nine students in grades 5 thru 8. The filmstrips, produced by the Society for Visual Education were entitled "Foundations for Occupational Preparation." Specific titles can be found in Appendix A, Exhibit III. The film, produced by Encyclopedia Britannica Educational Corporation and titled "Why Fathers Work" explained to students why work is important to a family, a community and a city. It also illustrated how labor and services make the many aspects of city life interdependent.

During one of these demonstration lessons, this advisor was privileged to be visited by supervisors of the Louisiana State Industrial Arts Association. They had convened in New Orleans, and were interested in seeing the progress of the E.P.O.P. components.

The increase in fieldtrip excursions to business and industry, which manifested itself at all grade levels, was directly related to the increase in classroom activities in occupational awareness. These fieldtrips served as reinforcement to what had already been explored in class. In most instances, further classroom activity was stimulated after the excursion had been completed. For example, after a visit to Bunny Bread Bakery, one first grade class at the Moton School brought materials, mixed and baked bread in a toy Easy Bake oven with the supervision of their teacher.

Many classes were seen, after a visit to the various shopping centers, role playing the numerous aspects of the service occupations viewed. In some cases, counters erected of cardboard boxes were pointed and served as models for the role-playing activities. To date, one hundred seven classes have taken two trips each to a variety of places. (See Appendix A, Exhibit XI, for numerical breakdown).

In a continuing effort to improve the quality of information and materials rendered to students and staff members, this advisor was invited, and attended several workshops. The theme of these sessions were directed to vocational and business education, and to maximizing vocational resources for disadvantaged youth. These work sessions were held at the following locations:

1. Jackson Brewery - New Orleans

2. South Central Bell Telephone Company - New Orleans

3. Louisiana Training Institute - Baton Rouge, Louisiana

At each of the sessions attended, the project design and school components of E.P.O.P. were discussed.

During American Education Week, the elementary advisor appeared as a panelist at the Robert R. Moton School. The tone of this session was "Bridging the Gap in Education" from a vocational point of view.

An invitation to discuss the elementary component of the Exemplary Program was extended by the Administrator of the William Rogers Elementary School. The objective of the meeting was to discuss the possibilities of introducing a similar program within that school. Many encouraging suggestions and ideas were initiated.

The project design and the three level component presentation was also made to the Orleans Parish School's Industrial Arts Association, at the request of the association's chairman. The audience was elated upon hearing the emphasis being placed on vocational education at all school levels.

Lastly, two presentations were made in Baton Rouge to audiences of Advisory Committee members on Career Education for the Louisiana State Department of Education at the request of Mr. John E. O'Dowd, Assistant Superintendent for Career Education. These presentations were geared to influencing those persons in positions to make decisions along the lines of career development.

"Career Days" activities were held on April 5, 6, and 7th for students of grades 5 thru 8 of the elementary component of the E.P.O.P. schools. Three vocational counselors from business and industry

appeared daily to discuss the salient points of their jobs along with training requirements and manpower needs. The vocational areas considered included:

A. Fire Fighter

B. Telephone Operator

C. Social Worker

D. Telephone Installer, Repairman

E. Mechanic

F. Health Occupations

G. Sales (Cashier)

H. Sales (Auto)

I. Clerical

After the question-answer period each morning, two of the elementary component schools toured the vocational shop area of Carver Middle and Senior High Schools in rotation.

Invitations to the "Career Days" activities were extended to the parents of the community, and the response was gratifying. The students who participated numbered about 675.

The intensified efforts of the vast majority of administrative staff and student population served by the Exemplary Program has produced a greater observed change for the school year 1971-72.

As this advisor visited the four component schools on opening school day, signs of occupational awareness was evident in classrooms in the form of displays, posters etc. The administrators were eager to plan for such services as testing, distribution of vocational materials, and meetings with staff members. Students, as always, were eager for fieldtrips.

Throughout the year, there was increased awareness of the vocational involvement inherent throughout the curriculum. In many instances, all subject-matter was related to the world of work.

The increase in classroom activity resulted in increased field-trips, as students continued to identify with and express a desire to perform specific occupations observed.

As before, the "Career Days" provided students with opportunities of exposure to resource persons from a variety of occupational fields, and assured them of the vocational offerings awaiting them upon entry into the Carver Middle and Senior High Schools as evidenced by the tours taken.

II Middle School Component

Through the first five years of elementary school most students have found it difficult to bridge the gap between a low socio-economic culture at home and the traditional college preparatory culture of the classroom; have experienced varying degrees of failure and, therefore, possess a poor self-image. They also exhibit extremely short attention-spans, because of this lack of interest in the regular curriculum.

Carver Middle is composed of approximately seventeen-hundred Black students almost equally divided among males and females. While many of the students are aware of numerous occupations, planning for their future careers is not important part of the mileau; whereas, a sense of anomie is. Further, with few if any specific skill training at the Middle School level, students are not prepared vocationally or psychologically to meet the challenge of finding a job in a highly competitive society.

In an effort to bridge the gap between school and the work world at the Middle School level, the intent of the Exemplary Program for Occupational Preparation was to provide semi-skilled training with core subjects included in each course to enable students to understand the relationship between such core academic areas as English, Math, and Science and future occupational choices. Other objectives include the infusion of occupational information through grades six thru eight by expanding the World of Work occupational orientation in all subject areas to enlarge occupational aspirations and options.

The following plans were formulated for implementing the Middle School program and achieving its objectives:

A. Orientation sessions geared to inform teachers and administration about E.P.O.P. and the World of Work.

B. Interview and screen over-aged and potential dropouts for semi-skilled classes.

C. Have pupils scheduled for semi-skilled classes.

D. Counsel students enrolled in semi-skilled classes.

E. Arrange for students in the semi-skilled classes to receive practical experiences related to their class work.

F. Administer a pre and post attitude toward work survey to students in grades 6 and 8.

G. Secure and distribute audio-visual materials related to the world of work.

H. Promote career awareness and exploration through field-trip experiences, role playing, and utilization of films and resource persons.

I. Conduct vocational guidance sessions for students at all grade levels.

J. Plan a "Career Day" program to inform students about opportunities in health occupations.

K. Meet with the business community to inform them of the activities of E.P.O.P.

L. Place students from semi-skilled classes in part-time and summer employment.

M. Inaugurate the World of Construction in the Industrial Arts curriculum.

N. Participation in workshops sponsor by business community.

O. Present E.P.O.P. activities to State Board of Education Committee on Career Development.

Three teachers were responsible for the instructional phases of the three semi-skilled classes in carpentry, child care and food handling.

A total of eighty-two teachers participated in correlating World of Work instructional materials into their core subject lesson plans and thirty-seven referred students for vocational counseling sessions.

Four counselors, one attendance worker, and two counselor aids assisted in referring counselees for consideration for the semi-skilled classes.

Full cooperation from the principal, assistant principal, and assistant to the principal for curriculum was experienced in implementing the semi-skilled classes and correlating World of Work materials with the regular instructional program.

The procedure for selecting students for the semi-skilled classes was by referral from counselors, teachers, and administration.

Carver Middle School serves sixteen hundred eighty-five students enrolled in grades 6 thru 8. Of that number a total of seventy-four pupils were enrolled in semi-skilled classes sponsored by E.P.O.P.

Being new in the position of middle school advisor, there was a need for a period of orientation and adjustment. Therefore, time was spent in assimilating reports and materials related to the E.P.O.P. program, the philosophy of occupational vocational education and the World of Work program.

Staff meetings were held and plans to implement classes in carpentry, child care and food handling were discussed by the E.P.O.P. advisor and middle school administrative personnel.

Having a new administration and twenty-five new faculty members assigned to the Carver Middle School, it was necessary to initiate orientation procedures geared to inform all staff members about the E.P.O.P. program and the World of Work.

Talks and discussions on a one-to-one basis with staff members were held to build better rapport and gain support in implementing ideas basic to E.P.O.P. In these discussions information regarding the utilization and availability of materials and field trip experiences related to the world of work was presented to the faculty.

Having completed the mechanics of illustrating the need for semi-skilled classes within the middle school curriculum, the advisor solicited referrals of potential dropouts and over-aged students from counselors and teachers. As these referrals were received, prospective students were interviewed and processed for placement in the semi-skilled classes.

After meeting and arranging with the scheduling committee, twenty-eight students were assigned to the carpentry class, twenty-eight to the child care class, and eighteen to the food handling class.

Seeking to gain more knowledge about the operation and personnel requirements of day-care centers, visits were made to day-care centers and nurseries. The director of Piety Street Day Care Center agreed to accept students in the Child Care classes as volunteers in order to provide them with practical experiences.

Students enrolled in food handling received practical experience by working in the school cafeteria, preparing and serving lunches to school personnel speaking guests and parents from the community. Visits to neighboring restaurants and foods factories were also undertaken by these students.

In acquiring practical experiences, students enrolled in the semi-skilled carpentry class, planned and constructed two 8' x 8' houses with interiors and exteriors finished; and, partitioned and secured rooms within the school for curriculum planning.

A pre-test and post-test designed to measure students' attitude toward work was administered at the beginning of the school term and again during the closing week of the school session. (See Appendix B, Exhibit I).

In order that students begin storing facts about the many job opportunities and careers in the world of work, films related to jobs and careers were shown on a regularly scheduled once-a-week basis at all grade levels within the Environmental Arts Department.

This department, consisting of the industrial arts, art, and music classes, combine their classes each period on Fridays to view career films and meet with resource people having careers related to the films being shown. During the course of the day, every student within the school will have viewed the films and had an opportunity to speak with the resource person made available for the day.

Career awareness was promoted among students by teachers being encouraged to display or impart information about careers in their individual classrooms by means of bulletin board exhibits, information centers, newspaper articles and ads, discussions, role playing, films, filmstrips, etc.

Personal growth and development was experienced by the middle school advisor's participation in three workshops which focused his attention on vocational education and career opportunities. These workshops were sponsored by (1) Jackson Brewery Inc., (2) Louisiana Training Institute, and (3) South Central Bell. During these workshops the E.P.O.P. staff presented facts and information about the E.P.O.P. objectives and activities.

In meeting the vocational needs of students at all grade levels within the middle school, this advisor held vocational guidance sessions and mock job interview sessions with students in regular classes as well as those enrolled in the semi-skilled classes.

Since E.P.O.P. sponsors classes in practical nursing at the senior high level, a career day program on health occupations was presented to all eighth grade students by four staff members of Flint Goodridge Hospital.

There were two occasions on which this advisor presented the objectives and activities to the members of the State Board of Education Committee on Career Development.

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The eighth grade students enrolled in the "World of Construction" will be scheduled for the "World of Manufacturing" at the ninth grade level in the senior high component.

A continuation of career awareness from the elementary school level was realized through classroom demonstration lessons and follow-up field-trip excursions. Arrangement were made to insure that teachers and pupils were given an opportunity to speak with those people who were actually doing the work about their training, salaries, and duties. See Appendix B, Exhibit II, for an analysis of the fieldtrips taken.

Although placement is not a primary function of the middle school advisor, efforts were made to secure summer jobs for students enrolled in the semi-skilled classes. Of the seventy-four semi-skilled students, thirty-nine students applied for summer jobs through the middle school advisor. Thirty-two students were placed in job slots with NYC, AFI-CIO, restaurants, independent carpenters and food stores. (See Appendix B, Exhibit III). The remaining seven students found jobs through their own efforts.

Meeting the task of helping students develop favorable attitudes towards work was achieved to a significant degree as the results of the attitude towards work survey pre-tests and post-tests indicate. (See Appendix B, Exhibit IV). These changes can be attributed to classroom demonstration, use of filmstrips, role playing, fieldtrips, career days, use of resource persons, vocational guidance sessions, semi-skilled classes, etc.

If an effort to further achieve the previously stated objective of providing the over-aged and potential dropout students with semi-skilled training, two classes in carpentry, two in child care, and one class in food handling were established and became operational. These classes were very successful in meeting the needs of the students and establishing pride and self-esteem in the students involved. The students were able to experience success and learn what they considered relevant to their needs. (See Appendix B, Exhibit V).

The fact that only two students out of seventy-four were suspended and only three dropped out of school may have been due in part to their involvement in E.P.O.P. classes.

Teachers and administrative personnel were cooperative in assisting in exposing the students to the world of work. This can be measured by their requests for demonstration lessons, fieldtrips, resource persons and use of audio-visual materials related to the world of work.

Parent involvement was encouraged and through consultation sessions with E.P.O.P. teachers and advisor, a good relationship with parents was established. Parents were encouraged and did participate in E.P.O.P. semi-skilled classes activities. A total of ninety-eight parents took part in E.P.O.P. sponsored fieldtrips.

In-service training for teachers was achieved through large and small group sessions and on a one-to-one basis. There appears to be a need for more professionally planned training sessions in this area.

III High School Components

A. O.J.T. and Counseling

At the senior high school level, it was determined that the dropout rate is extremely high. Much has been said about the lack of vocationally significant experiences and vocational counseling contributing to this high drop-out rate. This void in the school experiences of the Desire Area students has been identified as a problem which could be attacked through this occupational program. Hopefully the results to be obtained would alleviate the drop-out problem and provide the students with more work experiences and vocational skills leading to greater employment possibilities which would eventually reduce the social and economic problems prevalent in the Desire Area.

In working towards the achievement of the goals and objectives as described in the preceeding section, a variety of approaches was used.

The counselor was responsible for conducting group sessions with the E.P.O.P. component classes. A topic outline and time schedule is found in Appendix C, Exhibit I.

Aside from these scheduled group sessions there were many individual sessions held at the request of the student, teacher or (in the case of O.J.T. students) the employer.

Evaluation of skills interests and aptitudes was dependent upon a review of the students' achievement records, teacher appraisal, self-appraisal and results of interest inventories. Additionally, some devices which assist in introspection were available and used.

The development of job skill was the direct responsibility of the various classroom teachers, however, the Vocational Counselor worked with the students in the formation of proper work attitudes and habits, approaches to problem-solving on the job and budgeting of money received from employment.

A considerable amount of effort has gone into attempting to make curricular adjustments through meetings and workshops with teachers, consultants administrators, and representatives of business and industry.

The major portion of the O. J. T. Coordinator's time was spent visiting businesses in the New Orleans area in attempts to develop

O. J. T. slots for our job-ready students. (Appendix C, Exhibit II).

The staff involved in the program at the senior high level included one teacher in each of the following areas: woodworking, electricity and electronics, mechanical drawing, small gas engines, practical nursing, and clerical training.

The Carver Senior High School houses about two-thousand students most of whom live in and about the Desire Project.

It is generally agreed that the students are in the lowest economic brackets with a great portion receiving welfare assistance. Many of these students are also the product of broken homes or illegitimacy which creates many social and emotional problems peculiar to ghetto residents.

Some problems evident at the school include a high drop-out rate, poor attendance and limited success in job preparation and procurement.

The student population served through E.P.O.P. is not necessarily the total population of the school. Classes served by the O.J.T. Coordinator and Vocational Counselor directly were:

a.	Office simulation block (1)	- 34
b.	Clerical Office block (2)	- 44
c.	Practical Nursing (3)	- 58
d.	Industrial Arts Dept. (18)	- 417
	TOTAL	553

While these classes were served directly, many other students were also served on a walk-in or referral basis for the regular counselor staff. (Appendix C, Exhibit VII).

The student activities included counseling sessions of a group and individual nature. A monthly schedule of topics was developed for the group sessions. (Appendix C, Exhibit II). These sessions involved group discussions, role-playing, rap sessions, viewing and discussion of films and filmstrips and simulated experiences as in application-filling and interviewing.

Individual counseling was more specific in nature often dealing with personal adjustment problems or difficulties on the job and many times decision-making relative to job-choice. The students involved in the one-to-one counseling were most often students seeking O.J.T. slots or those already in these slots who were experiencing some difficulty.

Regularly scheduled meetings were held with the students who were on-the-job. They were met weekly to record their job experiences, activities, difficulties and income. The information gathered through

these meetings were used in rating their performance on the job and assisting them in developing a budget and complying with income tax requirements.

In an attempt to spread the career education principle throughout the curriculum and publicize E.P.O.P. activities and objectives a handbook was developed by the Vocational Counselor. (Appendix C, Exhibit VII). This handbook was distributed to the entire staff of the school and whenever inquiries were made concerning E.P.O.P. at the senior high level.

As a result of the Vocational Counselor's efforts there are currently a number of curricular changes either approved for the 1972-73 session or pending approval. Two such changes involve the redirecting of the senior year Math and English courses toward preparing the student to be better able to handle pre-employment testing which will be encountered when seeking a job.

There is also a tentatively scheduled course titled, "Maintenance Repairman" which is an outgrowth of our on-the-job experiences this session. This course would prepare students for the maintenance positions created in the upkeep of large buildings and the equipment located therein.

Other incidental activities relative to student interests included attendance at a workshop for counselors conducted by South Central Bell, two appearances before the State Advisory Board for Career Education in Baton Rouge, Louisiana, involvement in the development of Project Leapfrog (a computerized guidance system) and the conduct of a workshop to determine weaknesses of our high school graduates as seen by business and industry.

The efforts of the O.J.T. Coordinator during the 1971-72 session were much more productive than experienced previously. Contact with business and industry was initiated during the first quarter. Needless to say the objective was to publicize our program to those businesses which were unaware and to revisit many which had been contacted in our initial year of operation.

The results of the efforts of the O.J.T. Coordinator amounted to a three hundred precent increase in on-job-training slots over last session. For a complete breakdown see Appendix C, Exhibit III.

Possible involvement on a semi-permanent basis seems likely as a result of this year's efforts. Housing Authority of New Orleans was very cooperative and seems to favor a continuing relationship. The same might be said of the Holiday Inn East Highrise. While there is no commitment from these employers, they were extremely pleased with the outcome of their participation in the O.J.T. program this past year.

It should be noted that of the fourteen students involved in on-the-job training, twelve (12) have been retained through the summer. Last year none of the student workers were retained. There is also a distinct possibility that some of these students may become permanent. This cannot be determined until the fall.

Again this year the Vocational Counselor was very active in securing summer employment for on-the-job training candidates and other students within the school in general. It can be reported that the results were very gratifying in this area as approximately forty-nine (49) students were placed through this office. (See Appendix C, Exhibit IV).

South Central Bell again sponsored a training program for high school graduates who were disadvantaged. Through the efforts of the O.J.T. Coordinator ten of our graduates were tested for this program of the ten, six were accepted into the training program. The sixty percent success was in contrast to last year's results when four of twenty or twenty percent passed the qualifying exam. The marked increase can be attributed to a pre-test workshop conducted by the O.J.T. Coordinator. This consisted of reviewing basic skills in math and developing test techniques such as making reasonable choices in multiple choice answers, finding patterns in non-verbal reasoning items etc.

B. Health Occupations

The Health Occupations curriculum is designed to recognize nursing as a problem-solving process. It attempts to develop practical nurses with high principles who are capable of functioning as skilled members of the health team in giving patient-centered care.

The program for the 11th grade practical nursing students calls for 15 hours weekly at the rate of 3 hours daily of instruction, observation, and laboratory practice during the entire school year. The last week of the school year the students are assigned for 6 hours daily for pre-clinical practice and instruction in affiliating hospitals. During the summer following the first year of the program the students must spend 30 hours weekly for 6 weeks in beginning medical-surgical nursing practice in American Hospital Association approved hospitals.

Following a one-month vacation, the students who have earned a grade of "C" or better for the first year begin the second year of practice and instruction in the hospitals with which the New Orleans Public Schools have written agreements for clinical experience. The 12th grade students practice 20 hours weekly for the entire school year.

We begun this school year with 26 practical nursing students. At the end of this school year, 15 students, who had earned a grade of

"C" or better were admitted to the second year of the program. Eleven students earned a grade of "D", and though they earned credit for the work, they were not admitted to the summer session.

Many of these eleven have asked to be readmitted following high school graduation to the post-secondary program, others asked to be admitted into the twelfth grade Nurse Aide program.

During the month of June, 1972, the practical nursing students had introductory medical-surgical nursing in three approved local hospitals. Much satisfaction with their practice has been expressed by their teachers and by hospital personnel.

The project was initiated for disadvantaged students to provide health occupations instruction leading directly to gainful employment.

In Metropolitan New Orleans health occupations positions are available, particularly for the occupation of Licensed Practial Nurse. Qualified trained Nurse Aides or Nursing Assistants are also needed. However, a lack of available students at Carver Senior High, with sufficient interests and/or aptitudes precluded the offering of a Nurse Aide course during the second year. More intensive recruiting and screening of prospective students should enable the offering of this course with greater success during the third year of the program than experienced during the first.

The education experiences initiated serve, therefore, by providing qualified personnel for roles in the care of the sick, as well as to motivate students for higher level professional development.

The project was initiated in an area of previously limited employment opportunities and high unemployment.

Post-secondary students from this problem area have been served to some degree by our city-wide post-secondary program. Previously, some secondary students qualified, together with other secondary students for the one city-wide practical nurse education program begun in September of 1967. Many students from the project area who asked to be included were not accepted because of the need to limit our classes to reasonable numbers.

Practical nurse education has been successfully offered in the New Orleans Public Schools for 18 years before this project was begun. Our school had experience in basic foundation, clinical practice, and related instruction. Patterns of teaching laboratory, clinical practice, and evaluation had been evolved for secondary and post-secondary practical nursing programs. Appropriate textbooks and audio-visual materials had been selected based on previous success with these materials.

It is the belief of the staff of the Practical Nursing Program

that education for practical nursing is rooted in good nursing practice and sound principles of education. The program must meet and fulfill the needs of our society. Because a person achieves fulfillment while contributing to his society, a part of his formal education should be specialized and directed towards preparation for useful employment.

C. Clerical Occupations

The Vocational Office Block at Carver Senior High School was a two-hour class at the twelfth grade level combining Typewriting II and Clerical Practice. These courses, previously taught in isolation, were taught in one block of time in an effort to refine and strengthen previously learned skills and knowledges and to integrate them with new learnings in the setting and through the activities of a simulated office. Typewriting I was the only prerequisite for admittance to the course.

Prior to the simulation, the instructor taught the basic elements of Typewriting II and Clerical Practice. From January 12, 1972 through April 28, 1972, the two-hour class period was devoted to the operation of the Lester Hill Corporation, an office simulation published by McGraw-Hill Book Company.

Students reacted very positively to the office simulation. It is difficult, however, to evaluate its real worth because it can't be stated in averages and percentages. One needs to see the class in operation, observe the students at work, and listen to their comments to realize the high level of motivation, interest, and learning. In addition to their vastly improved knowledge of office work, students learned the importance of teamwork, regular attendance, and above all, accuracy.

The students enjoyed this class because they were totally involved in it. Instruction during the simulation was completely individualized, and students felt responsible for their own learning. Following the simulation, the instructor noted an increase in the students' maturity and attitude toward class work. Instead of being withdrawn, they are much more vocal.

Because of the good results achieved in the office simulation program at Carver, use of the Lester Hill materials was extended to 14 additional classes in eight schools. Present plans call for further expansion in the 1972-73 session.

The pre-cooperative block was designed to prepare students for participation in the Cooperative Office Education during the twelfth grade by giving them an opportunity to become acquainted through in-school, classroom experience with the makeup and routine of some fifteen different clerical jobs and to remediate deficiencies, particularly in math and English, which might prevent them from qualifying for jobs.

Unfortunately, the material we planned to use in this program has still not been published. In its place, we have used a number of fragmented texts, programmed material and kits in an effort to prepare students for work in the office. Although the program was not as we had originally envisioned, it did result in some very useful by-products. We did find and use material that was highly motivating in business math, and next year we are using that material in pilot programs in business math in three senior high schools. Some of the other material proved to be so effective with the students that it led us to a reorganization of the General Business course, so that the material could be utilized at a lower grade level.

The success of the block time method of scheduling which we began at Carver has resulted in increased acceptance of this procedure. The block time schedule seems to work particularly well in a large senior high school, because the students are enrolled in a sequenced program and because they have an opportunity to identify with a group. Teachers find it more satisfactory, because they become better acquainted with the students; and it is easier to work with the students when you know their strengths and weaknesses.

We proceeded through the year with the programmed typing, although we continued to be hampered by late receipt of material. One teacher achieved satisfactory results from the programmed material, but we were less satisfied with the results achieved in the other classes and have decided to abandon programmed instruction in typewriting for the coming year.

IV Out-of-School Youth Component

According to our design and budgeting, the two classes in mechanical drawing or drafting and automotive mechanics in operation during the previous year were to be continued. However, in September 1971, while recruiting for students, it developed that very few persons were interested in the drafting course. As a result, it was delayed pending the enrollment of a sufficient number of students. In the process of recruiting, the course offering was changed to Blue Print Reading, to meet the needs and desires of the enrollees. As a result interest increased to the degree that this course was began in January 1972 and operated for a period of eighteen weeks.

On the other hand, the Automotive Mechanics course continued to be very popular and was continued in September as planned and operated for a full thirty-six weeks.

It should be noted that during the first program year, these two classes were the only skill training classes offerred in the evening at Carver Senior High School.

However, during the second program year, the Carver Community School was fully operational through Model Cities funding offering twenty-one courses available to adults and out of school youth. The Carver Community School is part of the Carver Senior High School and as such was in a position in render excellent support to the E.P.O.P. classes. Through its guidance and counseling procedures a number of students were referred to the E.P.O.P. classes based on interest and need.

The curriculum continued to permit those out-of-school youth to pursue individualized programs of study within each class offering. This flexibility permitted the classes to appeal to a broader group of youth.

Total enrollment for the Automotive Mechanics class was 21, and the total for Blue Print Reading was 18 persons.

The instructors were the regularly assigned personnel at the senior high with years of classroom and journeyman experience in their area of instruction.

Attendance in these classes were in generally very much improved due to the presence of several hundred persons enrolled in classes conducted by the Carver Community School.

Our continuing concern for making more opportunities for skill training available, has been satisfied, in part, by the Community School curriculum. The continued cooperation and flexibility of this component is making a meaningful contribution to the needs of the Desire Area community.

EVALUATION

This Final Report was prepared by members of the team employed by the Orleans Parish School System for the purpose of evaluating the Exemplary Program for Occupational Preparation (EPOP). The report will address itself to an identification of the present status of the project based on the observations and contacts with the EPOP staff since December, 1971, and a consideration of suggestions for the final contract year of the project.

The evaluation team, as a part of management, seeks to influence decisions, from an external, independent reference point, relative to the management of the program. Inherent in this approach is the necessity of determining the degree to which identifiable, measurable objectives are being realized. This goal has given rise to an immediate concern of the evaluation team, that of not having the specific behavioral process and performance objectives of the program delineated in appropriate, measurable terms.

As indicated in the Interim Report[1] dated April 24, 1972, the EPOP staff was, in September, 1971, endeavoring to continue its operation without the services of an evaluator. The present evaluation team assumed its responsibilities in December, 1971. It is felt, therefore, that maximum value to the project will be realized if this report addresses itself to:

(I) A review of the General and Specific objectives of each of the grade level divisions of the program;

(II) An account of the activities and accomplishments of each division during the last half of the second year of operation as they relate to these objectives;

(III) Recommendations believed to be pertinent to a successful final year of the program.

I. OBJECTIVES OF EACH GRADE LEVEL DIVISION

A. Elementary School

1. Provide students with information about a variety of occupations and vocational options.

2. Create a desirable attitude with regard to the dignity of work.

3. Guide the students toward development of sound occupational aspirations.

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[1]Interim Report, Project No. 0-361-0125, Contract No. OEC-0-70-4783(361), An Exemplary Program for Occupational Preparation, William G. Young, New Orleans Public Schools.

B. Middle School

1. Provide the overaged student and potential dropout with semi-skilled training in order to:

   a. give him a practical interest in remaining in school
   b. provide him with a means of earning economic supplements while he is in school
   c. provide him with salable skills if he must terminate his schooling.

2. Help this student see the relationship between core academic subjects and his chosen occupation field.

3. Help the student to develop a desirable attitude with regard to the dignity of work through skill training and vocational guidance.

C. Senior High School

General Objectives

1. Through on-the-job training provide the student with experiences in the latest methods and machinery of industry.

2. Provide job-entry skills and employability for students in areas of industrial arts, health occupations, and clerical occupations.

Specific Objectives of the Clerical Training Phase

1. Pre-Cooperative Clerical Block for Eleventh Grade Students:

   a. To acquaint students through in-school, classroom experience with the make-up and routine of some fifteen different clerical jobs.
   b. To give students an opportunity to decide those clerical jobs which they like and those for which they are qualified.
   c. To remedy those deficiencies which would prevent a student from qualifying for the job he would like to obtain.
   d. To prepare students for participation in the cooperative office education program during the twelfth grade.

2. Vocational Office Block, Including Simulated Office Environment:

   a. To provide a vocational office block at Carver Senior High School to give senior business education students an opportunity to identify themselves as potential office workers through a simulated office experience.
   b. To develop new office skills and knowledges, to refine and strengthen previously acquired office skills and knowledges, and then to integrate and apply these skills and knowledges in a simulated office.
   c. To give students an opportunity to develop and practice in an office setting those intangible qualities; such as, promptness, neatness, dependability, initiative, etc., which have such a direct bearing on job success.

3. Programmed Instructional Teaching of Typewriting and Shorthand:

   a. To develop the learner's skill in manipulating the operative parts of the typewriter.
   b. To reinforce initial learnings through smaller packets of instruction.
   c. To allow disadvantaged students many opportunities to experience success by providing individualized programmed instruction which allows each student to progress at a rate consistent with his own ability.
   d. To improve the student's skill in reading and carrying out instructions.
   e. To expand the student's problem-solving ability.
   f. To develop the learner's ability to type by touch at a minimum skill of thirty gross words a minute with no more than five errors in a five minute timed writing.
   g. To develop a program in Typewriting I, which eliminates the lock-step approach, a program which will not be hindered by the erratic attendance which is so frequently a characteristic of the disadvantaged student, a program which is more student-directed than classroom directed.
   h. To build upon existing research to further determine through a controlled program whether disadvantaged students can become better typists when taught with the individualized programmed approach rather than the traditional approach.

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i. To develop an employable skill in typewriting so that the learner will be qualified to enter the cooperative office education program at the twelfth grade level and/or the labor market upon high school graduation.

D. Out-of-School Youth

Through night courses train youth who have left school through graduation or dropout in the marketable trades of auto-mechanics and mechanical drawing so that they can earn a living wage. (See Bibliography, #1, pages 12 and 13.)

II. ACTIVITIES AND ACCOMPLISHMENTS OF EACH DIVISION

A. Elementary School

The objectives of the Elementary Component of the Exemplary Program for Occupational Preparation are to (a) provide students with information about a variety of occupational and vocational options, (b) create a desirable attitude with regard to the dignity of work, and (c) guide the students toward development of sound occupational aspirations.

Four elementary schools (Dunn, Edwards, Moton, housing grades 1-5, and St. Philip the Apostle, grades 1-8) participated in this project. These four schools collectively represent an enrollment of approximately 3,500 students from the Desire area. The elementary advisor is responsible for this component of the program which involves working with teachers and pupils in 125 classrooms. He spends one day per week in each school, and visits each classroom at least once each month.

During each school visit an effort is made to visit as many classes as possible. From eight to ten informal teacher conferences are held each day, and large and small group meetings with teachers are held on a regular basis. In addition, he meets with teachers at regularly established faculty meetings of each school as well as with individuals or small groups on demand to discuss specific problems such as advantageous utilization of World of Work materials, scheduling of special demonstration lessons[2] for a particular social studies unit and planning for suitable field trips for various class groups. (See Appendix A, Exhibit IV.)

Since the conception of the program, the elementary advisor has prepared and distributed information concerning occupations. He has also developed a twenty-eight page mimeographed booklet, Suggested Activities and Information on Career Development at the Elementary Level (see Appendix A, Exhibit XIII), which was distributed to all elementary teachers in the program

[2] Dunn, C.J. and Payne, B.F., World of Work: Occupational-Vocational Guidance in the Elementary Grades, A Handbook for Elementary School Teachers and Counselors.

as well as to their principals, district superintendents and key administrative personnel in the central office. In addition, the elementary advisor has prepared two Suggested Unit Outlines on Career Development, one for the primary level (grades 1-3) and one for the intermediate level (grades 4-6). (See Appendix A, Exhibits XIV-A and XIV-B.)

Essentially, at the primary level, the Unit Outline (see Appendix A, Exhibit XIV-A) deals in depth with the basic concepts of the value of work. The unit is tied in with the social studies area at the first, second and third grade levels respectively and addresses itself to an identification of workers in the home, community, and city. In addition, specific jobs (nurse and postman) are introduced as a means of developing awareness of their roles in the world of work and their importance in society.

The Unit Outline at the intermediate level (see Appendix A, Exhibit XIV-B) builds upon the basic concepts established and adds vocational-occupational goals to the program. Starting with the kinds of jobs performed by the family, the unit moves to relating them to the variety and levels of jobs found in the community. The unit then focuses realistically on the kinds of abilities and skills required by various occupations. With this in mind, provisions are made for self-examination of interest, abilities, strengths and weakness by each child to help him explore various pathways toward a vocational goal. These units have been distributed to all teachers and principals of the schools involved. In addition, they serve as a basis for the demonstration lessons and discussions relative to the utilization of World of Work materials. (See Appendix A, Exhibit IV.)

Demonstration lessons referred to above are conducted by the elementary advisor in all elementary classrooms involved in the project. In addition to the materials already described, he also utilizes filmstrips, tape recorders, and other non-book materials.

This contact with teachers has provided a vehicle for the exchange of ideas and the development of concepts for specific lessons or units. A tangible result of these meetings is the Suggested Unit Outlines for primary and intermediate levels already discussed.

Early in the planning, the decision was made to administer an opinion survey (Vocational Information Questionnaire) of the use of vocational information in schools to determine the change of attitudes, if any, in administrators, counselors, and teachers involved in the program. (See Appendix A, Exhibits V, VI and VII.)

As indicated in Exhibits VI (Pre-test) and VII (post-test), there was a definite change, positive in nature, relative to the attitudes of administrators, counselors, and teachers involved in the project. Responses to each question indicate this shift in attitude towards a more positive awareness of the values inherent in the program. This change in attitude also revealed the need for additional information and materials, vocational in nature, for teachers, counselors, and administrators. As a result, Vocational Centers were established in each of the four elementary schools involved. These centers have filmstrips, films, tapes, records, and books related to social studies units and occupational preparation. (See Appendix A, Exhibits III and IV for inventory of materials.) In addition, each staff member has been furnished a copy of the World of Work, A Handbook on Occupational-Vocational Guidance in the Elementary Grades, by C.J. Dunn and B.F. Payne.

A revised instrument designed to measure students' attitudes toward work was administered in September, 1971, and again in May, 1972. Revision of the original instrument included: (a) Deletion of confusing or ambiguous items, (b) reduction of the number of test items from 25 to 20, (c) re-ordering of test items according to a random method, (d) testing only of evenly numbered grades for two consecutive years, and (e) deletion of the aspirational test instrument. (See Appendix A, Exhibits I and II.)

The revised Attitude Towards Work scale was, in terms of the revision, administered only to grades two and four in the participating schools: (1) St. Philip the Apostle, (2) Henderson H. Dunn, (3) Helen S. Edwards, and (4) Robert R. Moton. The statistical pre-test and post-test data are presented in Appendix A, Exhibit XII.

The tables compare pre-test and post-test measures of the attitude variable. It should be noted that a negative (-) mean difference indicates a negative attitude towards work as revealed in the differences between the pre-test and post-test scores.

Since the test was administered only to the second and fourth grade classes in each school and since all except one of these grades enrolled less than thirty students each, it was decided to use "students" t distribution for determining the significance, if any, of attitudinal change.

Tables in Exhibit XII indicate, for each of the four schools: (a) The number of students in each grade tested, (b) mean of the differences between the pre-test and post-test scores for each grade, (c) the standard deviation for each

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grade's scores, and (d) the t-statistic or the deviation of change in attitude as indicated by the paired dependent variables.

It should be noted that, in addition to the significant positive gain in attitude toward work within each school realized during the first year of the program, each school again showed additional gain in attitude towards work during the second year of the program. It is true that the gain was not as great, but eleven of the thirty-one classes tested showed a gain in attitude towards work at the .05 level of significance. Three of the classes showed gains at the .025 level of significance.

Fifty field trips were planned, scheduled, and completed by the elementary advisor and teachers in their respective schools. Seven new places were added as field trip sites for the current year. Guidelines for scheduling and suggestions for follow-up procedures were prepared and discussed with teachers and staff. (See Appendix A, Exhibits VIII, IX, X, and XI.)

During the year "Career Days" were held on April 5, 6, and 7 for all students of the participating schools in grades 5 through 8. The job areas explored by the students were:

April 5	Firefighter, Telephone Operator, Health Occupations
April 6	Telephone Installer, Auto Mechanic, Social Worker
April 7	Cashier, Sales (Auto), Clerical Worker

Three representatives from the business community were present each day to discuss the characteristics of their occupations and to answer questions raised by students.

At the end of the presentations and question-and-answer period each day, students were conducted on a tour of the vocational shop areas of Carver Middle and Senior Schools.

Invitations to "Career Day" activities were also extended to the parents of the students served by the program. Approximately 675 students and parents were in attendance.

B. Middle School

The objectives of the Middle School Program, as defined in the original proposal[3] (#1, page 12) are to provide the

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[3] An Exemplary Program for Occupational Preparation

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overaged student and potential dropout with semi-skilled training in order to supply him with (a) a practical interest in remaining in school, (b) a means of earning economic supplements while he is in school and during summer recesses, and (c) salable skills if he must terminate his schooling. In addition, the middle school program seeks to provide the student with an understanding of the relationship of core academic subjects to his chosen career field, as well as to help him develop a desirable attitude toward work and semi-skilled training.

During this reporting period, staff meetings were held in which planning for implementation of classes in child care, food handling and carpentry were undertaken. These meetings included the EPOP advisor and the middle school administrative personnel. Further, steps were also taken to involve potential dropouts in the above-mentioned semi-skilled areas. The first step consisted of encouraging students to be available for interviews that would place them in the program. There were seventy-four such interviews. Of the seventy-four, twenty were rejected for a variety of reasons, the most common of which involved "college-bound" students who were merely curious or wanted something different to do. (See Appendix B, Exhibit V.) Secondly, classroom teachers and counselors were asked to utilize their knowledge of the students for the purpose of referring those children who would most benefit from participation in the training classes. Screening of potential students involved the consideration of age, grade, records of academic performance and student behavior, school attendance, and economic needs of students.

Concurrent with the semi-skilled training classes, field trips (see Appendix B, Exhibit II) were planned to expose students to relevant work situations. In the case of child care classes, trips were made to day care centers and nurseries for the purpose of helping the students understand the operation and personnel requirements for these kinds of occupations. Students enrolled in food handling likewise received practical experience by working in the school cafeteria and participating in visits to neighboring restaurants and food factories.

In providing practical experience for students enrolled in the semi-skilled carpentry classes, arrangements were made for the students to plan and construct two complete houses with finished interiors and exteriors.

The houses were constructed according to previously developed plans. Each had a total area of 64 square feet. Twenty-eight students of the seventh and eighth grade carpentry classes participated in the construction of the houses. The classroom instructor judged the students' work according to the following criteria: Could the student properly make measurements? Could the student read and implement blueprints?

Could the student follow directions? Could the student properly use available materials? The houses, when completed, were inspected by the instructor and then dismantled for reassembly by future participants in the program.

As further practical experience, the carpentry students assisted in partitioning a section of the school building for use as a curriculum planning area.

The middle school advisor served as liaison between the carpentry instructor and the program coordinator, communicating the progress of the project. He also ordered the materials for construction. The materials ordered are itemized in Appendix B, Exhibit VII. They were paid for with EPOP funds and used for the exclusive purpose of training students in the skills of carpentry.

In keeping with the defined objectives of EPOP, consideration is being given to introducing more vocationally oriented courses into the middle school curriculum in an effort to realize more continuity in the curriculum. Specifically, plans are underway to introduce the Industrial Arts Curriculum Project (IACP) Construction Course for Career Opportunities beginning with the Fall semester of the next academic year, 1972-1973. Serious consideration is also being given to determining the need to shift emphasis within established core courses toward developing salable skills.

At the middle school level, instructional efforts continue to broaden the basic concepts of the World of Work (see Appendix A, Exhibit IV) introduced at the elementary school level. This is being done through weekly Career Day activities in the Environmental Arts Department, through increased use of community resources (human and material), through increased use of career oriented instructional materials (films, printed matter, slides, etc.) in all areas of the middle school curriculum, and through increased numbers of field trips. (See Appendix B, Exhibit VIII.)

To assess the effect of the occupational training offered at the middle school, a pre-test/post-test designed to measure the students' attitude toward work was administered at the beginning of the school term and again during the last week of the school session. (See Appendix B, Exhibit IV.) The data from the testing is shown in the table contained in Appendix B, Exhibit IX.

The data presented in Appendix B, Exhibit IX, indicates that the curriculum had positive effects upon students participating in the EPOP program at the middle school level as measured by The Attitude Toward Work Survey.

To facilitate student awareness of job opportunities and careers, films related to jobs and careers were shown within the Environmental Art Department on a scheduled once-a-week basis at all grade levels. Each film treated a specific job. The Environmental Art Department, consisting of the industrial arts, art and music classes, combined its classes on Fridays to view the career films and meet with resource persons having careers related to the films being shown. (These films were securred through the audio-visual center of the Orleans Parish School Board.) Each month, one resource person from a local business (i.e., Avondale, South Central Bell, etc.) would answer questions concerning the particular career under consideration. (See Appendix B, Exhibit VI.) During the course of a given Friday, every student within the school (1,685) would have been afforded the opportunity of addressing the resource person. The films and presentations were staged in the school auditorium, thus allowing for the greatest possible exposure.

In combination with these efforts, teachers were encouraged to display information about careers in their individual classrooms. Eight bulletin boards were utilized for this purpose. The bulletin boards displayed job-seeking techniques, proper interviewing practices, etc.

Having discussed the function of EPOP within the school, community aspects of the program are due consideration.

Facts and information concerning EPOP objectives and activities were disseminated during workshops sponsored by (1) Jackson Brewery, (2) South Central Bell, and (3) Louisiana Training Institute. These workshops also emphasized vocational education and career opportunities. The value of these workshops may include publicity afforded the program.

A continuation of career awareness from the elementary school level was realized through classroom demonstration lessons and fieldtrip excursions. (See Appendix B, Exhibit II.)

Efforts were made to secure summer employment for students enrolled in the semi-skilled training classes. Of the 74 students, 39 applied for summer jobs through the middle school advisor. Thirty-two were successfully placed in job slots with NYC, AFL-CIO, restaurants, independent carpenters and food stores. (See Appendix B, Exhibit III.)

C. · Senior High School

The objectives of the senior high school component as defined by the source document (#1, pages 12 and 13) are: "(1) through on-the-job training (OJT) to provide students with experiences in the latest methods and machinery of industry, (2)

to provide job entry skills and employability for students in the area of industrial arts, health occupations and clerical occupations, (3) to provide counseling designed to promote positive attitudes towards work and to improve the students' job-seeking techniques, and (4) to assist students in making vocational choices through self-evaluation of their own skills, interests, aptitudes and accomplishments."

To become eligible for On Job Training (OJT) slots, senior students had to have completed two or more industrial arts courses in either woodworking, mechanical drawing, electricity, or power mechanics (small engine repair).

Vocational counseling was available to the approximately 440 students enrolled in the senior high component, including those pupils in the OJT program as well as those enrolled in Practical Nursing, The Vocational Office Block, Office Simulation and the "Pre-COE" Clerical Block. The students were counseled both individually and in groups. Counseling sessions included the following areas of concentration: (1) job-seeking techniques, (2) attitudes toward work, (3) interviewing, (4) filing of applications, (5) resume writing, (6) job finding resources, (7) evaluation of self-concept, and (8) interest surveys including Kuder Preference Records. (See Appendix C, Exhibit II for a numerical accounting of student participation in these various exercises.)

Several techniques were employed during group counseling sessions. There were general group discussions considering the topic of basic information necessary for competence in applying for a job and involving approximately 110 participants. Role playing techniques were used to emphasize appropriate interview behaviors. More than 100 students participated in this activity. Rap sessions involving approximately 95 students were held wherein the students expressed their reactions to the vocationally oriented information. Other techniques used in the counseling sessions included viewing and discussion of films and filmstrips, and simulated experience in the completion of application forms.

The filmstrips used in these sessions were entitled:

1) "Importance of a Job"
2) "Determining the Right Job"
3) "Preparing for the Job"
4) "Finding a Job"
5) "Getting the Job"
6) "What the Employer Expects"
7) "Supervisor-Subordinate Relationships"
8) "Fellow Worker Relationships"
9) "Role of Profit"
10) "Seven Fatal Sins"
11) "Seven Vital Virtues"
12) "Good Working Attitudes"

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Two films entitled "Applying for a Job" and "Your Job: Good Work Habits" were also viewed by approximately 300 students participating in the program.

The individual counseling was more personal, often dealing with adjustment problems or difficulties on the job and decision-making regarding job preferences. The students who participated in the one-to-one counseling were most often those seeking OJT slots or those already in such slots and experiencing difficulties.

During the summer there were 49 OJT slots available. The following table indicates how OJT positions were filled:

Agency	No. of Students	Type of Experience
Housing Authority of New Orleans	15	Maintenance
Internal Revenue Service	6	Clerical
U.S. Navy	8	6 Clerical 2 Electronics
N.Y.C.	20	Varied: Clerical Drafting Maintenance

These placements were realized primarily through the efforts of the EPOP High School Vocational Counselor.

The vocational counselor maintained continuous contact with the students placed in OJT slots. In addition, he established contact with both prospective and participating employers through periodically scheduled meetings.

Because the career education principle is a primary concern for EPOP, a handbook was developed describing EPOP activities and objectives. (See Appendix C, Exhibit VII.) This handbook, developed by the vocational counselor, was distributed to the entire staff of the schools and made available for others inquiring about the EPOP program.

The vocational counselor was also instrumental in promoting curriculum changes which have been either approved for next year's school session or are pending approval. Two of the changes involve the restructuring of the senior year mathematics and English courses in order to better prepare students for pre-employment testing by exposing them to the types of material commonly found in such tests.

These curriculum changes were precipitated by a workshop attended by the English consultant, the mathematics supervisor, representatives from South Central Bell Telephone Company, heads of the English and Mathematics Departments of Carver High School, the EIOP staff, the school guidance counselor, the Supervisor of Industrial Education, and the Supervisor of Continuing Education.

During the workshop, consideration was given to whether the English and Mathematics Sections could better serve students entering the labor pool by redirecting the emphasis of course content in the senior mathematics and English classes. Placement attempts and employment test results at South Central Bell had revealed that most students could not meet employment entry requirements. Notably, a large number had failed the pre-employment test, which is constructed of tenth-grade level mathematics and English exercises.

As a result of the workshop, the mathematics and English senior courses were restructured to be more specific in nature. That is, the senior mathematics course would emphasize addition, subtraction, multiplication, division, percentages, ratios and basic computational mathematics. Exercises involving algebra, geometry, trigonometry, etc. would be deemphasized. Likewise, the senior English classes would emphasize resume writing, letter writing, basic grammar and communication. The area of English literature would be deemphasized. Both senior mathematics and senior English are elective courses. There are courses in the curriculum that provide advanced mathematics and English for those students who are college bound. Through this arrangement, both vocational and college preparatory students will find classes developed according to their immediate needs.

Other program changes predicted for the coming project year include the development of a new course entitled "Maintenance Repairman" (see Appendix C, Exhibit VI for course outline) and the structuring of a new woodworking course (see Appendix C, Exhibit V, for course outline).

PROJECT ADMINISTRATION

A major factor in the ultimate success of any exemplary program is an organizational framework structured operationally to support the process, product, and management objectives of a program. Implicit in such an organizational structure are clearly defined lines of authority and responsibility that foster decisions based upon informed judgments, made with dispatch at the appropriate administrative level, and made by those most intimately informed. Effective, imaginative leadership and goal realization are spawned by such an organizational arrangement.

The Director of EPOP devotes one-fifth of his time to the program while simultaneously serving the New Orleans Public Schools as full-time Supervisor of Industrial Education. Under such an arrangement, the Project Director is denied the opportunity to provide the needed time and energy demanded by this exemplary program. In effect, topside, aggressive, imaginative leadership, necessary to realizing the maximum benefits of the program, is not continually available to EPOP, and the liaison role of the Program Coordinator appears to be insufficient to the operational, day-to-day needs of EPOP. The geographic distance of the Director from the program site has at times delayed the on-the-line decision-making process. Jointly, the time and space factors have produced some morale problems and some momemtum loss to the program. In addition, problems of openness and flow of communication have surfaced. If, because of school system structure, final administrative authority must reside with the Supervisor of Industrial Education, serious thought should be given to delegating sufficient authority to the on-site Coordinator to help insure effective, efficient administration of EPOP. This may aid also in overcoming the authority vacuum in on-site decision-making that has tended to diminish the initiative and enthusiasm of the staff and to erode valuable time and energy.

STAFF UTILIZATION AND PROGRAM DEVELOPMENT

To maximize the opportunity for and the resultant benefits of intensive (continuing) staff planning and program development, the EPOP management team might move to place the project staff on a twelve-month employment basis. Among the longitudinal benefits of such a move would be the investment in professional staff development that would endure through a cadre of trained personnel after the project terminates.

A problem that has been cited in previous formal reports and that continues is that of providing for the maximum use of the professional time and technical efforts of the EPOP staff. A better utilization of professional time and talents would occur if support personnel were provided to handle such non-professional tasks as clerical duties, data collection, requisitioning of materials and supplies, etc. Such manpower could be had through employment of additional clerks and aides. A continuing assessment of the duties and workload of all project staff personnel is in order.

Initial and continuous orientation of teacher and administrator part cipants to the purposes of EPOP and to current concepts of career education strikes at the heart of success with the exemplary program. A planned, sequential in-service education program--one that truly supports the nature and intent of EPOP--will not only free the project staff of repetitious orientation, but will also allow for a broadened and varied program of in-service education that will help insure immediate and long-range benefits of EPOP for the boys and girls of the New Orleans Public Schools. Two types of in-service education are suggested: One that allows the staff to visit and to study model vocational programs similar to EPOP, and one that brings in professional consultants external to the system to work in in-service education with project and program personnel. One operational consideration, however, is required in providing in-service education to professional program participants, i.e., that official provision be made for classroom teachers to be released from teaching duties during "company" time in order to insure the greatest possible yield from such in-service education efforts.

As part of management, the evaluation team has assumed the responsibility of reviewing staff appointments to EPOP. It is curious to note that, in a system as large as the New Orleans Public Schools, with many qualified counselors available, the middle school advisor is not certified for his role. It is to be noted, however, that the middle school advisor is certified in Special Education and is presently pursuing course work that will lead to counselor certification. Competency-based appointments build in a potential success feature in exemplary programs.

The potential is there for the impact that EPOP can have on the career preparation of students involved in the program. An equal potential exists for the impact that EPOP can have when a comprehensive, master plan of career education is confected for the New Orleans area.

CONCLUSIONS AND RECOMMENDATIONS

Administration of EPOP

1 ☐ Administrative structure continues to weaken the decision-making process because of the split levels of administration: Authority and responsibility are divided between sites-locations.

Appropriate authority and responsibility should be delegated to on-site staff to expedite and enhance the quality of the decision-making process.

Management of EPOP

2 ☐ All EPOP personnel are adequately trained for their respective positions with the exception of the middle school advisor. His credentials qualify him to work in special education.

Administration should give thoughtful consideration for choices in personnel consideration. Administration should continue to support the middle school advisor in his efforts to gain certification.

3 ☐ Even though professional staff works methodically with implementation of the EPOP objectives, their efforts continue to be diluted because of an inadequate support staff.

Each professional staff member should be provided with either aid or clerk-typist services.

4 ☐ In-service education and special training for project and program staff continues to be inadequate for dealing with the objectives established for EPOP.

A well-planned, systematic program of in-service education should be established for both staff members and program participants.

5 ☐ There continues to be inadequate communication among professional personnel at all levels.

Staff persons should be provided with sufficient support personnel to provide time necessary to assure open and continuous lines of communication both vertically and horizontally.

6 ▱ Record keeping is such that staff must spend a disproportionate amount of time retrieving data.

A systematic data retrieval system (as generated by a research design written in behavioral terms) should be implemented so that materials are available when decisions are to be reached, so that all materials used are available for report writing and public dissemination, and so that effective and efficient administration can be achieved. (See Conclusion-Recommendation #3.)

EPOP's Instructional Program

7 ▱ The objectives of the project are not defined in measurable terms and, as a result, the project staff is encountering difficulty in determining the degree to which step goals are established and EPOP objectives are realized.

The management team should move to expedite a refinement of objectives so that the third action year can be more efficiently measured.

8 ▱ By this point, the needed instructional materials have been requisitioned.

An inventory should be made to insure that requested instructional materials are on hand for the beginning of the final action year of the project.

9 ▱ The on-the-job training aspect of the program has not been as successful as anticipated.

The High School Vocational Counselor should be more aggressive in pursuing more OJT slots and should work in close cooperation with similar New Orleans Public School vocational programs. The Community Advisory Committee should be an active resource for finding OJT slots and seeking public cooperation in this effort.

10 ▱ There is little or no cooperation between EPOP and other vocational education programs within the school, within the system or within the community.

Greater effort must be expended in the coordination of and the dissemination of the EPOP program into New Orleans Public Schools and the communities served. Here, too, the Advisory Committee must play a dominant role.

11 ▱ Even though the design of EPOP, except for the objectives as currently defined, is sound and exemplary, EPOP has not realized its full impact on the community or on career education.

In order for EPOP to realize its full potential, the evaluation design must be modified, the Advisory Committee reactivated and utilized, and EPOP's role in the community identified and expanded.

12 ▱ The program has not developed (expanded) as originally designed. However, with a more efficient evaluation design, flexible extensions to other schools are possible.

The Project Director should with all deliberate speed secure the modified evaluation design (behavioral objectives). The evaluation team should in the third action year identify those aspects of EPOP essential to its success and recommend that they be transplanted into other vocational programs within the New Orleans area.

13 ▱ EPOP staff and program participants have worked diligently with and without evaluation teams. The degree to which they were successful is apparent in the progress that has been realized through two action years.

This record of effort and achievement is worthy of note and recognition. Continued support from all levels is justified.

CONCLUSION AND RECOMMENDATIONS

A careful analysis of the activities, results and evaluation leads to the conclusion that the E.P.O.P. program has achieved significant progress from its first action year. Many areas of concern a year ago have been resolved through the cooperative efforts of the staffs and teaching personnel. Although some problem areas continue to exist, the direction and potential of the program is in focus, more clearly. A discussion of these problems was covered in the sections on results and accomplishments and also in the evaluation.

In general the E.P.O.P. program continues to meet the needs of the students in the schools in the Desire Area by providing a more relevant curriculum. As public schools undertake the challenge of mass education, it is quite obvious a significant number of students receive inadequate preparation. Many persons in or out of school do not have an effective orientation to the world of work and are thereby relagated to the lowest ranks of our economy. Vocational orientation, for career decision-making, in particular, has had a low priority in the curriculum. Implied in the challenge of mass education is the goal that each individual will become a productive member of society. Therefore, we cannot over-emphasize the need for vocational information and orientation in the curriculum as we train students to become productive individuals.

The activities of the E.P.O.P. project have been acknowledged as necessary and relevant by the teaching personnel and enthusiastically received by the students. The E.P.O.P. staff observed behavioral changes reflecting direct results of the objectives.

Significantly, in the elementary level, the increase in fieldtrip excursions to business and industry, manifested at all grade levels, was directly correlated to an increase in classroom activities regarding occupational awareness.

In the middle school, the full implementation of the three semi-skilled courses combined with weekly career day programs lead to more favorable attitudes, as measured, toward work.

The 300% increase in O.J.T. slots over the previous year and the acceptance of proposed new courses for inclusion in the curriculum reflect the growing acceptance of the objectives.

A real continuing concern to the E.P.O.P. staff is the development of an evaluation design and adequate instruments to measure changes effected in relation to the stated objectives because of the manner in which the objectives are written. In spite of this problem the E.P.O.P. program is moving in the direction of its objectives.

Obviously, certain modifications predicated by insights gained during the first and second program years are required.

The E.P.O.P. staff feel that serious consideration should be given to the following recommendations to help the program achieve its objectives:

1. More community and advisory committee involvement in project functions.

2. More dissemination of project materials in other local schools in order to expand the influence of the program.

3. More community awareness of E.P.O.P. activities and objectives through newspaper articles, T.V., etc.

4. More in-service programs for teachers involved with E.P.O.P. including greater usage of outside resource persons.

5. More intervisitation with programs similiar with E.P.O.P. to exchange ideas and discuss problems common to all.

6. The evaluation design be rewritten to incorporate measurable product and process objectives.

7. More effort exerted to secure upper echelon commitments favorable to the continuation of the program.

8. To continue curriculum expansion and/or revision to include such courses as IACP (World of Construction, World of Manufacturing), General Maintenance, Career English and Applied Mathematics.

9. To reinstitute the Nurse Assistant course into the Health Occupations component with a more sophisticated selection procedure.

As has been noted, the E.P.O.P. is making school more relevant for students of the target area by emphasizing to them the advantages of vocational information. An increased capability to make wise intelligent decisions in terms of a student's individual abilities, needs and interests is an essential goal of E.P.O.P.

The Exemplary Program for Occupational Preparation should increase its impact to establish a program which will be expanded throughout the school system. Its basic developmental approach beginning with exposure to occupations, aspirations and attitude formation, and advancing to specialized skill training, including on-job-training, affords opportunities for students to graduate from high school with entry level, marketable skills. It will further equip students with understandings and attitudes important for progressing on the job.

Therefore, it is necessary that all of the above recommendations be incorporated into the operation of the E.P.O.P. project to achieve its mission.

BIBLIOGRAPHY

A Guide: Work Experience Education and Employment Placement Program. Los Angeles City Schools, California, 1969.

Bailey, J. A. The Relevance of Occupational Information to Career-Choice Theory and Decision Making. American Personnel and Guidance Association, Washington, D. C. 1969.

Barbula, P. M., and Isaac, S. W. Career Simulation for Adolescent Pupils, Final Report. BR-6-8744. San Diego County Dept. of Education, California 1967.

Block Time - Simulation: Individualized Office Instructional System Vol. I: Guide to Organizing and Operating the Block Time Simulation Program, Research & Development Program in Vocational-Technical Education, Michigan State University, July 1969.

Business Speech: A Second Language for Vocational Use, Developed by The Adult Education Department, St. Mary's Dominican College under contract with the U. S. Dept. of Labor, Office of Manpower Policy, Evaluation and Research Contract Nos. (82-17-75) (82-20-67-12), 1967.

Career Development Activities, Grades 5, 6, 7. Abington School District, Pennsylvania, 1968.

Center for Vocational Arts, Norwalk, Conn.; New York Univ., N.Y. Center for Field Research and School Services. A Pilot Project to Develop a Program of Occupational Training for School Alienated Youth. Appendix to Second Interim Report.

Cook, Dr. Helen E. Occupational Information Materials Project for Pupils in Grades 3-8. Atlanta Public Schools.

Cozine, June. Approaches to Use in Assessing Needs for, Content of and Certain Factors to be Considered in Offering Home Economics Courses Preparing for Gainful Employment. Oklahoma State University, Research Foundation.

Cushman, Harold R., et al. The Concerns and Expectations of Prospective Participants in Directed Work Experience Programs. State University of N. Y. Ithaca, New York, 1967.

Darcy, R. L. An Experimental Junior High School Course in Occupational Opportunities and Labor Market Processes, Final Report. BR-5-1203. Ohio University, Athens, Ohio, 1968.

Dunn, Charleta J. and Payne, Bill F., World of Work: Occupational-Vocational Guidance in the Elementary Grades, A Handbook for Elementary School Teachers and Counselors.

Ferguson, Margaret and Barbara H. Nalepa, Basic Gregg Typing I - Machine Controls, Gregg Division, McGraw-Hill Book Co., New York, 1969.

Ferguson, Margaret and Barbara H. Nalepa, Basic Gregg Typing II - Foundations of Production, Gregg Division, McGraw-Hill Book Co., New York, 1971.

Jacobs, Leland B. "Books that Recognize the Joy of Work," Instructor, 1969.

Jeffries, D. "The Needs of Inner-City Children for Career Guidance", Elementary School Guidance and Counseling, 1968.

Knoz, Stephan A., and Middleton, Rayoma. "Work Instruction Programs for the Food Service Industry." Kansas State University, Manhattan, Agriculture and Applied Science.

Job Opportunities Now - Group I (Series of 6) Society for Visual Education, Inc. Chicago, 1971, Cat. No. 612-SAR, Filmstrips.

Krawitz, Myron J. Lester Hill Office Simulation, Gregg Division, McGraw-Hill, New York, 1971.

Lifton, Walter. Foundations for Occupational Planning (Series of 5) Society for Visual Education, Inc. Chicago, 1971. Cat. No. 778-SA, Filmstrips.

Living With Your Family (Series of 4) Society for Visual Education, Inc. Chicago, 1971, Cat. No. 219-SR, Filmstrips.

Occupational Education Program, Image of the World of Work, Description and Analysis of Teacher Orientation Activities (August 1968). Rocky Mountain Education Lab., Inc., Greeley, Colorado, 1969.

O'Hara, R. P. A Theoretical Foundation for the Use of Occupational Information in Guidance. The Personnel and Guidance Journal, 1968.

U. S. Department of Labor Research and Demonstration Project, Loyola University of the South, New Orleans (Special Extension Education for Secretarial and Agricultural Workers - Contract No. 82-20-66-11)

U. S. Office of Education, Washington, D.C. "A Pilot Project to Develop a Program of Occupational Training for School Alienated Youth." Interim Report and Statistical Evaluation. August, 1967.

Warner, T., Ed. "Needed Concepts in Elementary Guidance." Ohio State Department of Education, Columbus, 1969.

Whitfield, E. A. "Vocational Guidance in the Elementary School: Integration or Fragmentation?", The School Counselor, 1968.

Wood and House. Basic Gregg Typing III, Gregg Division, McGraw-Hill Book Co., New York. (Unpublished)

APPENDIX A, EXHIBIT I
(Original)

Grades 1 - 5, 6 Form ATW-E - "Attitudes Toward Work"

THIS IS TO SEE HOW YOU FEEL ABOUT SOME THINGS. THERE ARE NO RIGHT OR WRONG ANSWERS. CIRCLE EITHER THE YES OR NO ACCORDING TO HOW YOU FEEL.

1.	Should all grown-ups work?	YES	NO
2.	Would you like to do an important job?	YES	NO
3.	Do you think you should work to get money?	YES	NO
4.	Do you think people who work make lots of friends?	YES	NO
5.	Do you think people should work hard?	YES	NO
6.	When you finish school do you want to work?	YES	NO
7.	Do you think anybody really wants to work?	YES	NO
8.	Do you think people who work are happy?	YES	NO
9.	Should people get money who don't work?	YES	NO
10.	Do you think people work just for money?	YES	NO
11.	People who don't work are lazy.	YES	NO
12.	When you get a job do you think you will be a good worker?	YES	NO
13.	Should people who have families have to work?	YES	NO
14.	Do you think people who work are unhappy?	YES	NO
15.	Do you like adults who don't work?	YES	NO
16.	Do you think all jobs are important?	YES	NO
17.	Should people ever do a job they don't enjoy?	YES	NO
18.	Would you like to have a summer job when you are old enough?	YES	NO
19.	Would you like to earn money?	YES	NO
20.	When you get older would you like to live on welfare?	YES	NO
21.	Do you like adults who work?	YES	NO
22.	Do you think people who work help other people?	YES	NO
23.	Will you just work hard enough to get by?	YES	NO
24.	Would we be better off if no one worked?	YES	NO
25.	I hope that some day I get a good job.	YES	NO

APPENDIX A, EXHIBIT II

(Revised)

THIS IS TO SEE HOW YOU FEEL ABOUT SOME THINGS. THERE ARE NO RIGHT OR WRONG ANSWERS. CIRCLE EITHER THE YES OR NO ACCORDING TO HOW YOU FEEL.

1.	When you finish school do you want to work?	YES	NO
2.	Do you think all jobs are important?	YES	NO
3.	Do you think people who work are happy?	YES	NO
4.	When you get a job do you think you will be a good worker?	YES	NO
5.	Do you think people should work hard?	YES	NO
6.	Should all grown-ups work?	YES	NO
7.	Would you like to have a summer job when you are old enough?	YES	NO
8.	Would you like to do an important job?	YES	NO
9.	Should people who have families have to work?.	YES	NO
10.	Should people get money who don't work?	YES	NO
11.	Do you think anybody really wants to work?	YES	NO
12.	Will you just work hard enough to get by?	YES	NO
13.	Do you think you should work to get money?	YES	NO
14.	Do you think people who work help other people?	YES	NO
15.	Do you like adults who don't work?	YES	NO
16.	Do you like adults who work?	YES	NO
17.	Do you think people work just for money?	YES	NO
18.	Should people ever do a job they don't enjoy?	YES	NO
19.	Do you think people who work are unhappy?	YES	NO
20.	Do you think people who work make lots of friends?	YES	NO

APPENDIX A, EXHIBIT III

Exemplary Vocational Materials

Housed Within Each School

I. Living With Your Family

A. What Is A Family?
B. The Family Has A New Baby
C. A Day With Your Family
D. Family Fun

II. Community Workers and Helpers - Group I

A. Doctor's Office Workers
B. Library Workers
C. School Workers
D. Supermarket Workers

III. Community Workers and Helpers - Group II

A. Department Store Workers
B. Fire Department Workers
C. Hospital Workers
D. Television Workers

IV. Food, Clothing, and Shelter

A. How We Get Our Homes
1. Planning the Home
2. Building the Foundation
3. Building the Shell of the Home
4. Finishing the Home

B. How We Get Our Clothing
1. The Story of Cotton
2. The Story of Wool
3. The Story of Leather
4. The Story of Rubber

C. How We Get Our Foods
1. The Story of Milk
2. The Story of Bread
3. The Story of Fruits and Vegetables
4. The Story of Meat

V. Foundations for Occupational Planning

A. Who Are You?
B. What Do You Like To Do?
C. What Is A Job?
D. What Are Job "Families"?
E. What Good Is School?

APPENDIX A, EXHIBIT IV

Exemplary "World of Work" Books

Housed Within Each School

SERIES I

LET'S TAKE AN AIRPLANE RIDE
LET'S GO TO THE ZOO
LET'S GO TO THE SUPERMARKET
LET'S BUILD A HOUSE
LET'S VISIT THE FIRE STATION

SERIES II

LET'S VISIT A SHIP
LET'S GO TO THE FAIR
LET'S TAKE A BUS TRIP
LET'S GO TO THE DOCTOR'S OFFICE
LET'S VISIT THE POLICEMAN

SERIES III

LET'S VISIT THE POST OFFICE
LET'S VISIT A TV STATION
LET'S VISIT A FARM
LET'S GO TO SCHOOL
LET'S GO CAMPING

SERIES IV

LET'S VISIT THE RAILROAD
LET'S VISIT THE NEWSPAPER
LET'S VISIT A SPACESHIP
LET'S VISIT THE TELEPHONE COMPANY

SERIES V

LET'S PUBLISH A BOOK
LET'S VISIT MEXICO CITY
LET'S VISIT THE DAIRY
LET'S VISIT THE HOSPITAL
LET'S VISIT THE BANK

SERIES VI

LET'S VISIT AN ELECTRIC COMPANY
LET'S VISIT A RUBBER COMPANY
LET'S VISIT A MINING COMPANY
LET'S VISIT AN OIL REFINERY
LET'S VISIT A PAPER MILL

SERIES VII

LET'S VISIT A FURNITURE COMPANY
LET'S VISIT A SILVER COMPANY
LET'S VISIT A BAKERY
LET'S CHOOSE A PET
LET'S VISIT A FLOWER SHOP

APPENDIX A, EXHIBIT V

Please identify your profession by placing an (x) in the proper space.

Administrator _____
Counselor _____
Teacher _____

This questionnaire is an attempt to get your opinion on some of the questions that have arisen concerning the use of vocational information in schools. We are interested only in your agreement or disagreement with the following statements, not in the truth or falsity of them. In some cases you may feel that you do not have enough information to make a judgement; in such instances we would like you to make the best judgement possible. Please read each statement and respond to it in terms of your personal agreement or disagreement according to the following plan.

Strongly Agree	Moderately Agree	Moderately Disagree	Strongly Disagree
A	B	C	D

Please select the letter indicating your choice.

1. Vocational guidance should be provided to all children at the elementary level._____ ____

2. Providing occupational information to elementary school children will help them in choosing their high school courses. _____ ____

3. The making of career decisions begins in the elementary school. _____ ____

4. The elementary school curriculum should be altered in order that a specified time be devoted to the study of career information. _____ ____

5. Vocational information at the elementary level should be imparted through the use of games, plays, clubs, assembly programs, audio-visual aids and excursions__ ____

APPENDIX A, EXHIBIT V (con'd)

6. The elementary school is the ideal level at which vocational guidance should begin _____ ____

7. The success of the guidance program at the elementary level depends largely on the amount of involvement of the classroom teacher. _____ ____

8. Career information in the elementary school should be presented to students by the counselor rather than by the teacher. _____ ____

9. Occupational information has a claim to a place in the elementary school curriculum just as any other information and knowledge. _____ ____

10. The elementary grades are the ideal level at which children should learn about the dignity of work.__ ____

11. Junior and senior high school counselors can be more effective with students who have received career information in the elementary grades. _____ ____

12. Elementary schools providing ineffective vocational guidance may be contributing to future social problems. _____ ____

13. A school program designed to provide occupational information should include a study in values.____ ____

14. In my school, teachers are sufficiently equipped with knowledge of the world of work to provide information about a number of occupations to their students. _____ ____

15. There is sufficient vocational information available in my school to assist students in making educational plans and career decisions. _____ ____

APPENDIX A, EXHIBIT VI

Pre-Test

Please identify your position by placing an (x) in the proper space.

Administrator _____
Counselor _____
Teacher _____

This questionnaire is an attempt to get your opinion on some of the questions that have arisen concerning the use of vocational information in schools. We are interested only in your agreement or disagreement with the following statements, not in the truth or falsity of them. In some cases you may feel that you do not have enough information to make a judgement; in such instances we would like you to make the best judgement possible. Please read each statement and respond to it in terms of your personal agreement or disagreement according to the following plan.

(45 Tested)

Strongly Agree	Moderately Agree	Moderately Disagree	Strongly Disagree
A	B	C	D

Please select the letter indicating your choice.

	A	B	C	D
1. Vocational guidance should be provided to all children at the elementary level. _____	28	11	2	0
2. Providing occupational information to elementary school children will help them in choosing their high school courses. _____	29	10	1	2
3. The making of career decisions begins in the elementary school. _____	14	20	4	3
4. The elementary school curriculum should be altered in order that a specified time be devoted to the study of career information. _____	10	19	9	3
5. Vocational information at the elementary level should be imparted through the use of games, plays, clubs, assembly programs, audio-visual aids and excursions. _____	31	9	1	0

APPENDIX A EXHIBIT VI (Con'd)

	A	B	C	D
6. The elementary school is the ideal level at which vocational guidance should begin.	20	17	1	0
7. The success of the guidance program at the elementary level depends largely on the amount of involvement of the classroom teacher.	22	11	10	2
8. Career information in the elementary school should be presented to students by the counselor rather than by the teacher.	19	11	7	3
9. Occupational information has a claim to a place in the elementary school curriculum just as any other information and knowledge.	19	20	1	2
10. The elementary grades are the ideal level at which children should learn about the dignity of work.	38	3	0	0
11. Junior and senior high school counselors can be more effective with students who have received career information in the elementary grades.	26	12	2	2
12. Elementary schools providing ineffective vocational guidance may be contributing to future social problems.	22	13	7	1
13. A school program designed to provide occupational information should include a study in values.	31	9	1	1
14. In my school, teachers are sufficiently equipped with knowledge of the world of work to provide information about a number of occupations to their students.	8	17	8	8
15. There is sufficient vocational information available in my school to assist students in making educational plans and career decisions.	1	9	16	13

APPENDIX A, EXHIBIT VII

Post-Test

Please identify your position by placing an (x) in the proper space.

Administrator _____
Counselor _____
Teacher _____

This questionnaire is an attempt to get your opinion on some of the questions that have arisen concerning the use of vocational information in schools. We are interested only in your agreement or disagreement with the following statements, not in the truth or falsity of them. In some cases you may feel that you do not have enough information to make a judgement; in such instances we would like you to make the best judgement possible. Please read each statement and respond to it in terms of your personal agreement or disagreement according to the following plan.

(45 Tested)

Strongly Agree	Moderately Agree	Moderately Disagree	Strongly Disagree
A	B	C	D

Please select the letter indicating your choice

	A	B	C	D
1. Vocational guidance should be provided to all children at the elementary level.	38	7	0	0
2. Providing occupational information to elementary school children will help them in choosing their high school courses. _____	32	12	0	1
3. The making of career decisions begins in the elementary school. _____	24	19	1	1
4. The elementary school curriculum should be altered in order that a specified time be devoted to the study of career information. _____	17	19	7	2

APPENDIX A, EXHIBIT VII (Con'd)

	A	B	C	D
5. Vocational information at the elementary level should be imparted through the use of games, plays, clubs, assembly programs, audio-visual aids and excursions. _____	15	18	10	2
6. The elementary school is the ideal level at which vocational guidance should begin. _____	36	7	1	1
7. The success of the guidance program at the elementary level depends largely on the amount of involvement of the classroom teacher. _____	18	24	1	1
8. Career information in the elementary school should be presented to students by the counselor rather than by the teacher. _____	14	14	11	6
9. Occupational information has a claim to a place in the elementary school curriculum just as any other information and knowledge. _____	17	21	4	1
10. The elementary grades are the ideal level at which children should learn about the dignity of work.	31	13	1	0
11. Junior and senior high school counselors can be more effective with students who have received career information in the elementary grades. _____	27	15	3	0
12. Elementary schools providing ineffective vocational guidance may be contributing to future social problems.	15	15	9	6
13. A school program designed to provide occupational information should include a study in values. _____	28	15	1	0
14. In my school, teachers are sufficiently equipped with knowledge of the world of work to provide information about a number of occupations to their students.	8	19	13	4
15. There is sufficient vocational information available in my school to assist students in making educational plans and career decisions. _____	1	10	25	8

APPENDIX A, EXHIBIT VIII

Exemplary Program for Occupational Preparation

General Guidelines for Field Trips

1. The number of students taking a field trip should be limited to not less than fifty-five, and not more than sixty in order to assure full utilization of bus space and compliance with driver insurance regulations.

2. Parental involvement on field trips is encouraged. (At least two per bus)

3. A telephone call should be made the day before the trip to remind the company of your visit.

4. A thank-you letter by the students or teacher would be appreciated. (See sample below)

SAMPLE THANK YOU LETTER SENT TO THE BUSINESSES, AGENCY OR SCHOOL AFTER THE TRIP.

Dear Sir:

The students and staff of _____
(Name of School)
thank you for the courtesy and attention you offered us on our visit to _____
(Name of place visited)
It was a most valuable experience for us. The cooperation of people like yourself is vital for building the citizens and workers of tomorrow's society.

Thank you,

Leonard C. Belton /s/
Elementary Vocational Advisor

APPENDIX A, EXHIBIT IX

Exemplary Program for Occupational Preparation

Possible Field Trip Entries

Place	Contact	Students
American Sugar Company	Public Relations 271-5331	5th Grades & Above
American Tel. & Tel. Company	Public Relations 522-4722	
Bunny Bread Bakery	Public Relations 241-1206	
Blue Plate Foods Company	Inez Nunphy 488-6634	4th Grades & Above
City Hall, Mayor's Office	Frank Bertucci 522-6191	
Delgado Trade School	John Cain 486-5403	
Flint Goodridge Hospital	Mrs. Weil 899-4521	
Lakeside Shopping Center	(No Contact Needed)	
Main Post Office	P.J. Bachers 527-2201	5th Grades & Above
Major Industrial Areas of City	(Bus Ride)	
National Airlines	Edward Plaeger 729-3616	
N.O. International Airport	(No Contact Needed)	
Oakwood Shopping Mall	(No Contact Needed	
Times Picayune Company	Public Relations 521-7325	5th Grades & Above
Union Passenger & Bus Terminal	Mr. Hahn 524-8541	
Walker Roemer Dairies	Mrs. Murphy 887-4170	Closed on Wed.
Walking Tour of French Quarter	(No Contact Needed)	
Wylon Beauty Products	525-6377	

APPENDIX A, EXHIBIT X

	Number of Teachers within School by Grades									
School	K	I	II	III	IV	V	VI	VII	VIII	Total
H.H. Dunn	2	7	6	5	3	6				29
H.S. Edwards	1	7	7	6	7	7				35
R.R. Moton	2	7	7	6	6	5				33
St. Philip the Apostle	1	2	11	1	1	1	1	1	1	10

	Number of Pupils within School by Grades									
School	K	I	II	III	IV	V	VI	VII	VIII	Total
H.H. Dunn	70	220	182	168	88	171				989
H.S. Edwards	70	196	180	170	238	212				1,066
R.R. Moton	70	214	194	197	209	167				1,051
St. Philip the Apostle	25	72	30	38	32	34	28	29	28	345

APPENDIX A, EXHIBIT XI

Fieldtrips	No. of Students Involved Per Trip	No. of Teachers Involved Per Trip	No. of Parents Involved Per Trip
Bunny Bread Bakery	936	45	30
Blue Plate Foods Company	180	6	6
City Hall, Mayor's Office	450	22	15
Clearview Shopping Center	176	16	7
Dominican College Planetarium	54	3	2
Kenilworth Subdivision	37	3	1
Lakeside Shopping Center	335	25	11
L. A. Frey Meat Packing Company	422	25	17
Major Industrial Areas of City (Bus Ride)	638	36	21
Multi-Oaks Ranch	44	5	2
N. O. International Airport	454	37	12
N. O. Public Library	458	25	14
Oakwood Shopping Center	708	37	21
Times-Picayune Publishing Co.	119	13	5
Walker-Roemer Dairies, Inc.	600	35	18
Walking Tour of French Quarter	289	14	8
Xavier University	92	7	3
TOTALS	6,001	354	193

Total Trips Taken - 55

APPENDIX A, EXHIBIT XII

Table 1

Robert R. Moton

Comparison of Pre-Test and Post-Test Attitudes Toward Work Scale

Grade	No. of Students	Mean of the Differences	Standard Deviation	t-Statistic
Second	19	- .1578	5.1236	.1343
	19	+ .5789	4.8912	.5159
	22	-1.0909	8.4847	.6030
	22	-1.5000	7.3662	.9551
	18	-3.1111	6.0282	2.1895*
	21	+ .9047	5.6027	.7400
Fourth	17	+2.1176	3.8059	2.2941*
	21	- .2380	4.3806	.2490
	23	- .0869	4.4508	.0936
	27	-1.8518	5.4328	1.7711*

*Significant at the .05 level

Table 2

Helen S. Edwards

Comparison of Pre-Test and Post-Test Attitudes Toward Work Scale

Grade	No. of Students	Mean of the Differences	Standard Deviation	t-Statistic
Second	26	-1.3461	5.2683	1.3028
	18	- .6666	7.5925	.3725
	24	- .4166	4.6989	.4344
	22	+2.7272	3.9902	3.2058*
	21	- .4285	7.7625	.2530
Fourth	24	-3.8750	4.9371	3.8450*
	22	- .4090	3.5004	.5481
	27	+ .2592	8.3047	.1622
	28	-1.7857	7.1669	1.3184*
	24	-6.3750	3.9652	7.8762*
	22	+ .4090	4.1936	.4575

*Significant at the .05 level

Table 3

Henderson H. Dunn

Comparison of Pre-Test and Post-Test Attitudes Towards Work Scale

Grade	No. of Students	Mean of the Differences	Standard Deviation	t-Statistic
Second	22	+5.6299	5.4693	4.8281*
	24	+2.0000	23.0000	1.8290*
	22	+1.7727	7.0503	1.1793
	14	- .0142	11.0705	.0048
	18	- .8333	6.2895	.5621
	13	- .1538	10.8769	.0509
Fourth	31	+1.2903	3.7433	1.9191*
	25	- .6800	4.5617	.7453

*Significant at the .05 level

Table 4

St. Philip The Apostle

Comparison of Pre-Test and Post-Test Attitudes Towards Work Scale

Grade	No. of Students	Mean of the Differences	Standard Deviation	t-Statistic
Second	27	+1.5925	4.6265	1.7886*
Fourth	26	-1.1923	5.3293	1.1407

*Significant at the .05 level

APPENDIX A, EXHIBIT XIVI

Suggested Activities

and

Information

on

Career Development

at the Elementary Level

Exemplary Program for Occupational Preparation

1970-71

APPENDIX A, EXHIBIT XIV-A

"Suggested Unit Outlines"

Career Development

P R I M A R Y L E V E L

(Grades 1-3)

Exemplary Program for Occupational Preparation

1971-72

APPENDIX A, EXHIBIT XIV-B

"Suggested Unit Outlines"

on

Career Development

I N T E R M E D I A T E L E V E L

(Grades 4-6)

Exemplary Program for Occupational Preparation

1971-72

APPENDIX A, EXHIBIT XV

JOBS IN YOUR COMMUNITY

A Career Day Program

Presented by

Exemplary Program for Occupational Preparation

Wednesday, Thursday and Friday

April 5, 6, 7, 1972

9:30 to 11:00 A.M.

Desire Area Elementary Schools

Program

Wednesday, April 5, 1972

Invocation

Theme	Mr. Richard Theodore
Introductions	Mr. Jude T. Sorapuru
Telephone Operator	Miss Gayle Johnson South Central Bell
Fire Fighter	Mr. Warren McDaniels New Orleans Fire Dept.
Social Worker	Miss Elaine Cunningham Juvenile Court
Tour of Vocational Areas, Carver Middle School	Robert R. Moton Elementary School - Messrs. Harris and Belton
Tour of Vocational Areas, Carver Senior School	Edwards and St. Philip Elementary Schools - Messers. Theodore and Sorapuru

Thursday, April 6, 1972

Introductions	Mr. Jude T. Sorapuru
Mechanics	Mr. Stanley Stewart Carver Sr. High, Student
Health Occupations	Miss Diane Robinson Carver Sr. High, Student
Telephone Installer	Mr. Warren Lawless South Central Bell
Tour of Vocational Areas, Carver Middle School	Henderson H. Dunn School, Messrs. Harris and Belton
Tour of Vocational Areas, Carver Senior High School	Moton Elementary School - Messrs. Theodore and Sorapuru

Friday, April 7, 1972

Introductions	Mr. Jude T. Sorapuru
Distributive Education	Mrs. Christine LaGrange Carver Sr. High, Teacher
Automobile Salesman	Mr. Mac Dunbar Bernie Dumas Buick, Inc.
Cooperative Office Education	Miss Marilyn Pierre Carver Sr. High, Teacher
Closing Remarks	Richard A. Theodore
Tour of Vocational Areas, Carver Middle School	Helen S. Edwards, St. Philip Elementary School, Messrs. Harris and Belton
Tour of Vocational Areas, Carver Senior High School	Dunn Elementary School- Messrs. Theodore and Sorapuru

The faculty, staff and students of the Elementary Component Schools and the E.P.O.P. staff wish to express their sincere appreciation for your participation in this career awareness program.

Henderson H. Dunn Elementary School

Mr. E. Wilderson, Principal	Mrs. E.T. Bickham 5th Grade Level Chairman

Helen S. Edwards Elementary School

Mrs. H. Patten, Principal	Mrs. I. Baulden, 5th Grade Level Chairman

Robert R. Moton Elementary School

Mrs. R. Smith, Principal	Mrs. T. Fritz, 5th Grade Level Chairman

St. Philip the Apostle Elementary School

Sister Naomi, Principal	Mrs. M. Washington, 8th Grade Level Chairman

E.P.O.P. Staff

Leonard C. Belton	Elementary School Vocational Advisor
Charles A. Harris	Middle School Vocational Advisor
Jude T. Sorapuru	Senior High Vocational Counselor and O.J.T. Coordinator
Richard A. Theodore	Coordinator
William G. Young	Director

A P P E N D I X B

APPENDIX B, EXHIBIT I

Here are some questions that can be answered

YES NO

Draw a line under one of the answers for each question.
Do not skip any questions.

---

1. Would you like to listen to someone tell about the kind of work they do on their job?

   YES NO

2. Two people are talking about the kind of work you want to do when you are grown up. Would you listen carefully to learn something about the job?

   YES NO

3. Would you watch a TV program that tells about the kinds of jobs in your community?

   YES NO

4. If friends of your family began to tell you about their jobs, would you ask questions about the jobs?

   YES NO

5. Would you enjoy visiting a place where people work so you could learn about different kinds of jobs?

   YES NO

6. Are you able to picture yourself working in a certain kind of a job when you finish school?

   YES NO

7. Do you think it is important for you to think about what kind of work you would like to do someday?

   YES NO

8. Do you think you know about the kinds of work you would like to do when you finish school?

   YES NO

APPENDIX B, EXHIBIT I (Con'd)

9. In choosing a job, would you need to know what kind of a person you are?

YES NO

10. Do you know of any jobs that you think that you would like to do when you finish school?

YES NO

11. Is work important mainly because it lets you buy the things you want?

YES NO

12. By the time you are in high school should you be sure about the kind of work you want to do?

YES NO

13. Could people do any job they wanted to as long as they tried very hard?

YES NO

14. Do you have only a very little idea what having a job would be like?

YES NO

15. Can you think of several jobs that you would like to have when you finish school?

YES NO

APPENDIX B, EXHIBIT II

Place	Number of Pupils	Number of Teachers	Number of Parents
Flint Goodridge Hospital	120	4	8
New Orleans International Airport	120	4	6
Bunny Bread	30	2	3
Main Post Office	60	2	4
WBOK Jazz City Studio	60	2	4
French Quarters	60	2	4
Dominican Planetarium	250	9	16
Tour of Industrial Centers of New Orleans	557	19	27
Delgado College	125	5	[illegible]
Desire Day Care Center	30	1	2
Piety Day Care Center	28	2	3
Morrison Cafeteria	60	3	8
Public Service	85	4	6
TOTAL	1,585	48	98

APPENDIX B, EXHIBIT III

Course	Enrollment	Number of Students Applying for Work	Number of Students Hired	Students Finding Jobs on Their Own
Carpentry	28	14	13	1
Child Care	28	7	5	2
Food Handling	18	18	14	4

APPENDIX B, EXHIBIT IV

Attitude Toward Work Survey

Test	Grade	Number of Students Tested	Sample	Possible Responses	Number of Positive Responses	%	Number of Negative Responses	%	% Chang
Pre Test	6	550	50	750	570	76%	180	24%	
Post Test	6	423	50	750	720	96%	30	4%	20%
Pre Test	8	350	50	750	63	85%	119	15%	
Post Test	8	256	50	750	727	97%	23	3%	12%

The test consisted of fifteen possible "yes" or "no" responses of which a "yes" response indicated a wholesome, positive attitude toward work. (Appendix A)

Of the total number of students tested, fifty sixth grade students and fifty eighth grade students were randomly selected to measure changes in the pre and post test results. The results of these tests indicated a significant positive attitudinal change.

APPENDIX B, EXHIBIT V

Semi-Skill Classes

Course	Total Enrollment	Left School	Dropped Subject	Remaining	Passed	Failed	% Passing	% Failing
Carpentry	28	0	3	25	25	0	100%	0%
Child Care	28	3	1	24	24	0	100%	0%
Food Handling	18	3*	0	15	15	0	100%	0%

*Students went into full-time restaurant work.

APPENDIX B, EXHIBIT VI

MIDDLE SCHOOL

RESOURCE PEOPLE

September	Clifton Ricard - Brick Layer Melvin Parent - Carpenter
October	Mr. Mac Dumbar - Car Salesman Mr. Irvin Washington - Shoe Salesman
November	Mr. Alvin Melacon - Welder - Avondale Shipyards
December	Mrs. Patricia Johnson - Secretary
January	Mr. Silas Conner - Teacher Mrs. Mercedes Jackson - Teacher Mr. Anthony Curry - Teacher Mrs. Anna Johnson - Teacher
February	Officer John Taylor - New Orleans Police Department Officer Iris Turner - New Orleans Police Department
March	Mr. Warren Lawless - Telephone Installer and Repairman
April	Mr. John Adams - Maitre'd
May	Miss Mareen Weil - Human Relations Director of Flint Goodridge Mrs. Williams - Medical Librarian Mr. Darryl Vincent - Medical Technician Mr. Edward Harris - Physical Therapist

APPENDIX B, EXHIBIT VII

MATERIALS USED IN CONSTRUCTION OF TWO HOUSES FOR MIDDLE SCHOOL COMPONENT:

Vendor: Broadhead-Garrett Company
1213 Riverside Drive
Macon, Georgia 31201

6	Sliding "T" Bevel with 10" Blade, Stanley 25TB
3	1/2 Pint Bench Oiler, Eagle #145C
6 sets	Saw Horse Brackets, H&G #362A

Vendor: Brandin Slate Company, Inc.
1021 N. Rampart Street
New Orleans, Louisiana

3 rolls	#30 Felt
2 sqs.	Black 235 Regular Asphalt Shingles

Vendor: Doussan, Inc.
P.O. Box 52407
New Orleans, Louisiana 70150

2	8" x 2" x 1" Silicon Carbine Oilstone #68 Simond
3	24" Cross Cut Saw, 8 Pt., #300 Atkins
3	24" Cross Cut Saw, 10 Pt., #300 Atkins
1	6' H.D. Metal Step Ladder
6	Coping Saw with Blade Atkins #50
2	24" Goose Neck Wrecking Bar
1 set	Auger Bits, #4-#16, Irwin #D-13, 13 pcs.
2	Expansive Bit (Irwin #22, 7/8" - 3")

Vendor: Owens and Sons, Inc.
2034 Agriculture Street
New Orleans, Louisiana 70122

6 sks.	Pea Gravel
6 sks.	Sand
3 sks.	Cement
10 pcs.	8" Blocks 1/2"

APPENDIX B, EXHIBIT VII (con'd)

MATERIALS USED IN CONSTRUCTION OF TWO HOUSES FOR MIDDLE SCHOOL COMPONENT (continued)

Vendor: Liberty Lumber Yard, Inc.
5367-83 Tchoupitoulas Street
New Orleans, Louisiana 70115

35 pcs.	2 x 4 - 8 #1 Common Pine S4S
2 shts.	4 x 8 - 3/8" Exterior Fir Plywood
4 pcs.	6 x 6 - 12 - Celcured Pine S4S
4 pcs.	6 x 6 - 8 - Celcured Pine S4S
14 pcs.	2 x 10 - 8 - #1 Pine S4S KD
60 pcs.	2 x 6 - 8 - #1 Pine S4S KD
100 pcs.	2 x 4 - 8 - #2 Fir S4S KD
6 pcs.	2 x 4 - 12 - #2 Fir S4S KD
8 pcs.	1-1/4 x 4 - 10 - C and Better Fir S4S
250 bd. ft.	1 x 8 #2 Pine S4S
350 bd. ft.	1/2 x 6 - C Grade Beveled Edge Cypress Weather Boards
24	Nail Aprons
5 shts.	4 x 8 - 3/4" Plywood Sheets
4 shts.	4 x 8 - 1/2" Celotex Sheets
8 shets.	4 x 8 - 3/8" Sheetrock
2	Aluminum Single-Hung Window Units, 2' x 3' - 2/2 LTS with 1/2 screens
20 lbs.	6 Penny Finishing Nails
12 lbs.	7/8" Galvanized Roofing Nails
5 lbs.	Felt Nails
2 5 gal.	cans Joint Compound
1 roll	Perfa-Tape
100 bd. ft.	1 x 8 Random Pine sheathing

APPENDIX B, EXHIBIT VIII

Films Viewed by Carver Middle School Students

1. What Do You Like to Do?
2. Careers with a Future--Millwright
3. Your Job: Finding the Right One
4. Getting a Job
5. Size Description
6. Fuels: Their Nature and Use
7. Steel
8. Careers with a Future--Rigging
9. Let's Measure Feet, Inches, Yards
10. Careers in Broadcast News
11. Careers with a Future--Secretary
12. Community Helpers--Sanitation Department
13. Community Services
14. Night Community Helpers
15. Capitalism
16. Inflation
17. Working Together
18. Why People Have Special Jobs
19. Garbage Explosion
20. Bus Driver
21. City Bus Driver
22. Secretary: A Normal Day
23. Secretary: Taking Dictation
24. Secretary: Transcribing
25. Secretary Transcribes
26. It's Your Decision: Part I
27. It's Your Decision: Part II
28. Office Teamwork
29. Simple Demonstration with Magnets
30. What Is Electric Current?
31. When I'm Old Enough, Good By
32. Our Friend the Atom, Part I
33. Our Friend the Atom, Part II
34. Your Career in Nursing
35. Careers with a Future--Electrician
36. So You Want to be a Tool and Die Maker
37. Life in a Coal Mining Town
38. To be an Electronics Technician
39. Engines and How They Work
40. You and the Aerospace Future(s)
41. Man in Space
42. Veterinarian Serves His Community
43. Dairy Farmer, The
44. Your Job Getting Ahead
45. Salesmanship--Career Opportunities

46. Selling as a Career
47. Careers with a Future--Welding
48. Machinist and Tool Maker
49. Contractors
50. Building a House
51. Careers with a Future Instrumentation
52. Shape Description, Part I
53. Shape Description, Part II
54. Drafting Curves and Lettering
55. A is for Architecture
56. Working in Our Town
57. Portraits of Famous People A-J

APPENDIX B, EXHIBIT IX

Attitude Toward Work Survey

Test	Grade	No. of Students Tested	Sample	Possible Responses	No. of Positive Responses	%	No. of Negative Responses	%	
Pre-test	6	550	50	750	570	76%	180	24	
Post-test	6	423	50	750	720	96%	30	4	20
Pre-test	8	350	50	750	663	85%	119	15	
Post-test	8	256	50	750	727	97%	23	3	12

APPENDIX C

APPENDIX C, EXHIBIT I

Vocational Guidance Calendar

September	Collection of data through questionnaire concerning pupil occupational plans and goals.
October	Provide information which will assist students in attaining stated goals such as information regarding colleges, vocational and technical schools. vocational and technical courses, sources of training through the armed forces, scholarships available, etc.
November	Personality and occupation - Discuss personality development in relationship to occupation. How it can be an asset or a liability. How certain personality traits are more suited to certain occupations or others.
December	Administer Interest Inventory. Examine stated anxieties and exhibited interests. Promote development of self-concept and self-evaluation.
January	Develop job seeking skills (explain use of employment agencies, walk-in attempts, aid from relatives, etc.)
February	Interviewing do's and don'ts (Suggest that a consultant from industry be brought in to assist this activity such as a personnel manager, etc.).
March	Application filling do's and don'ts Use of variety of forms
April	Bring in major employers in New Orleans area to discuss employment opportunities available in their individual fields. (Civil Service--state, federal, city; Public Service--South Central Bell, etc.).
May	Distribute follow-up cards and discuss follow-up procedure with students. (Will be used to check students activities after graduation.)

APPENDIX C, EXHIBIT II

Student Participation in Group Sessions

Title of Session	Average Number of Pupils Per	Number of Sessions	Total Number of Pupils Involved
Job-Seeking Techniques	20	6	120
Attitudes and Work	35	4	140
Interviewing	15	4	60
Resume Writing	15	2	30
Application Filling	15	6	90
Job-Finding Resources	25	8	200
Evaluation of Self-Concept	25	6	150
Interest Surveys Kuder Preference Records	10	10	100

APPENDIX C, EXHIBIT III

O.J.T. Experiences

Agency or Business	Number of Students	Job Title
Shell Oil Company	1	Draftsman Trainee
U.S. Coast Guard	1	Painter's Helper
Holiday Inn East	3	Assistant Maintenance Man
Genuine Auto Parts	1	Parts Salesman Trainee
Avondale Shipbuilders	1	Welder Trainee
City of New Orleans Dept. of Streets	2	Draftsman Trainee
Housing Authority of New Orleans	6	Maintenance Repairman I

APPENDIX C, EXHIBIT IV

Students in Summer Employment

Agency	Number of Students	Type of Experience
Housing Authority of New Orleans	15	Maintenance
Internal Revenue Service	6	Clerical
U.S. Navy	8	6 Clerical 2 Electronics
N.Y.C.	20	Varied: Clerical Draftsman Maintenance

APPENDIX C, EXHIBIT V

PROPOSED ADJUSTMENT TO WOODWORKING SCHEDULE OF OFFERINGS

Grades

9th Woodworking I
10th Woodworking II
11th Woodworking III
12th 4 Sections Woodworking IV

1 Section V.C. (Pre-Vocational Cabinet Making and Construction) Prerequisite - 2 yrs. Woodworking

General Skills and Knowledge to be included in V.C. Course Content

1. Identification of lumber used in construction
2. Project design (blueprint reading)
3. Cutting of lumber
4. Furniture construction methods
5. Assembling
   a. gluing
   b. kinds of adhesives
6. Building Construction
   a. staking out the site
   b. kinds of construction
   c. carpentry tools and machines
   d. lumber grades
   e. foundation walls
   f. floor framing
   g. exterior walls
   h. partition framing

APPENDIX C, EXHIBIT V (Con'd)

i. roofs and coverings

j. rafters

k. sheathing

l. flashing

m. doors, windows, siding materials

n. insulations

o. safety practices

7. Painting and Finishing

a. preparation for paint

b. mixing paint

c. spray methods

d. brush and roller method

APPENDIX C, EXHIBIT VI

Maintenance Repairman

Course Outline

Teacher responsibilities have been divided into six separate units. There are six six-week mini-courses. Instructors for these courses are chosen according to their specialities in the Industrial Arts Program.

Twenty (20) students will be rotated through the mini-courses which are:

1) Plumbing and Heating
2) Electricity
3) Basic Carpentry
4) Masonry
5) Welding (Tack)
6) Painting

APPENDIX C, EXHIBIT VII

AN EXEMPLARY PROGRAM FOR OCCUPATIONAL PREPARATION

Suggested Activities

and

Information

on

Career Development

at the

Senior High Level

Compiled
by
Jude T. Sorapuru
under
the
supervision
of
Richard A. Theodore
and
under
the
direction
of
William G. Young
for
use
in

George W. Carver Senior High School

Exemplary Program for Occupational Preparation

New Orleans Public Schools

APPENDIX C, EXHIBIT VII (Con'd)

EXEMPLARY PROGRAM FOR OCCUPATIONAL PREPARATION

It is the intent of this exemplary program for occupational preparation to adequately prepare low-income students for a responsible and productive life by providing a realistic viewpoint about the dignity of work and knowledge concerning possible vocational choices, and to complement such occupational awareness on the secondary level with skills salable on the New Orleans job market.

Specifically, the objectives at Carver Senior High School include:

1. Encouraging students to think of a wide range of occupations.

2. Getting students to appreciate the dignity of work.

3. Assisting and encouraging students to make their own occupational choices.

4. Providing information related to finding and holding jobs.

5. Provide the students with employable skills upon termination of their schooling.

6. Provide on-the-job training opportunities.

7. Provide whatever other occupational and vocational assistance that may be needed.

8. Assist students in self-evaluation of their skills, interests, abilities, and aptitudes.

Basically, the students who are served through E.P.O.P. are those registered in the Industrial Arts classes, the two Nursing classes, the Pre-cooperative Clerical Block for eleventh graders, and the Vocational Office Block. The services provided to these students are also available to every student at the Carver Senior High School except the possibility of on-the-job training for non-component students.

AREAS OF INVOLVEMENT

Individual Counseling - E.P.O.P. offers to the students of Carver Senior High School the services of a vocational counselor. The counselor is involved in assisting the students make wise vocational choices based upon their interests, aptitudes, skills and abilities.

Testing - Testing can be arranged to determine interests and aptitudes.

Vocational Information - The E.P.O.P. office is a source of occupational and vocational information concerning the world of work in the New Orleans area. The counselor is available to speak to classes about these areas of information.

Employment Counseling - E.P.O.P. offers assistance to students in developing job hunting skills and advice on how to hold a job.

On-The-Job Training - The E.P.O.P. staff is active in seeking jobs for students related to their classroom instruction. This service is restricted to students in the Industrial Arts classes who are seniors.

Job Placement - The E.P.O.P. staff offers assistance to graduating seniors in securing permanent jobs and to undergraduates in securing summer employment.

Resource Personnel - E.P.O.P. will assist in securing speakers for formal or informal talks concerning jobs, vocations, employment procedures, etc.

Please feel free to contact the E.P.O.P. staff or make referrals to our office located in Room A 215-B.

Vocational Education Within Your Classroom

The following suggestions are presented with the hope that you, as a teacher, will possibly put some of them into use in your classrooms. We feel that there is a great need for more stress on vocational awareness among our students. We strongly urge that you use every means and opportunity available to you to broaden the scope of your students' vocational and occupational information.

The suggestions which follow will be divided into general and specific areas so that they may be more directly related to the curriculum and hopefully more readily applied.

APPENDIX C, EXHIBIT VII (Con'd)

General Information

Related to Occupational Preparation at the Senior High School Level

I. Relate all subject matter with the world of work and self-development.

A. Help students to begin to think about what they may become and how the immediate subject matter will help them.

B. Help students to think about possible careers related to the subject. Let them do research and otherwise become involved before giving them the answer. (Advisor will be compiling occupational materials that will supplement those acquired otherwise.)

C. Arrange field trips to industries, etc., so that students can see and identify with real, live role-models of their group.

1. Trips should be pre-planned with students as to objectives, etc.
2. Students should be prepared to ask good, relevant questions.
3. Interview techniques and note taking should be rehearsed.
4. Parents should be encouraged to participate with students.

D. Arrange for resource people to visit the classroom as role-models.

E. Make bulletin boards relating subject matter to careers. (i.e., "Arithmetic will help you get these jobs.") It is preferable that pictures be used showing minority groups at work. "Ebony" magazine, etc., are excellent sources.

F. Collect occupational materials related to subjects taught. Keep a scrapbook on jobs related to subject areas.

G. Help students to study and learn about themselves in relation to subjects and careers studied. Center discussions around the following:

1. What sort of person do I think I am?
2. How do I feel about myself as I think I am?
3. What sort of person would I like to be?
4. What are my values and needs?
5. What are my aptitudes and interests?
6. What can I do to reconcile my self-ideal with my real self?
7. What outlets are there for me with my needs, values, interests, and aptitudes?
8. How can I make use of these outlets?

II. Allot time for group and individual guidance with students.

A. Help them understand and develop proper attitudes toward work.

B. Help students develop and understand the importance of good personal/social habits.

1. Grooming
2. Punctuality
3. Talk
4. Courtesy
5. Responsibility
6. Originality, etc.

C. Help students to know themselves better and build a positive self-image.

1. Identify talents.
2. Understand aptitudes, interests, and abilities.
3. Explore attitudes.
4. What sort of person am I?
5. What sort of person can I become?

III. Teach the importance and interdependence of all kinds of work. (Teachers should especially examine their own middle-class bias here.)

A. Develop appreciation and dignity for all kinds of work.

B. Develop proper attitudes concerning sex and work. (The line between "male" and "female" work is becoming extremely thin.)

C. Be alert to textbook bias.

D. Help students understand the all-pervasive effects of work:

1. Determines way of life.
2. Determines values.
3. Influences manner of speech, dress and leisure time activities.
4. Determines where family lives, whom they meet, and what schools are attended.
5. Determines whole social and economic status.

E. Work satisfies the following needs:

1. Physiological (food, shelter, etc.)
2. Safety
3. Belonging
4. Feelings of importance, respect, self-esteem, independence
5. Information
6. Understanding
7. Beauty
8. Self-actualization

IV. Set standards equal to those of best schools.

A. Help students to develop realistic pictures of themselves and their competencies as compared to other children with whom they will have to compete on a realistic basis in the world of work.

B. Help students build skills, knowledge, and competencies desired by employers (pleasant personality, good grooming, potential for advancement to more responsible positions within the industry).

V. Help students anticipate changes in the world of work.

A. New Inventions.

B. Automation.

C. War, etc.

VI. Minority youth lack confidence, self-motivation, and self-esteem. Teachers could help by:

A. Showing greater awareness and concern for student's problems--<u>show that you care</u>.

B. Building on the student's strengths in the classroom while helping to overcome weaknesses--emphasize success.

C. Allowing students to become involved in planning so that they may establish their own goals and see personal meaning in working toward attaining these goals.

VII. More visible cooperation between teachers of diverse racial groups should be shown--sets examples for children.

APPENDIX C, EXHIBIT VII (Con'd)

Specific Activities Related to Occupational Preparation at Senior High Level

English

1. Have students present oral reports using a job as the subject. Give physical and educational requirements. Discuss tasks involved.
2. Write reports of the same nature.
3. Have students write letters of application.
4. Have students answer classified ads by letter.
5. Make alphabetical spelling lists of various jobs.
6. Have students conduct mock interviews to check oral communication.
7. Write newspaper ads for the "Help Wanted" column.

Social Studies

1. Discuss the effect of climate and topography on occupations.
2. Define terms as union, civil service, social security, withholding, fringe benefits, labor, management, etc.
3. Discuss reasons for unemployment.
4. Develop a lesson showing the chain effect a person's income initiates. Show how money changes hands.
5. Have students write a job description including as many specifications as possible.
6. Discuss and simulate job finding techniques.
7. Discuss concept of freedom in relationship to personal security and social control.
8. Study agencies which aid in job-hunting or which offer help in solving problems related to health-welfare.

APPENDIX C, EXHIBIT VII (Con'd)

Mathematics

1. Figure wages for day, week, month and year based on hourly pay.

2. Math based jobs may be discussed: These include Accountant, Bookkeeper, Auditor, Payroll Clerk, Timekeeper.

3. Compute take-home pay (net) from gross pay by subtracting deductions as insurance, withholding tax, union dues, etc.

4. Prepare budgets based upon average weekly pay for various jobs.

5. Have exercises involving various banking procedures.

6. In-depth study of interest rates, installment buying, and comparative shopping.

Sciences

1. Identify the various jobs requiring scientific background. Include the petroleum industry, textiles, engineering, industrial chemicals, etc.

2. Conduct research to determine the extent to which such jobs exist in the New Orleans area.

APPENDIX C, EXHIBIT VII (Con'd)

Senior High On-the-Job Training Component

Some Suggested Areas for On-the-Job Training

Course - Woodworking
Employment Areas - Cabinet-making and related, advertising display set-up, furniture repairs and refinishing, construction framing building materials and hardware sales.

Course - Mechanical Drawing
Employment Areas - Map-making and tracing, tooling, patterns, engineering, structural and architectual design, blueprinting.

Course - Small Engines
Employment Areas - Lawnmower repairs, new mower servicing, outboard engine repairs, motorcycle repairs, and new cycle servicing.

Course - Electricity and Electronics
Employment Areas - Maintenance assistants in large buildings, small appliance repairs, minor radio and television parts testing.

Course - Auto Mechanics
Employment Areas - Any position requiring such skills as possessed by basic six and eight cylinder mechanic's helper, and auto parts sales.

Cost to Employer

$1.60 per hour for 3 or more hours daily

$6.40 per day for 4 hours day or,

$32.00 per week or,

$1,052.00 per school year (36 weeks)

Work Schedule

Student work hours may be arranged so that he/she is available from 8-12 A.M. or 12:30 - 4:30 P.M. O.J.T. student receives 2 units of credit for successful job performance and usually carries 3 academic courses, one of which must be in the above areas.

APPENDIX C, EXHIBIT VIII
APPLICATION FOR EMPLOYMENT

Date of Application		
Date Appointed	Division	Salary

APPLICANT - DO NOT WRITE ABOVE THIS LINE. PLEASE PRINT.

NAME (First) (Middle) (Last)	DO YOU ☐ Live with parents ☐ Live with other relatives ☐ Board ☐ Own your home ☐ Rent	DATE OF BIRTH (Mo.) (Day) (Yr.)

RESIDENCE ADDRESS (No.) (Street)	(City or Town) (State) (Zone)	TELEPHONE NUMBER	LIVED HERE SINCE (Month) (Year)
PREVIOUS RESIDENCE (No.) (Street)	(City or Town) (Zone) (State)		HOW LONG THERE?

HEIGHT	WEIGHT	ANY PHYSICAL DEFECTS? ☐ YES ☐ NO IF YES-EXPLAIN	SOCIAL SECURITY NO.	ARE YOU A CITIZEN OF THE USA? YES NO

NAME OF PARENT(S) OR GUARDIAN(S) (First) (Middle) (Last)	OCCUPATION OF PARENT(S) OR GUARDIAN(S)	EMPLOYER OF PARENT(S) OR GUARDIAN(S)	ADDRESS OF PARENT(S) OR GUARDIAN(S)

MARITAL STATUS ☐ Married ☐ Divorced ☐ Widowed ☐ Separated ☐ Single	IF DIVORCED, GIVE DATE AND PLACE	GIVE NO. OF PERSONS DEPENDENT UPON YOU FOR SUPPORT	AGES OF DEPENDENTS

HUSBAND'S NAME (First) (Middle) (Last)	HUSBAND'S OCCUPATION	HUSBAND'S EMPLOYER	HUSBAND'S ADDRESS

Note: Complete this line if married, divorced or separated woman.

In the sections below headed Schools Attended and Active Service with United States Armed Forces and in the Previous Business Experience Section on the next page, account completely for all your time from the first year of high school until the present.

SCHOOLS ATTENDED

NAMES OF SCHOOLS	NO. OF YRS. Day	Eve.	COURSE OR MAJOR SUBJECTS	GRADUATED Yes or No	Mo.	Yr.	SCHOLASTIC STANDING	DEGREE

SCHOLASTIC HONORS (Societies-Prizes-Scholarships)	ATHLETIC ACTIVITIES	OTHER ACTIVITIES (Managerial-Editorial-Elective Offices-Clubs)

ACTIVE SERVICE WITH UNITED STATES ARMED FORCES

DATE (Mo.) (Day) (Yr.) OF ENTRY	DATE (Mo.) (Day) (Yr.) OF DISCHARGE	TYPE OF DISCHARGE (i.e. Expiration of Enlistment, Medical, Etc.)
BRANCH OF SERVICE	SERIAL NO.	RANK OR RATE AT DISCHARGE
SERVICE SCHOOLS OR OTHER SPECIAL TRAINING		

APPENDIX C, EXHIBIT VIII

CHARACTER REFERENCES (Do not use the names of relatives or former employers.)

Names	Addresses	Phones	Occupations

HAVE YOU ANY RELATIVES, FRIENDS, OR ACQUAINTANCES NOW EMPLOYED BY THIS COMPANY? Yes ☐ No ☐	IF YES, STATE NAME	TYPE OF RELATIONSHIP	POSITION

LIST ALL ORGANIZATIONS TO WHICH YOU BELONG OR HAVE BELONGED.
Do not include labor and political organizations or those where the name or character of the organization would include religion, race or national origin.

PREVIOUS BUSINESS EXPERIENCE
(List in order with last employer first. Do not include military service.)

NAME OF COMPANY	ADDRESS	JOB DUTIES	PERIOD OF EMPLOYMENT From Mo.	From Yr.	To Mo.	To Yr.

HAVE YOU EVER WORKED FOR THIS COMPANY? Yes ☐ No ☐	IF YES, GIVE DATES: From: To:	DIVISION

FOR WHAT SPECIAL LINE OF WORK HAVE YOU A PREFERENCE?

WERE YOU REFERRED BY AN EMPLOYEE OF THIS COMPANY? Yes ☐ No ☐	IF YES, STATE NAME	DEPARTMENT, IF KNOWN

HAVE YOU EVER BEEN REFUSED BOND? Yes ___ No ___	IF YES, EXPLAIN

HAVE YOU EVER BEEN ARRESTED, OTHER THAN TRAFFIC VIOLATIONS? Yes ___ No ___	IF YES, EXPLAIN

I AUTHORIZE INVESTIGATION OF ALL STATEMENTS CONTAINED IN THE APPLICATION BLANK IF I AM CONSIDERED FOR EMPLOYMENT AND HEREBY AUTHORIZE PREVIOUS EMPLOYERS, PERSONAL REFERENCES NAMED, OR ANY OTHER PERSON OR PERSONS TO WHOM THE COMPANY MAY REFER TO GIVE ANY AND ALL INFORMATION REGARDING MY EMPLOYMENT OR SCHOLASTIC STANDING TOGETHER WITH ANY OTHER INFORMATION, PERSONAL OR OTHERWISE, THAT MAY OR MAY NOT BE ON THEIR RECORDS.

I UNDERSTAND THAT MISREPRESENTATION OR OMISSION OF ANY FACT CALLED FOR HEREON, OR ON ANY OTHER STATEMENT MADE IN CONNECTION WITH MY REQUEST FOR EMPLOYMENT, OR RECEIPT BY THE COMPANY OF UNSATISFACTORY REFERENCES, MAY RESULT IN DISMISSAL FROM THE COMPANY'S SERVICE IF I SHALL HAVE BEEN EMPLOYED.

APPLICANT'S SIGNATURE _____
(First) (Middle) (Last)

NOT TO BE COMPLETED BY APPLICANT

DATE OF INTERVIEW	COMMENTS

APPENDIX C, EXHIBIT IX

STATE OF LOUISIANA

DEPARTMENT OF LABOR

DIVISION OF WOMEN AND CHILDREN

To obtain a vacation work permit or certificate, the minor must bring this form, properly filled, to the parish superintendent of schools of any parish, except in Orleans Parish, to the representative of the Commissioner of Labor. **He must also bring a birth certificate.** If under 16 years of age the minor must bring a certificate of health signed by a physician.

INTENTION TO EMPLOY

MINORS UNDER 18

(Required under provisions of R.S. 23:151-234)

The certificate or vacation work permit will be denied unless all provisions of Act 301 of 1908, as to hours, type of employment, etc., are complied with.

Employers who employ minors illegally are subject to penalties, (fines and/or jail sentences) according to provisions of R.S. 23:231-234, if convicted of a violation.

_____ Date_____

(City)

_____

(Parish)

Upon receipt of the employment certificate or the vacation work permit, the undersigned intends to employ:

_____ _____ _____

(Name of Minor) (Address of Minor) (Age)

in the capacity of_____

(Specific Occupation) (Industry)

for_____days per week; for_____hours per week;_____hours per day beginning_____

_____A. M. and closing_____P. M. with a lunch period of_____, the rate of

pay to be_____per hour or_____per day or_____per week.

_____

(Name of Employer) (Business Address)

_____

(Signature of Employer or Authorized Agent)

This form must be executed and signed by an officer of employing firm.

APPENDIX C, EXHIBIT IX

EMPLOYMENT APPLICATION

SHELL

AN EQUAL OPPORTUNITY EMPLOYER

SHELL OIL COMPANY
SHELL CHEMICAL COMPANY*
SHELL DEVELOPMENT COMPANY*
SHELL PIPE LINE CORPORATION

A DIVISION OF SHELL OIL COMPANY

Complete with ink or typewriter

GENERAL

DATE	EMPLOYMENT INTERESTS ☐ FULL-TIME ☐ PART-TIME ☐ SUMMER	DATE AVAILABLE FOR EMPLOYMENT
TYPE OF WORK DESIRED		

PERSONAL

NAME	FIRST	MIDDLE	LAST	TELEPHONE	AREA CODE	NUMBER
PERMANENT ADDRESS	NUMBER	STREET	CITY		STATE	ZIP CODE

MARITAL STATUS	NUMBER *(Exclude Yourself)* OF DEPENDENTS	IF YOU ARE NOT A U.S. CITIZEN, WHAT TYPE VISA DO YOU HAVE?	SOCIAL SECURITY NUMBER

EDUCATION

CIRCLE HIGHEST GRADE COMPLETED — GRADE SCHOOL 1 2 3 4 5 6 7 8 — HIGH SCHOOL 9 10 11 12

COLLEGE OR UNIVERSITY	DATES ATTENDED FROM MO.	FROM YR.	TO MO.	TO YR.	GRADUATED		MAJOR SUBJECT	DEGREE
					☐ Yes	☐ No		
					☐ Yes	☐ No		
					☐ Yes	☐ No		
					☐ Yes	☐ No		

OTHER SPECIAL TRAINING AND DATES

MILITARY

BRANCH OF U.S. SERVICE	HIGHEST RANK	DATE ENTERED	DATE DISCHARGED OR SEPARATED	TYPE OF DISCHARGE OR SEPARATION
MILITARY OCCUPATIONAL SPECIALTY				

EMPLOYMENT

LIST YOUR WORK EXPERIENCE WITH YOUR PRESENT AND LAST THREE EMPLOYERS

EMPLOYER	DATES FROM MO.	FROM YR.	TO MO.	TO YR.	JOB HELD (DESCRIBE DUTIES BRIEFLY)	REASON FOR LEAVING
1. PRESENT EMPLOYER NO. STREET CITY STATE						
2. LAST NO. STREET CITY STATE						
3. PREVIOUS NO STREET CITY STATE						
4. PREVIOUS NO. STREET CITY STATE						

HAVE YOU EVER BEEN EMPLOYED BY SHELL? ☐ YES ☐ NO	IF YES, WHERE	DATES

SR-1543 (REV. 1-70)

3087

PHYSICAL

CONDITION OF HEALTH	HEIGHT	WEIGHT
DESCRIBE ANY PHYSICAL LIMITATIONS		

In the event of my employment by any one of the companies listed on the face of this form and/or subsequently by an affiliated or subsidiary company, and in consideration thereof, I agree to the following provisions:

RELATIVES

As an applicant for employment, I understand that if there is any person employed by Shell or any affiliated or subsidiary company who is "close relative" (as defined in the footnote*) of me or my husband or wife, it is my obligation to provide full information of such relationship. I agree that any inaccuracy or misstatement in this regard, even if due to lack of knowledge or misunderstanding, will be cause for cancellation of my application or separation from the Company's service if I have been employed. (Check appropriate box below).

I HAVE:	NAME	SHELL LOCATION	HOW RELATED
☐ NO SUCH RELATIVES ☐ SUCH RELATIVES IDENTIFIED	NAME	SHELL LOCATION	HOW RELATED

I also agree that should such a relationship come into existence through any marriage after my employment, I will make the relationship immediately known to the Company. I understand that such relationship will not affect my employment unless a husband-wife relationship is involved.

CONDITIONS

1. I understand employment is contingent upon meeting the Company's standard physical requirements.
2. In the event of my employment, I will furnish proof of date of birth, military discharge and appropriate academic transcripts. Also, I realize it will be necessary to sign an invention agreement, a conflict of interest statement and a confidential information statement.

REFERENCES

I authorize and request each employer, person, firm or corporation named herein to answer all questions that may be asked, and to give all information that may be sought, in connection with this application or concerning me or my work habits, character, skill or action in any transaction.

I certify that all statements I have made in this application are true and agree that any misrepresentation or omissions of facts called for will be sufficient cause for cancellation of my application for employment or immediate dismissal from the Company's service if I have been employed.

SIGNATURE OF APPLICANT	DATE

*Shell follows a policy of not employing relatives. The purpose of this rule is to permit employment, transfer and promotion of employees without influence or prejudice arising from family connections. Any applicant who has a close relative who is either a Company employee actively employed or on military leave or other leave of absence, or the spouse of a Company employee, or whose own spouse has any such close relative, is not considered eligible for employment. For this purpose, the "close relative" of an applicant or of his or her spouse shall include any of the following: spouse, father, mother, brother, sister, son, daughter, uncle, aunt, nephew and niece, including in connection with each, "step", "in-law", or "half" relationships. This general rule also is applicable when the relative is employed by an affiliated or subsidiary company.

STATE OF LOUISIANA

DEPARTMENT OF CIVIL SERVICE

BATON ROUGE, LOUISIANA

APPLICATION FOR STUDENT EMPLOYMENT

FILE THIS FORM WITH EMPLOYING AGENCY

F 100 (8-11-66)

NAME OF APPLICANT	POSITION APPLIED FOR	SEX ☐ Male ☐ Female	TELEPHONE NO
HOME ADDRESS	DATE OF BIRTH	PLACE OF BIRTH	SOCIAL SECURITY NO
CITY OR TOWN, STATE, ZIP CODE	MARITAL STATUS ☐ Single ☐ Married ☐ Divorced ☐ Widowed ☐ Separated		

Definition of Bona Fide Student
Civil Service Rule 1.5.1

'Bona fide Student' means a person enrolled in an accredited high school, college, or university in the State, or in a State-operated vocational-technical school, in a sufficient number of courses and classes in such institution to be classified as a full-time regular student under the criteria used by the institution in which he is enrolled. A bona fide student shall not lose his status as such because of vacations during the academic year or because of his failure to attend summer school.

	YES	NO	Use this space to explain "Yes" answers to Questions 1, 2, and 3.
1. Are you now, or have you ever been, a member of any foreign or domestic organization, association, movement, group or combination of persons which is Totalitarian Fascist, Communist, or Subversive or which has adopted, or shows a policy of advocating or approving the commission of acts of force, or violence to deny other persons their rights under the Constitution of the United States, or which seeks to alter the form of government of the United States by unconstitutional means?			
2. Have you ever been discharged from a position because your conduct or work was not satisfactory?			
Have you ever resigned a position after being notified that your conduct or work was not satisfactory?			
3. Have you ever been arrested?			
Have you ever been charged, indicted, or summoned into court as a defendant?			
Have you ever been held by Federal, State or other law enforcement authorities for any violation of any Federal law, State law, Parish or Municipal law, regulation or ordinance?			

*Article VIII, Paragraph 6, of the Louisiana Constitution provides in part that "The following persons shall not be permitted to register, vote, or hold office or appointment of honor, trust or profit in this State: to wit: Those who have been convicted of any crime which may be punishable by imprisonment in the penitentiary, and not afterward pardoned with express restoration of franchise; * * *"
The Louisiana Supreme Court has interpreted the word "penitentiary" to mean the Louisiana State Penitentiary.
Any or all of your statements in this application may be investigated to determine their accuracy.

A. ARE YOU NOW A FULL-TIME REGULAR STUDENT? ☐ Yes ☐ No

B. WHAT IS THE NAME OF THE SCHOOL, COLLEGE OR UNIVERSITY YOU ARE NOW ATTENDING OR LAST ATTENDED? NAME OF SCHOOL ADDRESS

6. WHAT IS HIGHEST GRADE COMPLETED (CHECK) HIGH SCHOOL ☐ 9 ☐ 10 ☐ 11 ☐ 12 COLLEGE ☐ 1 ☐ 2 ☐ 3 ☐ 4 Years GRADUATE SCHOOL ☐ 1 ☐ 2 Years

7. IF YOU ARE NOT PRESENTLY ATTENDING SCHOOL,
A. WHEN WERE YOU REGISTERED LAST? MONTH YEAR
B. WHEN DO YOU PLAN TO RETURN TO SCHOOL? MONTH YEAR

I certify that the answers I have given to each and all of the foregoing questions are true to the best of my knowledge. If I am appointed, I agree to promptly notify the proper agency official of any change in my status as a student, including any reduction in courses taken, termination of student status, or scholastic probation.

DATE SIGNATURE OF APPLICANT

REPORT OF SCHOOL OFFICIAL

THE RECORDS OF THIS SCHOOL INDICATED THAT THE APPLICANT NAMED HEREIN

IS CLASSIFIED AS A FULL-TIME REGULAR STUDENT OF THIS SCHOOL UNDER ITS CRITERIA ☐ Yes ☐ No	B. HAS COMPLETED HIS COURSE AND RECEIVED A DIPLOMA OR CERTIFICATE OR HAS GRADUATED ☐ Yes ☐ No	C. HAS APPLIED FOR ENROLLMENT IN THIS SCHOOL EFFECTIVE ☐ Yes ☐ No

NAME OF SCHOOL ADDRESS

SIGNATURE OF SCHOOL OFFICIAL TITLE DATE

AGENCY REVIEW OF STUDENT STATUS

DATE REVIEWED	INITIALS	DATE REVIEWED	INITIALS	DATE REVIEWED	INITIALS
1.		2.		3.	
1.		2.		3.	

(List Previous Work Experience on Reverse Side)

3089

APPENDIX C, EXHIBIT IX

STATE OF LOUISIANA

DEPARTMENT OF LABOR

DIVISION OF WOMEN AND CHILDREN

To obtain a vacation work permit or certificate, the minor must bring this form, properly filled, to the parish superintendent of schools of any parish, except in Orleans Parish, to the representative of the Commissioner of Labor. **He must also bring a birth certificate.** If under 16 years of age the minor must bring a certificate of health signed by a physician.

INTENTION TO EMPLOY

MINORS UNDER 18

(Required under provisions of R.S. 23:151-234)

The certificate or vacation work permit will be denied unless all provisions of Act 301 of 1908, as to hours, type of employment, etc., are complied with.

Employers who employ minors illegally are subject to penalties, (fines and/or jail sentences) according to provisions of R.S. 23:231-234, if convicted of a violation.

_____ (City) Date_____

_____ (Parish)

Upon receipt of the employment certificate or the vacation work permit, the undersigned intends to employ:

_____ (Name of Minor) _____ (Address of Minor) _____ (Age)

in the capacity of_____ (Specific Occupation) _____ (Industry)

for_____days per week; for_____hours per week;_____hours per day beginning_____

_____A. M. and closing_____P. M. with a lunch period of_____, the rate of

pay to be_____per hour or_____per day or_____per week.

_____ (Name of Employer) _____ (Business Address)

_____ (Signature of Employer or Authorized Agent)

This form must be executed and signed by an officer of employing firm.

APPENDIX C, EXHIBIT IX

STATE OF LOUISIANA

DEPARTMENT OF CIVIL SERVICE

BATON ROUGE, LOUISIANA

APPLICATION FOR STUDENT EMPLOYMENT

(DD-18 11-62)

FILE THIS FORM WITH EMPLOYING AGENCY

NAME OF APPLICANT	POSITION APPLIED FOR	SEX ☐ Male ☐ Female	TELEPHONE NO
HOME ADDRESS	DATE OF BIRTH	PLACE OF BIRTH	SOCIAL SECURITY NO
CITY OR TOWN, STATE, ZIP CODE	MARITAL STATUS ☐ Single ☐ Married ☐ Divorced ☐ Widowed ☐ Separated		

Definition of Bona Fide Student
Civil Service Rule 1.5.1

'Bona fide Student' means a person enrolled in an accredited high school, college, or university in the State, or in a State-operated vocational-technical school, in a sufficient number of courses and classes in such institution to be classified as a full-time regular student under the criteria used by the institution in which he is enrolled. A bona fide student shall not lose his status as such because of vacations during the academic year or because of his failure to attend summer school.

	YES	NO	Use this space to explain "Yes" answers to Questions 1, 2, and 3.
1. Are you now, or have you ever been, a member of any foreign or domestic organization, association, movement, group or combination of persons which is Totaliterian Fascist, Communist, or Subversive or which has adopted, or shows a policy of advocating or approving the commission of acts of force, or violence to deny other persons their rights under the Constitution of the United States, or which seeks to alter the form of government of the United States by unconstitutional means?			
2. Have you ever been discharged from a position because your conduct or work was not satisfactory?			
Have you ever resigned a position after being notified that your conduct or work was not satisfactory?			
3. Have you ever been arrested?			
Have you ever been charged, indicted, or summoned into court as a defendant?			
Have you ever been held by Federal, State or other law enforcement authorities for any violation of any Federal law, State law, Parish or Municipal law, regulation or ordinance?			

'Article VIII, Paragraph 6, of the Louisiana Constitution provides in part that "The following persons shall not be permitted to register, vote, or hold office or appointment of honor, trust or profit in this State: to wit: Those who have been convicted of any crime which may be punishable by imprisonment in the penitentiary, and not afterward pardoned with express restoration of franchise; * * *"
The Louisiana Supreme Court has interpreted the word "penitentiary" to mean the Louisiana State Penitentiary.
Any or all of your statements in this application may be investigated to determine their accuracy.

4. ARE YOU NOW A FULL-TIME REGULAR STUDENT? ☐ Yes ☐ No

5. WHAT IS THE NAME OF THE SCHOOL, COLLEGE OR UNIVERSITY YOU ARE NOW ATTENDING OR LAST ATTENDED? NAME OF SCHOOL ADDRESS

6. WHAT IS HIGHEST GRADE COMPLETED (CHECK) HIGH SCHOOL ☐ 9 ☐ 10 ☐ 11 ☐ 12 COLLEGE ☐ 1 ☐ 2 ☐ 3 ☐ 4 Years GRADUATE SCHOOL ☐ 1 ☐ 2 Years

7. IF YOU ARE NOT PRESENTLY ATTENDING SCHOOL, A. WHEN WERE YOU REGISTERED LAST? MONTH YEAR B. WHEN DO YOU PLAN TO RETURN TO SCHOOL? MONTH YEAR

I certify that the answers I have given to each and all of the foregoing questions are true to the best of my knowledge. If I am appointed, I agree to promptly notify the proper agency official of any change in my status as a student, including any reduction in courses taken, termination of student status, or scholastic probation.

DATE SIGNATURE OF APPLICANT

REPORT OF SCHOOL OFFICIAL

THE RECORDS OF THIS SCHOOL INDICATED THAT THE APPLICANT NAMED HEREIN

IS CLASSIFIED AS A FULL-TIME REGULAR STUDENT OF THIS SCHOOL UNDER ITS CRITERIA ☐ Yes ☐ No	B. HAS COMPLETED HIS COURSE AND RECEIVED A DIPLOMA OR CERTIFICATE OR HAS GRADUATED ☐ Yes ☐ No	C. HAS APPLIED FOR ENROLLMENT IN THIS SCHOOL EFFECTIVE ☐ Yes ☐ No

NAME OF SCHOOL ADDRESS

SIGNATURE OF SCHOOL OFFICIAL TITLE DATE

AGENCY REVIEW OF STUDENT STATUS

DATE REVIEWED	INITIALS	DATE REVIEWED	INITIALS	DATE REVIEWED	INITIALS
1.		2.		3.	
1.		2.		3.	

(List Previous Work Experience on Reverse Side)

3091

APPENDIX C, EXHIBIT X

EXEMPLARY PROGRAM FOR OCCUPATIONAL PREPARATION

Survey Form for O.J.T.

Student's Name _____ Classification _____
Date of birth _____ Course _____
Previous related courses 1. _____ 2. _____ 3. _____
I.Q. _____ Number of earned Units _____
Minimum units needed for graduation _____

Work Traits Rating Scale (Excellent, Good, Fair, Poor)

Academic record _____ Attendance _____
Physical condition _____ Appearance _____
Verbal Ability _____ Attitude Towards Work _____
Teacher rating for O.J.T. _____ Interviewer's rating _____

Interviewer _____

EXEMPLARY PROGRAM FOR OCCUPATIONAL PREPARATION

EMPLOYER CONTACT RECORD

Name of firm ----------
Address ---------- Telephone ----------
Person to see ---------- Title ----------
Nature of firm's business ----------
Approximate number of employees ----------
Contacted for student employment as ----------

Date of contact How Contacted Results

APPENDIX C, EXHIBIT XI

STUDENT'S JOB SHEET

Name _____ School _____

Training Station

Date	Department	Job	Hours	Salary	F.I.C.A.	Fed. Tax

APPENDIX C, EXHIBIT XII

STUDENT PERSONAL DATA FORM

Introduction to Vocations

To the Students:

The purpose of this form is to bring together essential information about you, so that your teacher will know you better. Answer the questions frankly and completely as possible. The forms are for confidential use only.

Date _____

Name _____ Age _____

Home Address _____ Phone _____

Place of Birth _____ Date of Birth _____

Father's or Guardian's name _____

Father's Occupation _____ Highest grade completed _____

Mother's Occupation _____ Highest grade completed _____

Older brothers and sisters:

Sex (M or F)	Approximate age	Highest grade Completed	Occupation
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Was your last year's scholastic standing high? ____above average?___
below average _____low _____ (check one)

List the subject that:

You like best:	You dislike most:	Is easiest:	Is hardest:
_____	_____	_____	_____

Do you plan to graduate from high school?

If you do not plan to graduate from high school, encircle the last grade which you plan to complete.

Grade 9 10 11 12

State briefly the chief reason why you might leave school.

_____

_____

_____

What do you plan to do when you leave high school?

____ go to college
____ go to a technical school
____ go to a trade school
____ other plans, what are they? _____
____ go to business school
____ go to work
____ military service

_____

State the chief reasons for your plans indicated above.

_____

_____

If you have decided upon the particular school or college that you plan to enter after leaving school, name it

_____

What do you enjoy in life more than anything else? _____

_____

What achievements in school have given you greatest satisfaction?

_____

_____

What occupations or fields of work have you considered for your life's work?

First choice _____

Second choice _____

Third choice _____

Reason for first choice _____

When did you begin considering this choice? _____

If you could do just as you wished, what would you want to be doing when you are around 30 years old?

_____

How much schooling do your parents or guardians want you to complete?

_____

What vocation do your parents want you to follow? _____

Why? _____

APPENDIX C, EXHIBIT XIII

NAME: _____ DATE: _____

STEPS THAT LEAD TO A JOB

1. Below you will find some steps that you may have to take leading up to a new job. Can you put them in the right order in which they take place? Write numbers 1, 2, 3, and so on where you see ( ).

( ) Interviewing with the employer.
( ) Reporting to work the first day.
( ) Finding the job.
( ) Writing or telephoning for the interview.
( ) Finding out how to get to the place of interview.
( ) Finding out when the bus or train leaves (and returns) to get you to the place of interview on time.
( ) Getting yourself ready for the interview by planning what to wear.
( ) Thanking the employer for the interview.
( ) Getting your first week's pay.
( ) Punching a time clock when you come in and when you leave.
( ) Looking in the Help-Wanted section of your newspaper.
( ) Making sure that you have enough money to pay for your bus or train fare to and from the place of interview.

2. Check the way you should look when you report for a job interview:

BOY	GIRL
( ) Chewing gum	( ) Chewing gum
( ) Shined shoes	( ) Shined shoes
( ) Smoking a cigarette	( ) Smoking a cigarette
( ) Neatly pressed pants	( ) Neat day outfit
( ) "Loud" sport shirt	( ) A lot of makeup
( ) Neatly combed hair	( ) A lot of jewelry

APPENDIX C, EXHIBIT XIII (con'd)

SELLING YOURSELF TO THE EMPLOYER

I. Remember while on the actual interview:

A. The interviewer is sizing you up when you walk in, so show CONFIDENCE.
B. If interviewer is a man, extend hand and give firm shake. If interviewer is a woman, only extend hand if she does.
C. Give the correct greeting, "Good morning, Mr. _____. "I am _____ _____, a student from _____ High School, and I am applying for a position." (KNOW THE PERSONNEL MANAGER'S NAME)
D. Treat the employer with respect but not fear.
E. Be yourself.
F. Have correct posture while standing and sitting.
G. Do not sit until told to do so. (Do not cross legs.)
H. Use correct English. (Avoid using slang.)
I. Do not chew gum or smoke. If offered a cigarette by the interviewer, refuse politely.
J. Avoid saying, "I don't know."
K. Try to answer the questions by saying more than "Yes" or "No."
L. YOU ASK QUESTIONS
   1. duties
   2. hours
   3. advancement
   4. permanence

II. Be able to answer the following questions:

A. Why did you leave your last job? (Give an honest answer, but be careful. If you were fired, explain and give a reason why it will not happen again.)
B. What kind of work do you want? (Don't say, "Anything.")
C. Why did you come here to apply? (State career objectives and tell how the store may help you achieve them.)
D. Do you think that you are qualified for the job? (Be convincing.)
E. Do you have health problems?
F. Have you ever been arrested?
   1. Acquitted
   2. Charges
   3. Convicted

III. <u>BE SURE TO THANK THE PERSONNEL DIRECTOR FOR THE INTERVIEW.</u>

APPENDIX C, EXHIBIT XIII (con'd)

Physical Characteristics

9. Frequently we offend others unknowingly. The list below was compiled from the results of hundreds of answers to the question, "What physical traits keep people from presenting a good appearance and hence hurt their personalities?" Place a check mark before each thing that applies to you.

____Dirty fingernails
____Dirty hands
____Beard
____Excessive make-up
____Powder smears or dabs
____Yellow or unclean teeth
____Food between teeth
____Visible blackheads
____Pimples on face
____Dirty neck
____Greasy hair
____Dirty ears
____Dirty scalp
____Dandruff
____Hair too long
____Ragged fingernails
____Dirty shirt
____Soiled underclothes
____Dirty colllar and cuffs
____Baggy trousers or skirt
____Soiled suit or dress
____Runs visible in hose
____Hose seams crooked
____Run-over heels
____Unshined shoes
____Dirty, dirty shoes
____Body odor
____Halitosis
____Too few baths
____Inappropriate clothes
____Stoop shoulders
____Slouchy walking
____Awkward posture
____Hair not combed
____Greasy skin
____Gaudy fingernails
____Broken shoestring
____Buttons missing
____Tie poorly tied
____Tie crooked
____Tie wrinkled
____Collar wrinkled
____Clothes fitting poorly
____Dirty handerchief
____Wrinkled suit or dress
____Soiled, dusty purse
____Torn gloves
____Dirty gloves

Number of checks ____

If you checked fewer than five items, you are neater and better groomed than the average college student.

If you checked between five and ten items, you are below average in neatness and should do something about it now.

If you checked more than fifteen, you are in pretty bad shape. Drastic action is necessary.

Look over the items that you checked. Each one is a personality defect in the eyes of other perons. Every one of these defects can be eliminated.

APPENDIX C, EXHIBIT XIV

M E M O R A N D U M

To: Teachers in Industrial Education Department

From: Jude T. Sorapuru, Vocational Counselor E.P.O.P.

Re: Evaluation and summary of responses to written exercise of self-concept following self-development seminar held on Friday, February 26, 1971.

Date: March 3, 1971

ME

I am _____

_____

I would like to _____

_____

Sometimes I think _____

_____

Once when I was little _____

_____

If only _____

_____

When I like someone, it's usually because _____

_____

When I dislike someone, it's usually because _____

_____

I show that I like others by _____

_____

I show my dislike of others by _____

_____

My best friend is _____

My home is _____

Senior High School _____

Usually teachers are _____

Education is important because _____

When I get older, I _____

It is easy to _____

Something I find hard to do is _____

_____

If I could do exactly what I wanted to do now I'd _____

_____

Someone I think is great is _____

Who am I? - Most responses here indicated identity as being Black and a Student.

I would like to - Most students expressed a definite goal for themselves. Many stated a general goal such as, "I would like to be rich" or "I would like to be well known."

Sometimes I think - Responses here were generally indecisive. Thoughts reflected uncertainty about future plans and state of the world and society.

Once when I was little - Most responses here indicated that respondents early plans have since changed. This indicates a maturation process and changes in values. Many people did not complete this statement.

If only - Most responses to this statement indicated the desire for success and stature in life. The significant point here is that most of these are attainable if one worked at them. Some, however, are unrealistic as: "If only all people were black."

When I like someone, it's usually because and When I dislike someone it's usually because - Responses here indicate a reciprocal type of relationship. "I like them if they like me." The reasons most often given were personality and attitude.

I show I like others by and I show I dislike others by - Responses here indicate a reserved attitude towards interpersonal relationships. Most statements only indicated a willingness or unwillingness to communicate according to how they felt towards the person. There seemed to be a lack of depth in their desire to show someone they liked them but some depth in their expression of dislike.

My best friend is - A surprising number of responses described the respondent as his own best friend or indicated they had no best friend. This again indicates a lack of depth in their interpersonal relationships.

My home is - No significant responses. Most just listed their address.

Senior High School - No significant responses. Same as above.

Usually teachers are - Most responses here were positive and complimentary. A few responses questioned the motives of teachers and their interests.

Education is important because - Practically all statements made related to the need for education in securing a job or a good job.

When I get older, I - Most answers given here indicated the desire to accomplish material well being; i.e., good job, rich, big house.

It is easy to - Responses here indicated that many of the respondents felt it was easy to "get into trouble" or be negative.

Something I [illegible] to do is - Answers range from school assignments to resisting temptation and getting a job.

If I could do exactly what I wanted to do now I'd - Most students did not complete this statement. However, some indicated they would remove themselves from school or the city or the state. Others, again expressed the desire to have great wealth or a good job, house, etc.

Someone I think is great is - The majority of responses named the parents. One named H. Rap Brown, another, James Brown.

APPENDIX C, EXHIBIT XV

ATTITUDES TOWARD WORK SURVEY

Grade _____ Male or Female Age _____

We want to know what you think about jobs and work. You can tell us what you think by answering some questions. On the next three pages there are 20 questions to answer.

Directions:

Read each question.
Read the answers.
Pick out the answer that tells how you would answer the question.
Draw a line under that answer.

Before you start, look at these samples.

Sample A

Do you think an adult who has a job should be paid for doing his work?

YES NO

If you think that the answer to the question is "Yes," you would draw a line under "Yes" as shown above.

Here is another sample.

Sample B

Which of these do you think is most true about jobs?

All people have jobs.
Many people have jobs.
Only a few people have jobs.

Which answer tells how you would answer the question? Draw a line under that answer.

There are no right or wrong answers. You will not be asked to explain your answers. We only want to know what you think about jobs and work.

Remember, read the question and draw a line under the answer that tells how you would answer the question.

APPENDIX C, EXHIBIT XV (con'd)

Here are some questions that can be answered

YES NO

Draw a line under One of these answers for each question. Do not skip any questions.

---

1. Would you like to listen to someone tell about the kind of work they do on their job?

YES NO

2. Two people are talking about the kind of work you want to do when you are grown up. Would you listen carefully to learn something about the job?

YES NO

3. Would you watch a TV program that tells about the kinds of jobs in your community?

YES NO

4. If friends of your family began to tell you about their jobs, would you ask questions about the jobs?

YES NO

5. Would you enjoy visiting a place where people work so you could learn about different kinds of jobs?

YES NO

6. Are you able to picture yourself working in a certain kind of a job when you finish school?

YES NO

7. Do you think it is important for you to think about what kind of work you would like to do someday?

YES NO

8. Do you think you know about the kinds of work you would like to do when you finish school?

YES NO

APPENDIX C, EXHIBIT XV (con'd)

Here are some questions that have several answers. Draw a line under the ONE answer that best tells how you would answer the question.

- -

9. Which of these ideas do you think is most true about work?

   a) work is always hard and boring
   b) work is usually the same hard grind in whatever job you have
   c) work is sometimes hard and sometimes fun
   d) work is often fun
   e) work is always fun

10. Which of these do you think is most true about jobs?

   a) Any job that pays a lot will be OK with me.
   b) I would like to do a job which I am good at.
   c) I don't care what job I will have, just as long as I have work.

11. Which of these do you think is most true about work?

   a) Getting paid a lot is more important than liking a job.
   b) Liking a job is more important than getting paid a lot.

12. Work is:

   a) something a person has to do
   b) doing something to help the community
   c) doing something to help yourself
   d) doing something just for the money

13. About the jobs of some of the people in my family, I know

   a) many things
   b) some things
   c) only a few things
   d) nothing

APPENDIX C, EXHIBIT XV (con'd)

Here are some questions that can be answered Yes or No. Draw a line under ONE of these answers for each question. Do not skip any.

---

14. In choosing a job, would you need to know what kind of a person you are?

YES NO

15. Do you know of any jobs that you think that you would like to do when you finish school?

YES NO

16. Is work important mainly because it lets you buy the things you want?

YES NO

17. By the time you are in high school should you be sure about the kind of work you want to do?

YES NO

18. Could people do any job they wanted to as long as they tried very hard?

YES NO

19. Do you have only a very little idea what having a job would be like?

YES NO

20. Can you think of several jobs that you would like to have when you finish school?

YES NO

APPENDIX C, EXHIBIT XVI

APPLICATION FOR ENROLLMENT
IN THE WORK EXPERIENCE PROGRAM OF INDUSTRIAL ARTS

Name _____ Parent or Guardian's Name _____ Date _____

Address _____ Phone Number _____

Age _____ Sex _____ Height _____ Weight _____ Social Security # _____

Distance from school _____

Grade in school ____ Do you plan to go to college? Yes _____ No _____

List the high school credits you have earned in: Math _____ English _____

Social Studies _____ Science _____ Industrial Arts _____

Commercial _____ Other _____

Parent's Occupation: Father _____ Mother _____

What type of curriculum are you enrolled in? College Prep. _____

General _____ Vocational _____

What hobbies do you enjoy? _____

List the clubs and organizations to which you belong _____

_____

Do you wear glasses? Yes ____ No ____ Will you have transportation to work?

Yes ____ No ____ Do you have any physical handicaps? Yes ____ No ____ If Yes,

please explain: _____

List the name of employer and previous jobs you have held and the length of time spent on the job.

Name of Employer	Job	Length of Time

What occupations do you prefer to receive training in?

First Preference _____

Second Preference _____

APPENDIX C, EXHIBIT XVI (con'd)

APPLICATION FOR ENROLLMENT IN THE WORK EXPERIENCE PROGRAM OF INDUSTRIAL ARTS (continued)

What types of work do you dislike? _____

Will you be available to work after school? _____ On Saturday _____

What subjects do you need to graduate? _____

Teacher Comments

1. Student Strengths or Deficiencies

2. Would you recommend this student for vocational training? Why?

3. Would you consider this student a potential drop-out? Why?

4. Comment on student's personality and attitude.

Counselor Appraisal

If not enough space available, please use back of sheet

APPENDIX C, EXHIBIT XVII

TRAINING PLAN FOR COOPERATIVE

WORK EXPERIENCE IN INDUSTRIAL ARTS

_____ (Name of student) _____ (Age) _____ (Grade)

_____ (Industrial Occupation) _____ (Training Station)

_____ (Person responsible for training) _____ (Number of weeks in training)

HOURS:	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
In School	____	____	____	____	____	____
Training Center	____	____	____	____	____	____

Beginning Wages: $_____ per hr. Starting date: _____

TRAINING CENTER OUTLINE

KNOWLEDGE-OPERATIONAL SKILLS-ABILITIES	HOURS P*	HOURS C**
DATE _____ TOTAL HOURS		

* Planned
** Completed

APPENDIX C, EXHIBIT XVII (con'd)

Provisions

1. The school shall be responsible for providing technical and related instruction.
2. The training shall progress from job to job in order to gain experience in all phases of the occupation listed above.
3. The schedule of compensation shall be set by the center and in line with other employees of like experience and ability.
4. The Industrial Arts instructor will assist in the adjustment of problems.
5. The parent shall be responsible for conduct of student.
6. The student agrees to perform his duties at the training center and in school diligently and faithfully.
7. The student shall have the same status as other employees and the training may be terminated for the same reasons as any other employee.
8. No regular employee shall be laid off to train the student.
9. If the student drops out of school, he will not be employed by the training center for a period of less than 90 days.

OCCUPATIONAL COURSE OF STUDY

INFORMATION UNITS OF INSTRUCTION IN OCCUPATIONAL AREA	HOURS P*	HOURS C**
DATE _____ TOTAL HOURS		

* Planned
** Completed

(Student) (Employer)

(Parent or Guardian) (Industrial Arts Instructor)

(Chairman of Advisory Committee) (High School Principal)

APPENDIX C, EXHIBIT XVIII

ME

I am _____

_____

I would like to _____

_____

Sometimes I think _____

_____

If only _____

_____

When I like someone, it's because _____

_____

I show that I like others by _____

_____ _____

My best friend is _____

Elementary School is _____

Teachers are _____

Education is important because _____

When I get older, I _____

Something I find hard to do is _____

_____

If I could do what I wanted to do now I'd _____

_____

Someone I think is great is _____

APPENDIX C, EXHIBIT XIX

Exemplary Program for Occupational Preparation

Student's Work Report

Week Ending _____
Student _____
Firm _____
Department _____
Supervisor _____

Please describe the various types of work you have done this week.

_____
_____
_____
_____

On what type of work did you spend most of your time during the past week?

_____
_____
_____

How would you rate your overall performance during the past week on the job?

Very Good _____ Good _____ Satisfactory _____ Poor _____

What instructions do you need to improve your performance on the job?

_____
_____
_____
_____

Are you happy in the area where you are working?
Yes _____ No _____
Do you feel that you are learning on the job?
Yes _____ No _____
Has anything occurred that would require an immediate conference? Yes _____ No _____

Comments:

APPENDIX C, EXHIBIT XIX (con'd)

" Things to Think about when making Occupational or Vocational Decisions "

1. **What do I like about this job?**

2. **How much training is required?**

3. **How much education is required?**

4. **What physical characteristics are required?**

5. **Is there a need for these type workers?**

6. **What are the working conditions?**

7. **What are the possibilities for promotion?**

8. **Is the salary usually good?**

9. **Do I meet the physical and mental requirements?**

10. **Does anyone else feel I will be successful at this job?**

11. **Does the job require special abilities for dealing with people?**

12. **What type work have you done which is related to this occupation?**

APPENDIX C, EXHIBIT XI

THIS IS TO SEE HOW YOU FEEL ABOUT SOME THINGS. THERE ARE NO RIGHT OR WRONG ANSWERS. CIRCLE EITHER THE YES OR NO ACCORDING TO HOW YOU FEEL.

1.	When you finish school do you want to work?	YES	NO
2.	Do you think all jobs are important?	YES	NO
3.	Do you think people who work are happy?	YES	NO
4.	When you get a job do you think you will be a good worker?	YES	NO
5.	Do you think people should work hard?	YES	NO
6.	Should all grown-ups work?	YES	NO
7.	Would you like to have a summer job when you are old enough?	YES	NO
8.	Would you like to do an important job?	YES	NO
9.	Should people who have families have to work?	YES	NO
10.	Should people get money who don't work?	YES	NO
11.	Do you think anybody really wants to work?	YES	NO
12.	Will you just work hard enough to get by?	YES	NO
13.	Do you think you should work to get money?	YES	NO
14.	Do you think people who work help other people?	YES	NO
15.	Do you like adults who don't work?	YES	NO
16.	Do you like adults who work?	YES	NO
17.	Do you think people work just for money?	YES	NO
18.	Should people ever do a job they don't enjoy?	YES	NO
19.	Do you think people who work are unhappy?	YES	NO
20.	Do you think people who work make lots of friends?	YES	NO

APPENDIX C, EXHIBIT XXI

An Exemplary Program for Occupational Preparation

WHY FATHERS WORK

I. Directions: Answer as many of the film related questions as possible.

A. What different kinds of jobs are shown on the film?

B. Is Mr. Kimball's life at work very different from his life at home?

C. How do the Kimballs spend their Saturday's together?

D. What things do they do together?

APPENDIX C, EXHIBIT XXI

E. How do the Kimballs spend their paycheck?

II. Directions: Answer as many of the following questions as you can.

A. What do <u>you</u> do together with your family?

B. What does your father do for a living?

C. What kinds of jobs do the fathers of your friends have?

D. What is the difference between the things we need, and the things we want?

E. What would happen to your city if everyone stopped working?

APPENDIX C, EXHIBIT XXII

Exemplary Vocational Materials

Housed Within Each School

I. Living With Your Family

A. What Is A Family?
B. The Family Has A New Baby
C. A Day With Your Family
D. Family Fun

II. Community Workers and Helpers - Group I

A. Doctor's Office Workers
B. Library Workers
C. School Workers
D. Supermarket Workers

III. Community Workers and Helpers - Group II

A. Department Store Workers
B. Fire Department Workers
C. Hospital Workers
D. Television Workers

IV. Food,Clothing, and Shelter

A. How We Get Our Homes
1. Planning the Home
2. Building the Foundation
3. Building the Shell of the Home
4. Finishing the Home

B. How We Get Our Clothing
1. The Story of Cotton
2. The Story of Wool
3. The Story of Leather
4. The Story of Rubber

C. How We Get Our Foods
1. The Story of Milk
2. The Story of Bread
3. The Story of Fruits and Vegetables
4. The Story of Meat

V. Foundations for Occupational Planning

A. Who Are You?
B. What Do You Like To Do?
C. What Is A Job?
D. What Are Job "Families"?
E. What Good Is School?

APPENDIX C, EXHIBIT XXII (con'd)

Exemplary "World of Work" Books

Housed Within Each School

SERIES I

LET'S TAKE AN AIRPLANE RIDE
LET'S GO TO THE ZOO
LET'S GO TO THE SUPERMARKET
LET'S BUILD A HOUSE
LET'S VISIT THE FIRE STATION

SERIES II

LET'S VISIT A SHIP
LET'S GO TO THE FAIR
LET'S TAKE A BUS TRIP
LET'S GO TO THE DOCTOR'S OFFICE
LET'S VISIT THE POLICEMAN

SERIES III

LET'S VISIT THE POST OFFICE
LET'S VISIT A TV STATION
LET'S VISIT A FARM
LET'S GO TO SCHOOL
LET'S GO CAMPING

SERIES IV

LET'S VISIT THE RAILROAD
LET'S VISIT THE NEWSPAPER
LET'S VISIT A SPACESHIP
LET'S VISIT THE TELEPHONE COMPANY

SERIES V

LET'S PUBLISH A BOOK
LET'S VISIT MEXICO CITY
LET'S VISIT THE DAIRY
LET'S VISIT THE HOSPITAL
LET'S VISIT THE BANK

SERIES VI

LET'S VISIT AN ELECTRIC COMPANY
LET'S VISIT A RUBBER COMPANY
LET'S VISIT A MINING COMPANY
LET'S VISIT AN OIL REFINERY
LET'S VISIT A PAPER MILL

SERIES VII

LET'S VISIT A FURNITURE COMPANY
LET'S VISIT A SILVER COMPANY
LET'S VISIT A BAKERY
LET'S CHOOSE A PET
LET'S VISIT A FLOWER SHOP

APPENDIX C, EXHIBIT XXIII

EXEMPLARY VOCATIONAL FILMSTRIPS

Available to Schools On Loan

Grades K-3

Purpose: To establsih the importance of the World of Work, by showing how everyday learning and living is made possible through "occupations" - in terms of the knowledge needed to perform these jobs.

AN INTRODUCTION:
"Wally, the Worker Watcher"

OCCUPATIONAL BEGINNINGS:
"The Newspaper Boy"
"The Junior Home-Maker"

THE UTILITY WORKERS.
Electrical Services, covering:
The Meter Reader - Appliance Repairman - Overhead Lineman
The Instructors
Gas and Oil Servicers, covering:
The Meter Reader - Oil Delivery - Furnace Repairman
The Instructors
Telephone Servicers, covering:
The Installer - The Repairman - The Outside Worker
The Instructors

HOME SERVICERS:
Mail Delivery
Dairy Product Delivery

RETAIL STORE WORKERS:
Drug Store
Super-market
Service Station

Grades 4-6

Purpose: To further extend the horizons of young students in relation to the World of Work, by showing how specific occupations relate to the socio-economic development of almost everyone within their sphere of acquaintanship beginning with their parents and/or guardian.

AN INTRODUCTION:
"What Else do Fathers Do?"
"Just What do Mothers Do?"

IMPORTANCE OF THE "HAND" AS THE IMPLEMENTER:
"It's in your Hands"

APPENDIX C, EXHIBIT XXIII (con'd)

OCCUPATIONAL CLUSTER "THUMBNAILS"?

UTILITIES
"The Electrical Workers"
"The Gas and Oil Workers"
"The Telephone Workers"

DISTRIBUTIVE OCCUPATIONS
"Marketing - Advertising - Salesmanship - Sales Promotion - Transportation - Packaging - Purchasing"

OFFICE OCCUPATIONS
"Typing - Secretarial - Filing - Data Processing - Management

NATURAL RESOURCES
"Agri-business - Farming - Horticulture - Conservation

PERSONAL SERVICES
"Cosmetology - Hair Dressing - Restaurant - Cleaning - Tailoring

TECHNICAL & INDUSTRIAL
"Manufacturing - Engineering - Machine Shop - Processing Instrumentation

HOME ECONOMICS
"Personal Relations - Nutrition - Home Management - Finances Basic Health Care

HEALTH SERVICES
"Doctor and Dentist - Para-Medics - Nursing - Pharmacy

A DAY WITH YOUR FAMILY

WORKING IN U.S. COMMUNITIES
"New Orleans - Marketing Community"
"San Francisco - Financial Community"
"Detroit - Manufacturing Community
"Chicago - Transportation Community

FILM

WHY FATHERS WORK (14 minutes)

APPENDIX C, EXHIBIT XXIV

Exemplary Program for Occupational Preparation

General Guidelines for Field Trips

1. The number of students taking a field trip should be limited to not less than fifty-five, and not more than sixty in order to assure full utilization of bus space and compliance with driver insurance regulations.

2. Parental involvement on field trips is encouraged. (At least two per bus)

3. A telephone call should be made the day before the trip to remind the company of your visit.

4. A thank-you letter by the students or teacher would be appreciated. (See sample below)

SAMPLE THANK YOU LETTER SENT TO THE BUSINESSES, AGENCY OR SCHOOL AFTER THE TRIP.

Dear Sir:

The students and staff of _____
(Name of school)
thank you for the courtesy and attention you offered us

on our visit to _____.
(Name of place visited)
It was a most valuable experience for us. The cooperation

of people like yourself is vital for building the citizens

and workers of tomorrow's society.

Thank you,

Leonard C. Belton
Elementary Vocational Advisor

APPENDIX C,
EXHIBIT XXIV (Con'd)

Exemplary Program for Occupational Preparation

Possible Field Trip Entries

Place	Contact	Students
American Sugar Company	Public Relations 271-5331	5th Grades & Abov
American Tel. & Tel. Company	Public Relations 522-4722	
Bunny Bread Bakery	Public Relations 241-1206	
Blue Plate Foods Company	Inez Nunphy 488-6634	4th Grades & Above
City Hall, Mayor's Office	Frank Bertucci 522-6191	
Delgado Trade School	John Cain 486-5403	
Flint Goodridge Hospital	Mrs. Weil 899-4521	
Lakeside Shopping Center	(No Contact Needed)	
Main Post Office	P. J. Bachers 527-2201	5th Grades & Above
Major Industrial Areas of City	(Bus Ride)	
National Airlines	Edward Plaeger 729-3616	
N. O. International Airport	(No Contact Needed)	
Oakwood Shopping Mall	(No Contact Needed)	
Times Picayune Company	Public Relations 521-7325	5th Grades & Above
Union Passenger & Bus Terminal	Mr. Hahn 524-8541	
Walker Roemer Dairies	Mrs. Murphy 887-4170	Closed on Wed.
Walking Tour of French Quarter	(No Contact Needed)	
Wylon Beauty Products	525-6377	

APPENDIX C, EXHIBIT XXV

Fieldtrip

Interview Questions

1. Where did you go on your fieldtrip?

2. Did you have a guide to show you around?

3. What did you like most about your trip?

4. Was there anything that you did not like about your fieldtrip? If so, what?

5. Where else would you like to go to see people working on jobs?

APPENDIX C, EXHIBIT XXV (con'd)

Please identify your profession by placing an (x) in the proper space.

Administrator _____
Counselor _____
Teacher _____

This questionnaire is an attempt to get your opinion on some of the questions that have arisen concerning the use of vocational information in schools. We are interested only in your agreement or disagreement with the following statements, not in the truth or falsity of them. In some cases you may feel that you do not have enough information to make a judgement; in such instances we would like you to make the best judgement possible. Please read each statement and respond to it in terms of your personal agreement or disagreement according to the following plan.

Strongly Agree	Moderately Agree	Moderately Disagree	Strongly Disagree
A	B	C	D

Please select the letter indicating your choice.

1. Vocational guidance should be provided to all children at the elementary level. _____ _____

2. Providing occupational information to elementary school children will help them in choosing their high school courses. _____ _____

3. The making of career decisions begins in the elementary school. _____ _____

4. The elementary school curriculum should be altered in order that a specified time be devoted to the study of career information. _____ _____

5. Vocational information at the elementary level should be imparted through the use of games, plays, clubs, assembly programs, audio-visual aids and excursions ____ _____

6. The elementary school is the ideal level at which vocational guidance should begin _____ _____

7. The success of the guidance program at the elementary level depends largely on the amount of involvement of the classroom teacher. _____ _____

APPENDIX C, EXHIBIT XXV (con'd)

8. Career information in the elementary school should be presented to students by the counselor rather than by the teacher. _____ _____

9. Occupational information has a claim to a place in the elementary school curriculum just as any other information and knowledge. _____ _____

10. The elementary grades are the ideal level at which children should learn about the dignity of work. _____ _____

11. Junior and senior high school counselors can be more effective with students who have received career information in the elementary grades. _____ _____

12. Elementary schools providing ineffective vocational guidance may be contributing to future social problems. _____

13. A school program designed to provide occupational information should include a study in values. _____

14. In my school, teachers are sufficiently equipped with knowledge of the world of work to provide information about a number of occupations to their students. _____

15. There is sufficient vocational information available in my school to assist students in making educational plans and career decisions. _____ _____

APPENDIX C, EXHIBIT XXVI

Name: _____ Date: _____

What are your hobbies?

H O W W E L L D O Y O U K N O W Y O U R S E L F?

When you go for an interview, you will be asked many questions about yourself. You will have to have answers ready. Here are some questions that you surely will be asked and for which you must know the answers:

1. Your name, address, and telephone number.
2. The name of the high school you attended and for how long.
3. The subject you liked best in high school.
4. (a) Whether you have any hobbies.
   (b) What they are.
5. Why you are looking for the kind of work for which you are being interviewed.
6. The kind of jobs you had before and the reason for leaving your last job.
7. Names, addresses, and phone numbers of at least three people who know you and can be asked to give references.
8. Any physical defects you may have, such as poor eyesight, poor hearing, lameness, or any other.

Test yourself to see if you know all the answers now. Write your answer to each of the above points of information you are expected to know. Be sure to match the numbers correctly.

1. _____

_____

2. _____

_____

3. _____

_____

4. (a) _____

_____

(b) _____

_____

5. _____

_____

6. _____

_____

7. _____
Name:

_____
Address:

_____
Name:

_____
Address:

_____
Name:

_____
Address:

8. _____

_____

VT 019 484
JONES, DOLORES
AN EXPERIMENT IN KANSAS VOCATIONAL SCHOOLS.
CO-ORDINATED OCCUPATIONAL COMMUNICATIONS.

KANSAS STATE DEPT. OF EDUCATION, TOPEKA.
MF AVAILABLE IN VT-ERIC SET.
PUB DATE - JUL72 105P.

DESCRIPTORS - *EDUCATIONAL EXPERIMENTS; EXPERIMENTAL PROGRAMS; STANDARDIZED TESTS; *VOCATIONAL EDUCATION; *COMMUNICATION SKILLS; *PROGRAM COORDINATION; INSTRUCTIONAL STAFF; INSTRUCTIONAL INNOVATION; *EDUCATIONAL RESEARCH
IDENTIFIERS - *KANSAS; EDUCATIONAL AWARENESS; EMPLOYMENT SKILLS

ABSTRACT - THE ARTIFICIAL FRAGMENTATION OF SUBJECT MATTER CAN CREATE SERIOUS PROBLEMS FOR VOCATIONAL STUDENTS WHO HAVE DIFFICULTY GRASPING THE RELATIONSHIP BETWEEN BASIC ACADEMIC SKILLS OF COMMUNICATION AND THEIR PRACTICAL APPLICATION IN OCCUPATIONAL LEARNING. THIS STUDY ATTEMPTED TO COORDINATE THE TWO FIELDS THROUGH CAREFULLY STRUCTURED COURSE PLANNING, USING THE STUDENT'S "BUILT-IN" MOTIVATION TO LEARN OCCUPATIONAL COMMUNICATIVE SKILLS. A WORKSHOP TO PREPARE INSTRUCTORS WAS FOLLOWED BY THE TEACHING PHASE OF THE EXPERIMENT. STUDENTS INVOLVED IN THE EXPERIMENT WERE GIVEN A BATTERY OF STANDARDIZED TESTS, THE MCGRAW-HILL BASIC SKILLS SYSTEM (MHBSS) TO DETERMINE STUDENT NEEDS AND TO SERVE AS A MEASURE FOR THE EXPERIMENT'S SUCCESS. THE MHBSS BATTERY WAS AGAIN ADMINISTERED TO THE STUDENTS AFTER SEVERAL MONTHS OF EXPOSURE TO THE COORDINATED TEACHING OF OCCUPATION-COMMUNICATION SKILLS. STATISTICS REVEAL A SIGNIFICANT INCREASE OF MOST STUDENTS IN THE VARIOUS EXPERIMENTAL STATIONS. THE SUCCESS OF THE PROGRAM TRIGGERED THE DEVELOPMENT OF PLANS FOR AN EXPANDED PROGRAM, STRESSING BETTER TRAINING FOR PERSONNEL INVOLVED IN THE TEACHING OF BASIC SKILLS IN THE VOCATIONAL CLASSROOM. (KH)

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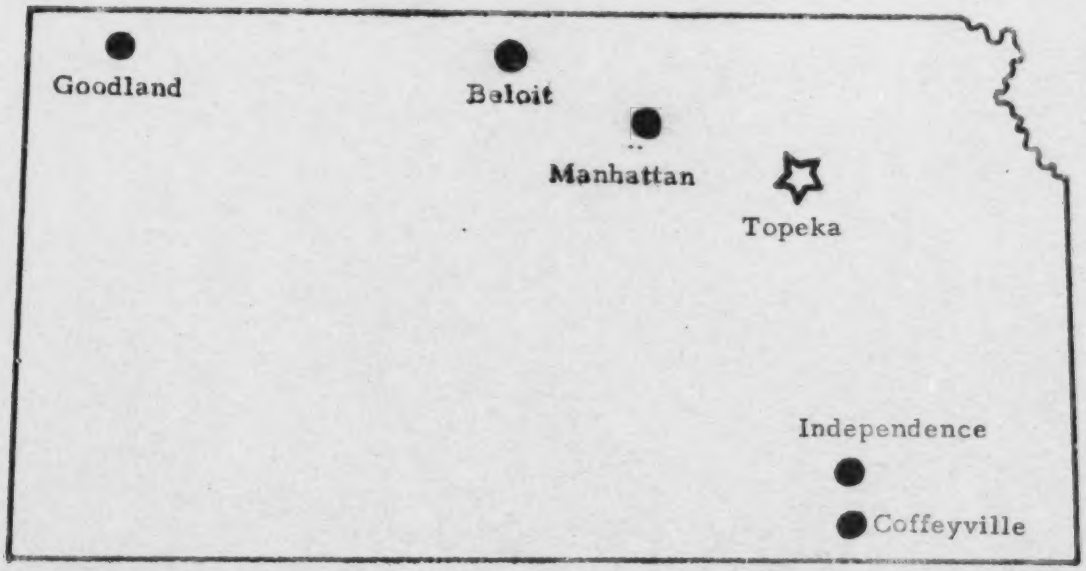
Co-ordinated Occupational Communications



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TOPEKA, KANSAS

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U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

AN EXPERIMENT IN KANSAS VOCATIONAL SCHOOLS

PREFACE

Since my life had been spent working in a variety of occupations before I went into teaching, I had never really envisioned educational skills as being anything except practical skills. However, convincing traditionally trained and academically orientated school personnel that these skills could be practically applied required more effort than I had anticipated. Because most instructors have never actually worked at any job other than teaching, few have given any consideration to the practical applications for the material they teach. Furthermore, the great majority of instructors, by using the traditional lecture method of instruction, have never allowed their students to explore beyond that teacher's limited knowledge. Compounding this dilemma, most administrators of our educational system began their careers as teachers and they, too, are unaware of the practical needs of the students. Therefore, in attempting to initiate a program such as CO-ORDINATED OCCUPATIONAL COMMUNICATIONS, I am deeply indebted to a few educators who understand the basic educational philosophy of helping the student become as self-sufficient as possible, and who are willing to combat the stiffling atmosphere of traditional academic snobbery. Mr. Wilbur Rawson, Director of Special and Exemplary Needs, Kansas State Department of Vocational Education, provided funds

that made this experiment possible; Richard Taylor, Dean of Adult and Occupational Education, Independence Community Junior College, provided faith in the teaching method and the opportunity for classroom testing; Bonnie B. Cox, instructor at Independence Community Junior College, provided not only endless hours of typing but more importantly, provided creative assistance throughout the total experiment. Perhaps the greatest indebtedness goes to those students who were enrolled in the program. Because they saw its relevance, they became the program's most enthusiastic promoters thereby providing me with the moral support necessary to carry it through.

Dolores Jones
July, 1972

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INTRODUCTION

A serious weakness in our American educational system is the artificial fragmentation of subject matter and the isolation of our faculties that typifies the usual school curriculum. This weakness has become so traditionally embedded in our educational system that various departments have developed a limited philosophy that has all but forgotten the basic aims of education--allowing the student to become as self-sufficient as possible.

James E. Allen, Jr., Assistant Secretary for Education in the Department of Health, Education, and Welfare, said in an address before the 1970 Convention of Secondary School Principals:

> One of the most serious flaws in our educational system has been its ironclad separation of academic and vocational preparation. . . When academic disciplines are taught in terms of their practical applications, formulas can become real to people not ordinarily attuned to abstractions.

This limited philosophy created by this fragmentation of subject matter becomes intensified when applied to the vocational technical schools. For it is an accepted fact that in today's educational programs we are finding that occupational education is playing a greater role in many students' educational plans. It is also generally accepted that many occupational students are adept at learning occupational skills but are not motivated to acquire the formalized or "academic" skills necessary for them to be successful in their careers. Too often

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the student not only has difficulty in reading and writing, but refuses to recognize the necessity for overcoming this difficulty. This obstacle not only handicaps him in the classroom and shop but makes it virtually impossible for him to upgrade his career in any way.

Statement of the Problem

We can no longer ignore the fact that by isolating our faculties, we limit thousands of occupational students in achieving the necessary self-sufficiency. No longer can the occupational instructor say a student need not read and write to be a carpenter. On the other hand, English departments must face the fact that thousands of students have not learned adequate reading and writing skills in the English classroom. By traditionally isolating ourselves both departments are responsible for the occupational student having difficulty in understanding the relationship between basic skills and their practical application.

Need for the Study

In an effort to help the thousands of students that have been handicapped by the traditional separation of subject matter and faculty, the Kansas Vocational School System--which includes fourteen vocational school areas and nineteen junior college vocational departments--began research to overcome this serious educational flaw. Called CO-ORDINATED OCCUPATIONAL COMMUNICATIONS, the research started by developing experimental occupational classes in which the course planning was so

carefully structured that the student's "built-in" motivation to learn occupational skills could be utilized to instruct the communicative skills necessary for him to be successful in his career.

Since none of the vocational schools in Kansas employ an English teacher and since the English departments in the Kansas junior colleges are traditionally separated from the vocational departments, the initial problem associated with the research was to coordinate the two fields. During the spring semester of the 1971 school year, two experimental classes were conducted at the Junior College in Independence, Kansas, in which the communication skills were incorporated into the occupational class plans. It was discovered that when necessary communication skills are taught in terms of their practical applications and students are encouraged to work as fast as their individual learning ability and motivation will permit, they can not only more readily recognize the problems existing within their own occupational field, but at the same time they can increase their proficiency in the necessary communicative skills.

From evidence gathered in these two experimental classes, a pilot project was proposed and the Vocational Education Division, Kansas State Department of Education, granted a sum of money for a study of this problem. Under the coordination of Mr. Wilbur Rawson, Director of Special Needs and Exemplary Programs; Mr. Richard Taylor, Dean of Adult and Occupational Education, ICJC; and Mrs. Dolores Jones, English instructor, ICJC, the first phase of the research was begun in the summer of 1971. (Attached as Appendix A is a copy of the original proposal)

ORIGINAL GRANT

Workshop Phase

The first phase in carrying out this pilot project called for a workshop to be conducted at the Independence Community Junior College from July 22 to July 30, 1971, for a select few vocational and junior college teachers. The occupational instructors selected by Rawson and Taylor were Virginia Cannon, from Manhattan Vocational School; William Hamlin and Frank Fitzgerald, from Coffeyville Vocational School; Jim Paulsen, from Goodland Vocational School; Rex Quackenbush, from Beloit Vocational School; and Bonnie B. Cox from Independence who represented the vocational business department at the junior college level. These individuals represented fields ranging from auto mechanics to electronics and were selected because of their unique teaching methods and variety of classroom assignments. Their selection provided a broad geographic range for this experiment and made available as diverse a student population as it is possible to find in the vocational schools in the state of Kansas. During the workshop phase, each teacher was to design a teaching syllabus that would meet the needs of his students and that the teacher could use in his own occupational classroom beginning in the fall of 1971. (A copy of the workshop syllabus is attached to this study as Appendix B.)

Goals

The first two days of the workshop were spent acquainting the occupational instructors with goals - goals that stressed helping the occupational student achieve enough communicative skill to be successful on the job. As these goals became clear to the instructors, each began to develop a list of practical communicative skills to be incorporated into his own teaching syllabus. (A copy of the list of suggested communicative skills areas is attached as Appendix C.)

Structure of the Teaching Syllabus

Adding the necessary communicative skills to the occupational syllabus was a very simple procedure. The secret of success lay simply in the planning of the course. The occupational instructors did not change their method of teaching; they merely incorporated into the class planning the communicative skills necessary for success, thereby taking advantage of the student's built-in motivation for a successful occupational career.

Using behavioral objectives for the syllabus, the occupational skills and the communicative skills were woven together. A strong emphasis was placed on the fact that they were integral and not separate skills. For example, the following objective was incorporated into the auto mechanics syllabus

> In a shop situation the student will perform the procedures of cleaning and inspecting drums and bearings. The student will record in an accurate technical vocabulary these procedures on a shop work sheet in the sequence that he performs the work.

Difficulty was experienced by some of the occupational instructors mainly because they were inexperienced in the preparation of lesson plans. They soon discovered, however, that by using behavioral objectives they could readily see how much of their teaching time had been wasted previously. They could also see how careful planning could help them overcome other problems as well. For instance, behavioral objectives also helped them with the ever-present problem of accommodating individual differences and abilities. The instructors simply designed projects and incorporated enough flexibility into their plans to provide for all levels of student ability and motivation. For example, the following statement was incorporated into the introduction of the office techniques instructor's syllabus

> A student may choose to complete the entire course at a faster pace, depending on her ability to develop the technique of analyzing problems and deciding what information is needed in order to develop appropriate solutions. No attempt will be made to be sure that all students follow the same time schedule or that all students complete the same number of assignments. If students have shown specific weaknesses in performance, then the jobs within the projects that place emphasis on these tasks may be assigned to them. On the other hand, jobs involving work in which the student has previously demonstrated proficiency may be skimmed over or even omitted.

Behavioral objectives helped the instructors understand that if he decides before he ever begins teaching exactly what it is he expects of the student, then the student is more apt to meet the instructor's expectations. (Attached as Appendix D is a "sample" syllabus.)

Teaching Phase

Pre-Testing and Description of Tests

Phase two of CO-ORDINATED OCCUPATIONAL COMMUNICATIONS began in September with the opening of classes. Every student involved in the experiment was first given a battery of standardized tests to not only discover each student's specific needs, but also to be used as a measure for the success of the experiment.

There were no standardized tests, either occupational or educational, that were completely satisfactory for this project. The McGraw-Hill Basic Skills System (MHBSS) testing series was chosen for three reasons: first, it seemed to be the broadest in scope, incorporating more areas than any other: second, it contained two versions that made it possible to pre-test and post-test the students: and third, it was geared to general educational ideas rather than occupations, and it was the basic skills that the experiment was interested in measuring rather than the technical skills. (The McGraw-Hill test series is attached as Appendix E.)

In addition to the MHBSS testing, the original proposal called for a standardized writing level test to be developed to evaluate the student's written communication ability. This writing level test was discovered to be invalid because no provisions had been made for determining the value of composition errors. For example, no agreement could be reached by authorities as to what value should be placed on an error in punctuation.

Therefore, this particular test was abandoned. However, writing samples from the students were taken at the beginning and end of the program in most cases and were evaluated by the director of CO-ORDINATED OCCUPATIONAL COMMUNICATIONS.

The MHBSS test series contains six sections, each an academic skill: READING, VOCABULARY, STUDY SKILLS, MATHEMATICS, SPELLING, and WRITING. The difficulty level of MHBSS tests centers on grades 10 through 13, while the content comes chiefly from college academic disciplines.

The READING test is in three sections. Reading Rate and Comprehension, Skimming and Scanning, and Paragraph Comprehension. Two reading selections are contained in the Reading Rate and Comprehension test: The first selection contains material that is easy to comprehend; the second, more complicated material. Each reading selection is followed by ten test items to determine how well the student understands what he has just read. The Skimming and Scanning portion of the READING test measures how well the student can obtain information quickly from printed material without actually reading all of it. Reference information covering various types of information is provided. The student is asked to read the question, then flip through the reference materials to find the answer. The Paragraph Comprehension section of the test measures the following skills: recognition of the main idea, recognition of details, understanding of general principles, discovery of paragraph organization and structure, and evaluation of tone and intent.

The VOCABULARY test is in two sections: Word Knowledge and Word Parts. The Word Knowledge contains a representative sample of the specialized vocabulary used in a variety of disciplines: physical sciences, the social sciences, the biological sciences, and the arts and humanities. Items are constructed to measure the meanings of these words. The student's task is to choose the correct meaning from the four given for each word. The Word Parts section contains word parts selected from studies of the utility of affixes and roots. To ensure that knowledge of word parts is measured rather than knowledge of the whole words, artificial words were created from word parts with well-established meanings. The student's task is to determine which one of the four meanings given would best define the artificial word.

The STUDY SKILLS test is designed to indicate the readiness of the student to make the transition from high school to college--to an environment where he must evaluate new ideas, develop correct study techniques, and make efficient use of his time. The test is divided into four parts: Problem Solving, Underlining, Library Information, and Study Skills Information. Part I, Problem Solving, contains items which represent situations that require the application of various problem solving techniques. The student must use one of the following problem solving techniques in order to arrive at a solution: classification, qualification, structure analysis, operation analysis, or analogy. Part II, Underlining, contains ten reading passages which have already been underlined.

This part of the test is intended to measure the student's mastery of effective underlining techniques. This skill is dependent on the ability to analyze the structure of the material being read. Correct underlining reveals the central ideas and supporting examples in the passage and conveys the same meaning as the whole passage. It, therefore, enables the student to review study material quickly and easily without rereading all of it. The student's task in Part II is to read the passage, then to determine whether the underlining is too much, incomplete, a misrepresentation of the text, or correct. Part III, Library Information, contains items to measure the student's proficiency in using the library.

The MATHEMATICS test contains material on arithmetic, elementary algebra, and intermediate algebra. It contains no geometry, no trigonometry and no calculus.

The SPELLING test contains fifty items, composed of one or two sentences. The student's task is to determine which one, if any, of the underlined words in each item is misspelled.

The WRITING test contains three parts. Language Mechanics, Sentence Patterns, and Paragraph Patterns. The Language Mechanics consists of two short compositions, each of which contains underlined words or phrases. The student must decide whether the underlined material is correct or contains errors in capitalization, punctuation, or grammar. The Sentence Patterns contains a variety of item types; the student must identify sentence types according to sentence fragment; simple, compound,

or complex sentences. The Paragraph Patterns contains items which represent paragraphs and require the student to recognize the relationship between the sentences in a paragraph in terms of development of thought. The student must choose the appropriate topic sentence for a paragraph, choose the appropriate developing sentences for a given topic sentence, and choose appropriate concluding sentence for a paragraph. In working other items, the student must determine which senience is out of order. Finally, he is to read through groups of sentences in order to indicate where each group should be divided into paragraphs.

In a completely unrelated experiment, these same tests were administered to all entering freshmen at Independence Community Junior College. Since the student body at ICJC was typical of the junior college students throughout the state of Kansas and the vocational students in CO-ORDINATED OCCUPATIONAL COMMUNICATIONS were typical of the vocational technical students in Kansas, it was hoped that these test results could be utilized as a control for the CO-ORDINATED OCCUPATIONAL COMMUNICATIONS experiment. However, since both the pre- and post-test versions of the ICJC freshman class were administered with no control by each particular freshman composition teacher and since these composition teachers had designed their teaching materials to include information that would be covered in the post-test version of the tests, the idea of using this group as a control group for CO-ORDINATED OCCUPATIONAL COMMUNICATIONS was not feasible.

Interestingly enough, the pre-test results of this freshman group revealed that these students and the vocational students in the CO-ORDINATED OCCUPATIONAL COMMUNICATIONS experiment were approximately the same level students with both groups ranking in the 40th percentile. Vocational, 46.7 and Junior College, 47.3 (Attached as Appendix F is information concerning these junior college classes.)

Three Approaches to Teaching

The actual teaching of the planned syllabus was approached from three different angles. In one instance, the English teacher was present in the classroom at all times to aid the student at any moment he desired help with a communication problem while the occupational instructor was present at the same time to aid with any technical problems. In another situation, the English teacher was available to the occupational student in a writing laboratory. The student chose his own time for any help from the English teacher. In other instances, the occupational teacher taught the necessary communicative skills himself.

These three different teaching angles came about accidentally. The original program called for each teacher involved in the experiment to embed communicative skills in his syllabus and then teach and grade. But very early in the experiment it was discovered that too much work was involved. Some teachers were unable to teach both the technical and the communicative skills and other teachers were not adequately qualified to teach the communicative skills. Therefore, in October, 1971, the Kansas State Department of Vocational Education granted funds to hire qualified individuals for grading and tutoring services for any teacher involved in the experiment who wanted them.

The computerized accounting teacher at Manhattan who had an extremely high student load and many class preparations, hired Mrs. Dorothy Morris who was qualified in the business teaching and counseling areas and who had a minor in English. Mrs. Morris' assistance turned out to be so effective that a new position was opened in the school and she was hired full time to aid all teachers in that system.

The Coffeyville program, which involved two teachers--one in auto mechanics and one in drafting--hired Mr. Harold Sappenfield, a retired English teacher, for a total of eight hours a week. He spent four hours per week with each instructor. Mr. Sappenfield was in the classroom with the drafting teacher and used the related class period in the auto mechanics classroom. He was needed in the drafting class because of the heavy student load of the teacher and in the auto mechanics class because of the exceedingly low level ability of the students enrolled.

The drafting-related math teacher at Goodland did not hire an assistant because the enrollment was somewhat small and because he was equipped and able to handle the communicative skills himself.

RESULTS AND INTERPRETATION OF TESTS

To interpret the results of the pre- and post-tests, source cards (a copy of which is attached as Appendix G) that contained all of the raw scores for each of the tests in the MHBSS test series were set up for each individual student. From these source cards, information was key punched into data processing cards. A program was then designed by Mr. Thurman Thompson of the ICJC mathematics department to correlate with the MHBSS percentile rankings and to provide a read-out of this information. Once the post tests had been administered, this information was added to the previously punched cards to provide the statistics that are used in this study. These statistics concerning the pre- and post-percentile results for each occupational area, the number of students tested, their average age, number of students who increased their communicative proficiency, and the number of students who decreased their communicative proficiency are revealed in the following self-explanatory tables.

TABLE I

NUMBER OF STUDENTS TESTED

Occupational Area	Pre-Tested	Dropped	Transferred	Jobs	Other	Post-Tested
AUTO MECHANICS						
Section 1	16	4	1	0	0	11
Section 2	14	1	0	5	0	8
COMPUTERIZED ACCOUNTING	67	7	1	0	3	56
DRAFTING	41	1	0	24	0	16
ELECTRONICS*	39				12	27
OFFICE TECHNIQUES						
Section 1	24	3	0	0	0	21
Section 2	13	2	1	1	0	9
RELATED	10	2	0	1	0	7
TOTALS	224	20	3	31	15	155

*The Electronics instructor failed to submit records showing disposition of the 12 students who were not post-tested. However, it is known that several of these 12 students were placed on the job.

TABLE II

SEX AND AVERAGE AGE

Occupational Area	Number of Male Students	Number of Female Students	Average Age
AUTO MECHANICS			
Section 1	16	0	15.1
Section 2	14	0	17.5
COMPUTERIZED ACCOUNTING	16	51	20.3
DRAFTING	33	8	19.2
ELECTRONICS	38	1	21.2
OFFICE TECHNIQUES			
Section 1	0	24	19.2
Section 2	0	13	20.0
RELATED	10	0	22.0

TABLE III

TOTAL PERCENTILE RANK
AND
PERCENTILE INCREASE
FOR
PRE- AND POST-TESTS

Occupational Area	Pre-Tested	Post-Tested	Difference
AUTO MECHANICS			
Section 1	14	28	+14
Section 2	25	29	+ 4
COMPUTERIZED ACCOUNTING	54	68	+14
DRAFTING	36	45	+ 9
ELECTRONICS	31	48	+17
OFFICE TECHNIQUES			
Section 1	52	67	+15
Section 2	53	59	+ 6
RELATED	45	68	+23
Average	39	51	+13

All figures have been rounded off.

As shown in Table III, pre-tests demonstrated a percentile ranking of a low of 14 in the auto mechanics area and a high of 54 in computerized accounting with an overall average of 39 for all areas. Post-testing demonstrated that there was a percentile rank increase of 13 in every area ranging from 4 in auto mechanics to 23 in related which brought the overall percentile rank increase to 13.

TABLE IV

PERCENTILE RANK RESULTS OF THE MHBSS
READING TEST

Occupational Area	RATE 1--EASY			RATE 2--DIFFICULT			FLEXIBILITY			RETENTION			SKIMMING AND SCANNING			PARAGRAPH COMPREHENSION			TOTALS		Ave.
	Pre-Test	Post-Test	Inc. Dec.	Pre-Test	Post-Test	Inc. Dec.	Pre-Test	Post-Test	Inc. Dec.	Pre-Test	Post-Test	Inc. Dec.	Pre-Test	Post-Test	Inc. Dec.	Pre-Test	Post-Test	Inc. Dec.	Pre-Test	Post-Test	Inc. Dec.
AUTO MECHANICS																					
Section 1	11	38	+27	14	49	+35	29	46	+17	35	48	+13	27	17	-10	15	24	+9	18	19	+1
Section 2	11	51	+40	40	37	- 3	37	49	+12	54	56	+ 2	55	50	- 5	4	49	+15	37	45	+8
COMPUTERIZED ACCOUNTING	31	56	+25	32	50	+18	49	62	+13	56	61	+ 5	64	72	+ 8	59	57	- 2	61	69	+8
DRAFTING	39	53	+14	56	62	+ 6	53	47	- 6	52	54	+ 2	56	70	+14	54	49	- 5	54	63	+9
ELECTRONICS	42	39	- 3	40	49	+ 9	52	48	- 4	35	49	+14	49	63	+14	32	44	+12	34	54	+20
OFFICE TECHNIQUES																					
Section 1	44	51	+ 7	49	45	- 4	51	64	+13	48	61	+13	64	80	+16	54	56	+ 2	56	68	+12
Section 2	56	59	+ 3	51	57	+ 6	68	60	- 8	52	58	+ 6	70	67	- 3	45	41	- 4	54	60	+ 6
RELATED	50	65	+15	49	47	- 2	55	62	+ 7	64	75	+11	58	80	+22	58	54	- 4	61	76	+15

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The Rates of Reading section of the test gives two measures of reading rate: one on easy material and one on difficult material. The Rate Flexibility (the difference between the two rates) indicates the extent to which the student adapts his rate of reading to the complexity of the material. Skimming and Scanning scores reflect the number of correct responses made during a ten minute time limit. A high score may be caused by (1) a careful, rigid, word-by-word attack that takes too long to be efficient; (2) a lack of skill in using reference materials and cues for locating information; or (3) a high error rate due to careless response patterns. Paragraph Comprehension measures the ability of the student to comprehend the printed paragraphs. A high score indicates that the student has a good command of the six comprehension skills areas measured in this section.

TABLE V

PERCENTILE RANK RESULTS OF THE
MHBSS SPELLING TEST

upational Area	Pre-Tested	Post-Tested	Increase/Decrease
TO MECHANICS			
ection 1	17	20	+3
ection 2	17	24	+7
COMPUTERIZED ACCOUNTING	61	69	+8
DRAFTING	25	26	+1
ELECTRONICS	32	37	+5
OFFICE TECHNIQUES			
Section 1	68	76	+8
Section 2	58	58	0
RELATED	63	63	0

The MHBSS Spelling test is a recognition-type test. Studies of the relationship between dictation-type spelling tests and recognition-type spelling tests have shown very high correlation between the two types of measure. It may be assumed that in most cases a student who scores low on this recognition test can be expected to produce many misspellings in his written work.

As shown in Table V, pre-tests demonstrated that six areas increased their percentile rank in spelling by an average of 5, with two areas--office techniques, ection 2 and related--remaining the same.

TABLE VI

PERCENTILE RANK RESULTS OF THE
MHBSS VOCABULARY TEST

Occupational Area	Pre-Tested	Post-Tested	Increase/Decrease
AUTO MECHANICS			
Section 1	15	25	+10
Section 2	19	32	+13
COMPUTERIZED ACCOUNTING	56	53	- 3
DRAFTING	19	21	+ 2
ELECTRONICS	33	42	+ 9
OFFICE TECHNIQUES			
Section 1	53	52	- 1
Section 2	51	57	+ 6
RELATED	58	63	+ 5

The total score on the Vocabulary test reflects the student's performance on both sections of the test. Word knowledge requires the student to recognize the meanings of words and word parts requires a knowledge of affixes and roots. A high score on the test indicates that a student is familiar with the meanings of many words and word parts. A low score is more difficult to interpret. The following three possible situations (or combinations of them) might be considered in interpreting a low score:

1. The student may simply not know the meanings of words and/or word parts because of limited ability, some specific learning disability, or deprived social or cultural background.

2. When extremely low scores are encountered, an examination of the answer sheet may reveal that the student worked so slowly on the test that he did not finish enough items to warrant a good score. The time limit is ample for almost all students, but an occasional student who is extremely slow and methodical will finish only part of the test.

3. A very few students may have low scores because they have trouble "sounding out" the words on the test. Severely retarded readers might know the meanings of the words on the test if they hear the words, but are not able to recognize them in print. Such students will show other evidence of weak reading skills if reading tests are administered to them.

Table VI demonstrates that six areas increased their percentile rank in vocabulary by an average of 7. Two areas decreased the percentile rank by an average of 2. This decrease might be attributed to the fact that the MHBSS test is composed of general vocabulary items and no attempt was made to measure the students' increase in occupational vocabulary.

TABLE VII

PERCENTILE RANK RESULTS OF THE
MHBSS STUDY SKILLS TEST

Occupational Area	PROBLEM SOLVING			UNDER-LINING			LIBRARY INFORMATION			STUDY SKILLS			TOTALS		
	Pre-Test	Post-Test	Inc. Dec.	Pre-Test	Post-Test	Inc. Dec.	Pre-Test	Post-Test	Inc. Dec.	Pre-Test	Post-Test	Inc. Dec.	Pre-Test	Post-Test	Inc. Dec.
AUTO MECHANICS															
Section 1	31	23	- 8	21	62	+41	14	40	+26	8	51	+43	8	25	+17
Section 2	26	27	+ 1	30	31	+ 1	18	23	+ 5	26	24	- 2	15	16	+ 1
COMPUTERIZED ACCOUNTING	47	55	+ 8	51	46	- 5	39	52	+13	53	59	+ 6	46	60	+14
DRAFTING	44	30	-14	27	58	+31	32	35	+ 3	16	56	+40	20	39	+19
ELECTRONICS	41	35	- 6	46	43	- 3	28	24	- 4	33	24	- 9	29	36	+ 7
OFFICE TECHNIQUES															
Section 1	46	45	- 1	57	50	- 7	49	54	+ 5	68	56	-12	62	53	- 9
Section 2	54	38	-16	44	51	+ 7	33	41	+ 8	48	50	+ 2	40	43	+ 3
RELATED	53	58	+ 5	35	68	+33	40	58	+18	38	54	+16	40	64	+24

The Problem Solving section of the test gives information about the student's ability to analyze a problem, classify the elements in it, and apply logical processes to reach a solution. A low-scoring student is more likely to be disorganized in his approach to solving a problem; he may jump to conclusions or fail to use all of the relevant information or apply faulty logic. The Underlining section requires the student to recognize whether or not a passage is correctly underlined. A low score reflects a need for information and practice in underlining techniques which a student should master in order to mark a textbook for future review. Library Information contains items that measure the student's familiarity with library procedures. A low score suggests that the student lacks information on how to make efficient use of the library and reference materials. Study Skills Information is similar to an achievement test that may be given in a "How to Study" course. A low score means that the student does not know how to study efficiently.

Table VII demonstrates an overall average increase in study skills by 9.5 percentile. It should be pointed out, however, that there is reason to question the validity of the auto mechanics (Section I class) study skills test results. It is felt that there was a possibility of some cheating on this particular test. This table demonstrates the difficulty of obtaining exact test materials. Every instructor involved in this experiment had embedded problem solving into his teaching syllabus and practically every area decreased their percentile rank according to this section of the MHBSS study skills test. However, the instructors had embedded narrative problem solving into their syllabi and the test measured visual comparison problem solving.

Included in the MHBSS test series is a battery of test questions that indicate an inventory of study habits. These questions are designed to reveal what the student "thinks" his capacity for study is. Quite often this score is completely unrealistic when compared to his actual measured ability. Ideally, his actual study skills and what he thinks he can do should be somewhat compatible. The following table compares the total of his actual study skills ability and the inventory of his study habits.

TABLE VIII

COMPARISON OF THE MHBSS INVENTORY OF STUDY HABITS AND THE MHBSS STUDY SKILLS TEST

Occupational Area	Study Habits Pre-Test	Study Skills Pre-Test	Comparison	Study Habits Post-Test	Study Skills Post-Test	Comparison
AUTO MECHANICS						
Section 1	FIGURES NOT AVAILABLE FOR THIS SECTION					
Section 2	39	15	-24	33	16	-17
COMPUTERIZED ACCOUNTING	67	46	-21	64	60	- 4
DRAFTING	81	20	-61	78	39	-39
ELECTRONICS	50	29	-21	61	36	-25
OFFICE TECHNIQUES						
Section 1	74	62	-12	66	53	-13
Section 2	64	40	-24	79	43	-36
RELATED	44	40	- 4	60	64	+ 4

Table VIII demonstrates that the pre-tests indicated an average difference in actual study skills and study habits of 24 percentile while post-tests show an average difference of 18 percentile. It is interesting to note that this more compatible figure came about as a "spin-off" to the teaching method. In no area was there a deliberate attempt to incorporate study skills into the teaching syllabus.

TABLE IX

PERCENTILE RANK RESULTS OF THE
MHBSS MATH TEST

Occupational Area	ARITHMETIC Pre-Test	ARITHMETIC Post-Test	ARITHMETIC Inc. Dec.	ELEM. ALGEBRA Pre-Test	ELEM. ALGEBRA Post-Test	ELEM. ALGEBRA Inc. Dec.	INT. ALGEBRA Pre-Test	INT. ALGEBRA Post-Test	INT. ALGEBRA Inc. Dec.	TOTAL SCORE Pre-Test	TOTAL SCORE Post-Test	TOTAL SCORE Inc. Dec.
AUTO MECHANICS												
Section 1	FIGURES NOT AVAILABLE FOR THIS SECTION											
Section 2	25	20	- 5	34	28	- 6	38	42	+ 4	28	24	- 4
COMPUTERIZED ACCOUNTING	52	55	+ 3	52	55	+ 3	53	55	+ 2	37	35	+ 4
DRAFTING	40	35	- 5	47	33	- 14	39	31	- 8	43	33	- 10
ELECTRONICS	53	58	+ 5	45	44	- 1	34	44	+10	47	49	+ 2
OFFICE TECHNIQUES												
Section 1	55	59	+ 4	63	61	- 2	45	52	- 7	53	56	+ 3
Section 2	FIGURES NOT AVAILABLE FOR THIS SECTION											
RELATED	76	74	- 2	62	71	+ 9	44	82	+38	57	77	+20

The Mathematics test contains material on arithmetic, elementary algebra, and intermediate algebra. It contains no material on geometry, trigonometry, nor calculus. If a student's total score on the math test is low, it would indicate that the student does not have a good command of the basic math skills and remedial work should be considered.

Table IX demonstrates that three areas increased their percentile rank in the arithmetic section of the MHBSS tests while three areas decreased. Only two areas increased their percentile rank in elementary algebra while four areas decreased. Five areas increased in the intermediate algebra section while one area decreased. It should be noted that very little math was embedded into the auto mechanics syllabus and a limited amount in the office techniques syllabus. This table points up the need for math revisions in all these syllabi. It also points to the necessity for radical revisions in math instruction in the drafting area. The related drafting instructor raised the rank by 20 percentile by carefully embedding practical math into his syllabus.

TABLE X

PERCENTILE RANK RESULTS OF THE MHBSS WRITING TEST

Occupational Area	Lang. Pre-Test	Mech. Post-Test	Inc. Dec.	Sent. Pre-Test	Patt. Post-Test	Inc. Dec.	Para. Pre-Test	Patt. Post-Test	Inc. Dec.	TOTALS Pre-Test	Post-Test	Inc. Dec.
OFFICE TECHNIQUES												
Section A	45	56	+11	53	59	+6	53	59	+6	52	61	+9
Section B	51	58	+ 7	54	62	-8	56	56	0	57	61	+4

The MHBSS writing test was given only to the Office Techniques sections at Independence Community Junior College because this test was being administered to all entering freshmen at ICJC.

AUTO MECHANICS

Community Characteristics:

The Southeast Kansas Area Vocational Technical School, located at Coffeyville, Kansas, was chosen for the auto mechanics phase of this experiment. Coffeyville is situated three miles from the Oklahoma border. It is an economically depressed area with a population of approximately 17 thousand. There are several small industries located in the city but its primary source of income is from farming.

School Characteristics:

The school facility itself, while old and dilapidated, still provides adequate equipment and materials for the auto mechanics program. The department is housed in the main school building, and a cooperative auto mechanics program is carried out with Coffeyville and Independence high schools and junior colleges.

Administration Characteristics:

The administration in this school was cooperative throughout the experiment and appeared highly interested in the results of the study.

Course/Classroom Characteristics:

The auto mechanics course is composed of nine units. To accommodate student ability, these units are taught through the cooperation of three instructors. Each instructor teaches his portion of the units each nine weeks. At the end of each nine-week period, these units are repeated.

This allows students to enter at any nine-week period and not miss any instruction. It also allows the student to repeat any unit in which he is weak or in which he would like to become more proficient.

Unit IV, automotive brakes, as used in this experiment, covers the essentials that the student will need to succeed in an automotive brake shop or that he will need to be an overall automotive technician. This unit is covered in a three-week section and is based upon the AUTO MECHANICS SERVICE textbook by Stockel.

This unit provides the student with the basic knowledge needed for an understanding of the replacement of brake shoes and lining, honing wheel cylinders, turning drums, rebuilding wheel cylinders and master cylinders, brake bleeding and adjustments, so that he can perform in the automotive shop.

The student is also subjected to recordkeeping and sequential listings using the accurate technical vocabulary to enhance his advancement opportunities in the automotive parts or supervisory fields.

The student is evaluated by written tests, performance tests, attendance, cooperation, attitude, and his ability to communicate in the classroom. He is also evaluated on his ability to keep adequate records and sequential lists of job work sheets. His grade is comprised of one third related and two thirds shop performance.

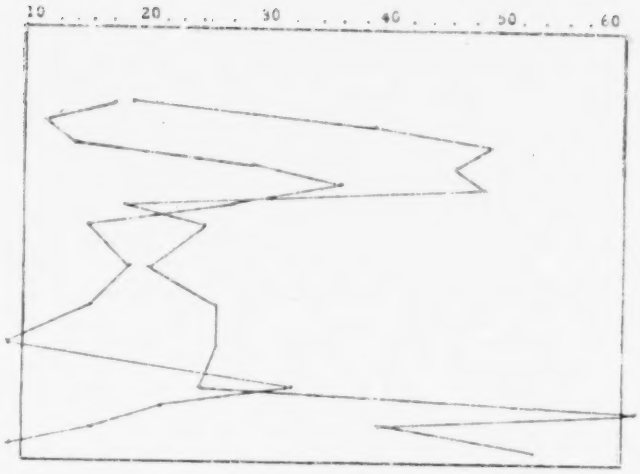
A related English instructor was hired at this school for four hours a week to aid the instructor in the communicative skills requirements.

AUTO MECHANICS (Section 1)

CLASS AVERAGES

PRE-TEST S.R.A.
(Standardized)

%	
18	Reading %ile Rank
11	Reading Rate (Easy)
14	Reading Rate (Difficult)
29	Reading (Flexibility)
35	Reading (Retention)
27	Skimming and Scanning
15	Paragraph Comprehension
17	Spelling %ile Rank
15	Vocabulary %ile Rank
8	Study Skills %ile Rank
31	Problem Solving
21	Underlining
14	Library Information
8	Study Skills Information*



POST-TEST S.R.A.
(Standardized)

%	
19	Reading %ile Rank
38	Reading Rate (Easy)
49	Reading Rate (Difficult)
46	Reading (Flexibility)
48	Reading (Retention)
17	Skimming and Scanning
24	Paragraph Comprehension
20	Spelling %ile Rank
25	Vocabulary %ile Rank
25	Study Skills %ile Rank
23	Problem Solving
62	Underlining
40	Library Information
51	Study Skills Information

*There is reason to doubt the validity of the Study Skills Test. It is felt that cheating occurred on this particular test.

INSTRUCTOR CHARACTERISTICS: Mr. Bill Hamlin teaches in conjunction with two other teachers. They have divided their course outline into sections, with each teacher specializing in a portion of the total auto mechanics program. For the purposes of this study only the "brake" section of the auto mechanics program was used. Mr. Hamlin maintained a high interest in the COC program throughout the experiment.

STUDENT CHARACTERISTICS. The students were from small towns within the vocational school district. During the first semester the students ranked in the 14th percentile. The instructor experienced numerous discipline problems with the students. The instructor believed that most of the problems stemmed from the low-level ability of these students. However, during the semester, two students were discovered to have serious visual problems and one student, who had been a discipline problem, did very well when properly counseled into a business class at another school.

TABLE XI

CHANGES IN PERCENTILE RANK FOR INDIVIDUAL SCORES
AUTO MECHANICS (Section 1)

	Number of Students Whose Score Increased	Number of Students Whose Score Remained The Same	Number of Students Whose Score Decreased
READING %ILE RANK	4	1	6
Reading Rate (Easy)	10	1	0
Reading Rate (Difficult)	9	2	0
Reading (Flexibility)	8	0	3
Reading (Retention)	8	1	2
Skimming and Scanning	3	1	7
Paragraph Comprehension	5	1	4
SPELLING %ILE RANK	5	0	3
VOCABULARY %ILE RANK	7	0	1
STUDY SKILLS %ILE RANK	7	1	0
Problem Solving	8	0	0
Underlining	8	0	0
Library Information	6	0	2
Study Skills Information	6	0	2
INVENTORY OF STUDY HABITS AND ATTITUDES %ILE RANK	5	0	1

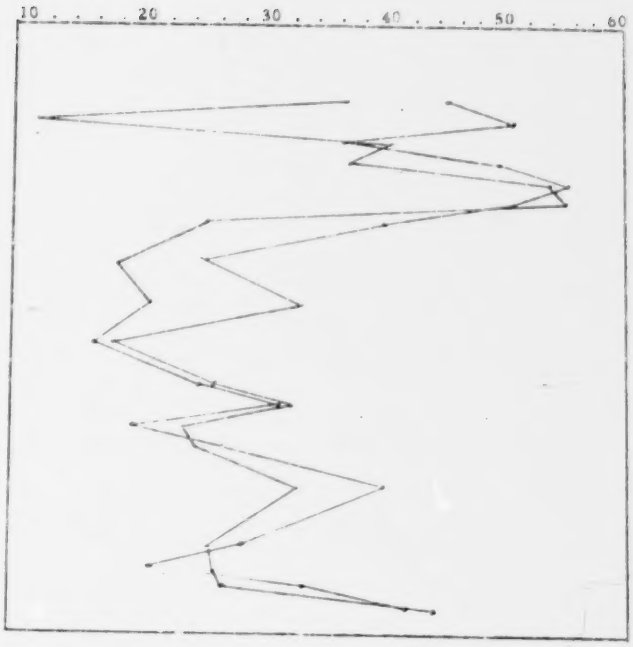
Number of students tested will vary because not all students were post-tested in every category of testing

AUTO MECHANICS (Section 2)

CLASS AVERAGES

PRE-TEST S. R. A.
(Standardized)

%	
37	Reading %ile Rank
11	Reading Rate (Easy)
40	Reading Rate (Difficult)
37	Reading (Flexibility)
54	Reading (Retention)
55	Skimming and Scanning
25	Paragraph Comprehension
17	Spelling %ile Rank
19	Vocabulary %ile Rank
15	Study Skills %ile Rank
26	Problem Solving
30	Underlining
18	Library Information
26	Study Skills Information
39	Inventory of Study Habits and Attitudes %ile Rank
28	Mathematics %ile Rank
20	Arithmetic
32	Elementary Algebra
38	Intermediate Algebra



POST-TEST S. R. A.
(Standardized)

%	
45	Reading %ile Rank
51	Reading Rate (Easy)
37	Reading Rate (Difficult)
49	Reading (Flexibility)
56	Reading (Retention)
50	Skimming and Scanning
40	Paragraph Comprehensi
24	Spelling %ile Rank
32	Vocabulary %ile Rank
16	Study Skills %ile Rank
27	Problem Solving
31	Underlining
23	Library Information
24	Study Skills Information
33	Inventory of Study Habits Attitudes %ile Rank
24	Mathematics %ile Rank
25	Arithmetic
26	Elementary Algebra
42	Intermediate Algebra

STUDENT CHARACTERISTICS: Students ranked in the 26th percentile and were mostly post high school students. There were no discipline problems present in this class.

TABLE XII

CHANGES IN PERCENTILE RANK FOR INDIVIDUAL SCORES
AUTO MECHANICS (Section 2)

	Number of Students Whose Score Increased	Number of Students Whose Score Remained The Same	Number of Students Whose Score Decreased
READING %ILE RANK	5	0	3
Reading Rate (Easy)	8	0	0
Reading Rate (Difficult)	3	0	5
Reading (Flexibility)	5	0	3
Reading (Retention)	3	0	5
Skimming and Scanning	3	1	4
Paragraph Comprehension	6	0	2
SPELLING %ILE RANK	8	0	0
VOCABULARY %ILE RANK	6	0	2
STUDY SKILLS %ILE RANK	6	0	2
Problem Solving	4	0	4
Underlining	2	0	6
Library Information	5	1	2
Study Skills Information	5	1	2
INVENTORY OF STUDY HABITS AND ATTITUDES %ILE RANK	4	2	2
MATHEMATICS %ILE RANK	2	0	6
Arithmetic	0	0	8
Elementary Algebra	1	2	5
Intermediate Algebra	4	0	4

Number of students tested will vary because not all students were post-tested in every category of testing

COMPUTERIZED ACCOUNTING

Community Characteristics.

The Manhattan Area Vocational Technical School, located in the city itself is approximately 50 miles from Topeka. It is an urban community which derives its income from industries and farm related activities.

School Characteristics.

The school facility is new. However, because of the extremely high enrollment in the experimental class, crowded conditions created a problem for this teacher. Ample materials and equipment were available for the computerized accounting course.

Administration Characteristics.

The administration was extremely cooperative throughout the program, allowing the combined CO-ORDINATED OCCUPATIONAL COMMUNICATIONS group to use the campus facilities for meetings during the experiment. They expressed much interest in the outcome of the experiment.

Course/Classroom Characteristics.

The computerized accounting program is designed to introduce the beginning accounting student to the problem-solving capacity of the computer. It can be used in conjunction with most contemporary introductory accounting texts.

At the outset, the computer will help the beginning student to learn by means of a set of magnetically-memorized business procedures called

"programs." These programs have been stored in the computer. The student, with no prior knowledge of programming, can call upon these programs to journalize, post, and prepare trial balances.

The exercises in this course are designed so that the student may delve deeper into a topic than typical texts or classroom presentations allow and may proceed at his own rate of speed. He uses his creative thinking about accounting principles and theory to enter original data on key-punched cards. The computer is used to make the tedious, routine computations which usually provide little, if any, learning experience for the student.

If the student finds he is weak in a particular phase of the course, he can supplement the exercises provided in the COMPU-GUIDE by making up his own data and using the same programs called for in solving similar exercises. The possibilities are limited only by the student's interest, time, and imagination.

Computerized accounting is designed to implement these learning principles. Each chapter of COMPU GUIDE contains an exercise which allows the student to involve himself actively by applying his own data to an accounting problem using the variables in the computer programs. The student can be encouraged to repeat and reinforce his accounting experiences on similar types of exercises as often as his time and interest permits. Computer print-outs quickly provide answers for the student's key-punched data.

This philosophy of computerized accounting encompasses four primary goals:

1. To permit the students of accounting to become more informed users of available computer products and facilities.

2. To use the computer as a tool to better understand the accounting material being studied.

3. To save the time of faculty and students.

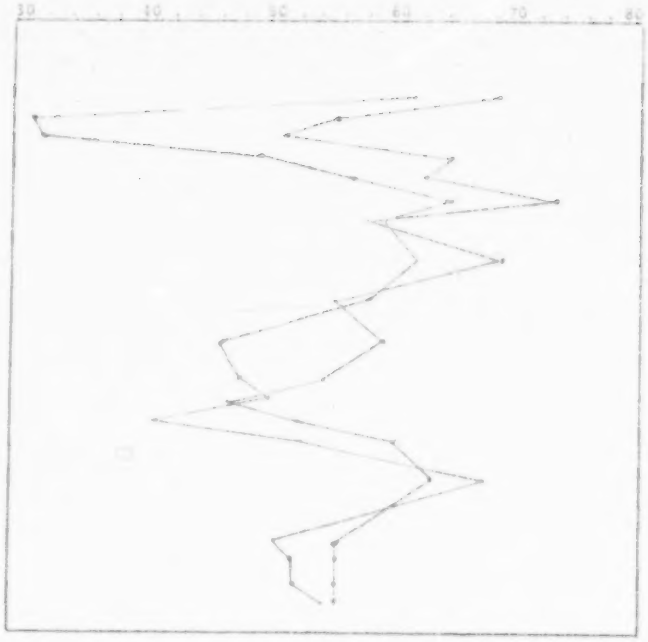
4. To include some quantitative analysis in the basic accounting course.

The students had access to a full-time related communications instructor throughout the course.

COMPUTERIZED ACCOUNTING

CLASS AVERAGES

PRE-TEST S.R.A. (Standardized) %		POST-TEST S.R.A. (Standardized) %	
61	Reading %ile Rank	69	Reading %ile Rank
31	Reading Rate (Easy)	56	Reading Rate (Easy)
32	Reading Rate (Difficult)	50	Reading Rate (Difficult)
49	Reading (Flexibility)	62	Reading (Flexibility)
56	Reading (Retention)	61	Reading (Retention)
64	Skimming and Scanning	72	Skimming and Scanning
59	Paragraph Comprehension	57	Paragraph Comprehension
61	Spelling %ile Rank	69	Spelling %ile Rank
56	Vocabulary %ile Rank	53	Vocabulary %ile Rank
46	Study Skills %ile Rank	60	Study Skills %ile Rank
47	Problem Solving	55	Problem Solving
51	Underlining	46	Underlining
39	Library Information	52	Library Information
53	Study Skills Information	59	Study Skills Information
67	Inventory of Study Habits and Attitudes %ile Rank	64	Inventory of Study Habits Attitudes %ile Rank
51	Mathematics %ile Rank	55	Mathematics %ile Rank
52	Arithmetic	55	Arithmetic
52	Elementary Algebra	55	Elementary Algebra
53	Intermediate Algebra	55	Intermediate Algebra



INSTRUCTOR CHARACTERISTICS: Mrs. Virginia Cannon was highly involved with the program and incorporated a great many communicative problems within her syllabus. She was overloaded because of the high student enrollment and popularity of her classes and because her classes were innovative. It was mainly because of this overload that a study skills coordinator was hired to assist this instructor with grading and necessary paper work involved. This instructor was visited by the director of COC three times during the course of the experiment; she visited once in Independence for consultation with the COC director.

STUDENT CHARACTERISTICS: The students averaged in the 60th percentile and were all post high school urban students. Both data processing and accounting students were involved in this experimental station. Eighteen data processing students received instruction for 24 weeks; and stenographic students, for 12 weeks. Some of the students involved in this program competed in the state accounting contest and placed first, second, and fourth. The first-place winner went on to place first in the nation in accounting competition.

TABLE XIII

CHANGES IN PERCENTILE RANK FOR INDIVIDUAL SCORES
COMPUTERIZED ACCOUNTING

	Number of Students Whose Score Increased	Number of Students Whose Score Remained The Same	Number of Students Whose Score Decreased
READING %ILE RANK	36	1	16
Reading Rate (Easy)	49	1	3
Reading Rate (Difficult)	39	1	13
Reading (Flexibility)	39	0	14
Reading (Retention)	29	0	24
Skimming and Scanning	33	3	17
Paragraph Comprehension	22	4	27
SPELLING %ILE RANK	37	2	13
VOCABULARY %ILE RANK	30	2	20
STUDY SKILLS %ILE RANK	40	1	10
Problem Solving	29	2	20
Listening	35	1	15
Library Information	33	2	16
Study Skills Information	29	0	22
INVENTORY OF STUDY HABITS AND ATTITUDES %ILE RANK	20	9	22
MATHEMATICS %ILE RANK	35	2	15
Arithmetic	35	20	17
Elementary Algebra	24	2	26
Intermediate Algebra	32	0	20

Number of students tested will vary because not all students were post-tested in every category of testing

DRAFTING

Community Characteristics:

The Southeast KansasArea Vocational Technical School, located at Coffeyville, Kansas, was chosen for the drafting phase of this experiment. Coffeyville is situated three miles from the Oklahoma border. It is an economically depressed area with a population of approximately 17 thousand. There are several small industries located in the city but its primary source of income is from farming.

School Characteristics:

The school facility itself, while old and dilapidated, still provides outstanding equipment and materials for the drafting program. A co-operative drafting program is carried out with Coffeyville and Independence high schools and junior colleges.

Administration Characteristics:

The administration in this school was cooperative throughout the experiment and appeared highly interested in the results of the study.

Course/Classroom Characteristics:

This course is designed to develop engineering and production support personnel for industry. The principal emphasis is concentrated in the field of drafting, including several areas of specialization.

Related subjects cover applied mathematics through trigonometry, basic physics, hydraulics, pneumatics, an introduction to materials of industry, elementary surveying, notekeeping and technical report writing.

The subject matter and the classroom activities are designed to duplicate as nearly as possible the conditions and procedures used in industry.

Students with prior drafting or work experience are pre-tested and allowed to proceed with more advanced work without repeating materials already covered. Through the processes of individual scheduling and tutoring each student is permitted to advance at his own speed. Each drawing or project is graded when completed, by the student and the grade verified by the instructor, thus giving immediate reinforcement at the conclusion of each project.

Individual responsibility is stressed at every opportunity. The student is trained in the proper use and care of professional quality precision equipment and the use of reference books, catalogs, and files because they are essential to individual responsibility and professional opportunity. The student will also practice the communicative skills by the writing and study of standard engineering letters, forms, reports, instruction and parts manuals in addition to the pictorial communications.

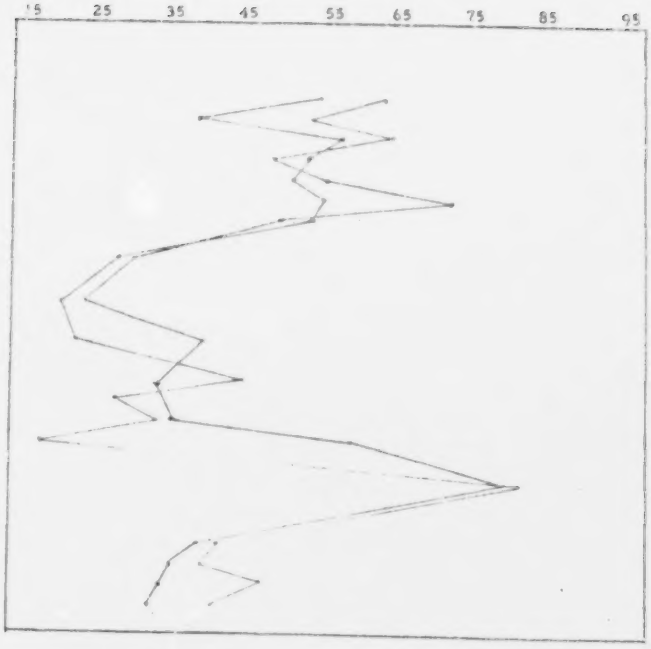
A related English instructor was hired at this school for four hours a week to aid the instructor in the communication skills requirements.

DRAFTING

CLASS AVERAGES

PRE-TEST S. R. A.
(Standardized)

%	
54	Reading %ile Rank
39	Reading Rate (Easy)
56	Reading Rate (Difficult)
53	Reading (Flexibility)
52	Reading (Retention)
56	Skimming and Scanning
54	Paragraph Comprehension
25	Spelling %ile Rank
19	Vocabulary %ile Rank
20	Study Skills %ile Rank
44	Problem Solving
27	Underlining
32	Library Information
16	Study Skills Information
81	Inventory of Study Habits and Attitudes %ile Rank
43	Mathematics %ile Rank
40	Arithmetic
47	Elementary Algebra
39	Intermediate Algebra



POST-TEST S. R. A.
(Standardized)

%	
63	Reading %ile Rank
53	Reading Rate (Easy)
62	Reading Rate (Difficult)
47	Reading (Flexibility)
54	Reading (Retention)
70	Skimming and Scanning
49	Paragraph Comprehension
26	Spelling %ile Rank
21	Vocabulary %ile Rank
39	Study Skills %ile Rank
30	Problem Solving
58	Underlining
35	Library Information
56	Study Skills Information
78	Inventory of Study Habits and Attitudes %ile Rank
33	Mathematics %ile Rank
35	Arithmetic
33	Elementary Algebra
31	Intermediate Algebra

INSTRUCTOR CHARACTERISTICS: Mr. Frank Fitzgerald was in his last year of teaching before retirement. The instructor was extremely efficient in filing reports and highly interested in this experiment. He attended all meetings. His syllabus was outstanding and he incorporated more communications than any of the area vocational technical school instructors. The location of this school to Independence made it possible for the COC director to visit with this instructor on numerous occasions during the experiment.

STUDENT CHARACTERISTICS: The students ranked in the 36th percentile. Some of them were freshman junior college students and some were vocational students. Student population is from small towns within the vocational school district.

TABLE XIV

CHANGES IN PERCENTILE RANK FOR INDIVIDUAL SCORES
DRAFTING

	Number of Students Whose Score Increased	Number of Students Whose Score Remained The Same	Number of Students Whose Score Decreased
READING %ILE RANK	4	1	3
Reading Rate (Easy)	7	0	1
Reading Rate (Difficult)	5	0	3
Reading (Flexibility)	3	0	5
Reading (Retention)	2	0	6
Skimming and Scanning	7	0	1
Paragraph Comprehension	1	1	6
SPELLING %ILE RANK	1	0	2
VOCABULARY %ILE RANK	2	0	1
STUDY SKILLS %ILE RANK	2	0	1
Problem Solving	1	0	2
Underlining	2	0	1
Library Information	1	0	2
Study Skills Information	2	0	1
INVENTORY OF STUDY HABITS AND ATTITUDES %ILE RANK	1	1	1
MATHEMATICS %ILE RANK	1	1	3
Arithmetic	3	0	2
Elementary Algebra	0	0	5
Intermediate Algebra	1	0	4

Number of students tested will vary because not all students were post-tested in every category of testing

ELECTRONICS

Community Characteristics:

The Beloit Area Vocational Technical School was chosen for the electronics phase of this experiment. Beloit is a small rural community of about 4800 located about midway in Kansas and near the Nebraska border.

School Characteristics:

The school facility is old and dilapidated in many respects and does not provide adequate classroom or shop space. The buildings are scattered over the town of Beloit. The electronics class is housed in a new pre-fabricated building which is located at least five miles from the main campus.

Administration Characteristics:

Since this instructor failed to file any evaluations, it is impossible to comment on the attitude of the administration.

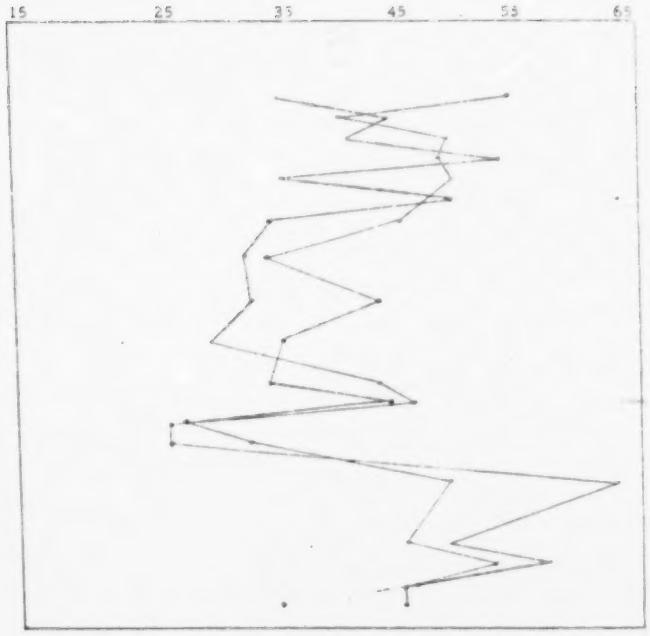
Course/Classroom Characteristics:

Since this instructor failed to file any reports, no description of the syllabus is available.

ELECTRONICS

CLASS AVERAGES

PRE-TEST S.R.A. (Standardized) %		POST-TEST S.R.A. (Standardized) %	
34	Reading %ile Rank	64	Reading %ile Rank
42	Reading Rate (Easy)	39	Reading Rate (Easy)
40	Reading Rate (Difficult)	49	Reading Rate (Difficult)
52	Reading (Flexibility)	48	Reading (Flexibility)
35	Reading (Retention)	49	Reading (Retention)
49	Skimming and Scanning	62	Skimming and Scanning
32	Paragraph Comprehension	44	Paragraph Comprehension
32	Spelling %ile Rank	37	Spelling %ile Rank
33	Vocabulary %ile Rank	42	Vocabulary %ile Rank
29	Study Skills %ile Rank	36	Study Skills %ile Rank
41	Problem Solving	35	Problem Solving
46	Underlining	43	Underlining
28	Library Information	24	Library Information
33	Study Skills Information	24	Study Skills Information
50	Inventory of Study Habits and Attitudes %ile Rank	61	Inventory of Study Habits and Attitudes %ile Rank
47	Mathematics %ile Rank	49	Mathematics %ile Rank
53	Arithmetic	58	Arithmetic
45	Elementary Algebra	44	Elementary Algebra
34	Intermediate Algebra	44	Intermediate Algebra



INSTRUCTOR CHARACTERISTICS: Rex Quackenbush, instructor for this group, did not attend the original institute and was added as a control to see what could be accomplished when an instructor expressed an "interest" in adding communicative skills to his syllabus. In addition to the textbook material and handbooks that he normally used he did incorporate special communicative skills in his syllabus. The instructor met with the other experimental teachers on only one occasion. All tests were mailed to him and he administered both pre- and post-tests to his students. The director of COC made one visit to his campus.

STUDENT CHARACTERISTICS: Students in this class were for the most part post high school students who ranked in the 30th percentile. They come from a low economic group. Very few of the students contemplated additional schooling beyond their present vocational training.

TABLE XV

CHANGES IN PERCENTILE RANK FOR INDIVIDUAL SCORES
ELECTRONICS

	Number of Students Whose Score Increased	Number of Students Whose Score Remained The Same	Number of Students Whose Score Decreased
READING %ILE RANK	22	0	5
Reading Rate (Easy)	11	3	13
Reading Rate (Difficult)	18	3	6
Reading (Flexibility)	13	0	14
Reading (Retention)	19	0	8
Skimming and Scanning	21	0	6
Paragraph Comprehension	16	0	11
SPELLING %ILE RANK	16	1	10
VOCABULARY %ILE RANK	19	0	8
STUDY SKILLS %ILE RANK	10	2	15
Problem Solving	11	0	16
Underlining	12	1	14
Library Information	9	3	15
Study Skills Information	11	1	15
INVENTORY OF STUDY HABITS AND ATTITUDES %ILE RANK	19	1	7
MATHEMATICS %ILE RANK	19	0	8
Arithmetic	20	1	6
Elementary Algebra	8	3	16
Intermediate Algebra	17	1	9

Number of students tested will vary because not all students were post-tested in every category of testing

OFFICE TECHNIQUES

Community Characteristics:

Independence Community Junior College is located in southeast Kansas. It is primarily a rural community with an older population. The average age of Independence residents is 45 years while the national average is only 26 years. It is an economically depressed area.

School Characteristics:

The facility itself is located in a campus-style setting with one of the finest equipped business departments in the state. The occupational business classrooms are designed to accommodate the students in a simulated office atmosphere.

Administration Characteristics:

The administration was cooperative in every aspect of the experiment.

Course/Classroom Characteristics:

To encourage original thinking and creative writing, the project method has been adopted for this course. The student is involved in a series of long-range, high-level assignments that do not require the memorization of facts. The student is immediately exposed to an entire situation and asked to develop a solution instead of being required to read a traditional textbook, chapter by chapter and discuss typical office relations problems, answer a series of true-false questions, and execute some simple, isolated workbook exercises.

This method permits maximum student independence and develops student responsibility for her own learning. The student is permitted freedom of interpretation, decision, and action (as well as freedom to make mistakes - and profit from them). The need for high-level skills is emphasized, of course, but primary attention is given to the development of such qualities as initiative, judgment, and the ability to plan work in order to meet deadlines. And although the development of managerial skills is stressed, the student is not allowed to lose sight of the fact that she is training for the secretarial--not the executive--role in business.

The projects used in this course are patterned as closely as possible on current business problems facing office workers in various types of employment. The student may complete from one to seven projects during a semester covering personal development, finding a job, relocating the office, handling administrative finances, planning in-service seminars, organizing meetings, and finding a secretarial replacement.

A student may choose to complete the entire course at a faster pace, depending on her ability to develop the technique of analyzing problems and deciding what information is needed in order to develop appropriate solutions. No attempt is made to be sure that all students follow the same time schedule or that all students complete the same number of assignments. If students have shown specific weaknesses in

performance, then the jobs within the projects that place emphasis on these tasks may be assigned to them. On the other hand, jobs involving work in which the students have previously demonstrated proficiency may be skimmed over or even omitted.

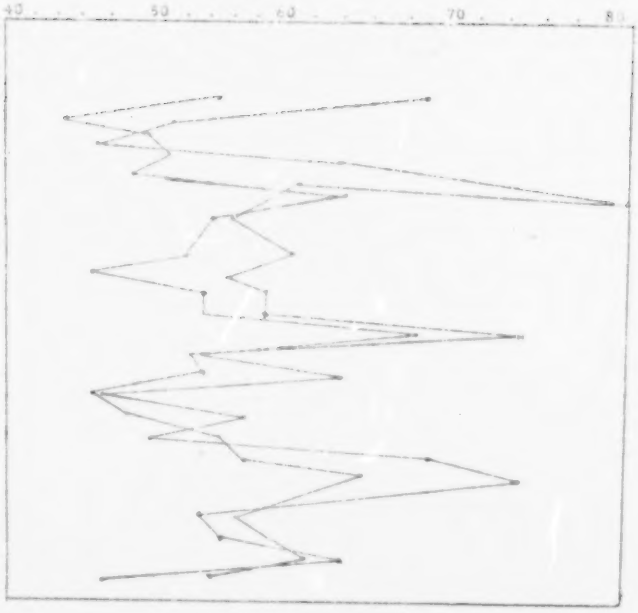
The director of the CO-ORDINATED OCCUPATIONAL COMMUNICATIONS program was present in the classroom at all times during the first semester. During the second semester a student teacher, Mrs. Paula Keck, was assigned to work directly with this class.

OFFICE TECHNIQUES (Section 1)

CLASS AVERAGES

PRE-TEST S.R.A.
(Standardized)

%	
56	Reading %ile Rank
44	Reading Rate (Easy)
49	Reading Rate (Difficult)
51	Reading (Flexibility)
48	Reading (Retention)
64	Skimming and Scanning
54	Paragraph Comprehension
52	Writing %ile Rank
45	Language Mechanics
53	Sentence Patterns
53	Paragraph Patterns
68	Spelling %ile Rank
53	Vocabulary %ile Rank
62	Study Skills %ile Rank
46	Problem Solving
57	Underlining
49	Library Information
68	Study Skills Information
74	Inventory of Study Habits and Attitudes %ile Rank
53	Mathematics %ile Rank
55	Arithmetic
63	Elementary Algebra
45	Intermediate Algebra



POST-TEST S.R.A.
(Standardized)

%	
61	Reading %ile Rank
51	Reading Rate (Easy)
45	Reading Rate (Difficult)
64	Reading (Flexibility)
61	Reading (Retention)
60	Skimming and Scanning
56	Paragraph Comprehension
61	Writing %ile Rank
56	Language Mechanics
59	Sentence Patterns
59	Paragraph Patterns
76	Spelling %ile Rank
52	Vocabulary %ile Rank
53	Study Skills %ile Rank
45	Problem Solving
50	Underlining
54	Library Information
56	Study Skills Information
66	Inventory of Study Habits and Attitudes %ile Rank
56	Mathematics %ile Rank
59	Arithmetic
61	Elementary Algebra
52	Intermediate Algebra

INSTRUCTOR CHARACTERISTICS: This instructor is the only junior college teacher involved. She helped originate the idea of the COC program and had experimented two years previously with her syllabus incorporating practical communicative skills. This instructor is popular with the students which creates a heavy student load in her teaching assignments.

STUDENT CHARACTERISTICS: Students ranked in the 52nd percentile. They were all junior college students; some were secretarial/business majors and some were non-majors. The students were from small towns or rural areas. These students received three hours credit in office techniques and three hours credit in freshman composition.

TABLE XVI

CHANGES IN PERCENTILE RANK FOR INDIVIDUAL SCORES
OFFICE TECHNIQUES (Section 1)

	Number of Students Whose Score Increased	Number of Students Whose Score Remained The Same	Number of Students Whose Score Decreased
READING %ILE RANK	12	1	6
Reading Rate (Easy)	13	0	6
Reading Rate (Difficult)	8	0	11
Reading (Flexibility)	10	1	8
Reading (Retention)	12	0	7
Skimming and Scanning	12	3	4
Paragraph Comprehension	10	0	9
WRITING %ILE RANK	13	0	6
Language Mechanics	12	0	7
Sentence Patterns	11	0	8
Paragraph Patterns	12	0	7
SPELLING %ILE RANK	13	1	5
VOCABULARY %ILE RANK	9	1	9
STUDY SKILLS %ILE RANK	6	1	11
Problem Solving	8	0	10
Underlining	10	0	8
Library Information	11	0	7
Study Skills Information	6	1	11
INVENTORY OF STUDY HABITS AND ATTITUDES %ILE RANK	4	2	12
MATHEMATICS %ILE RANK	8	1	7
Arithmetic	10	1	5
Elementary Algebra	8	2	6
Intermediate Algebra	10	0	6

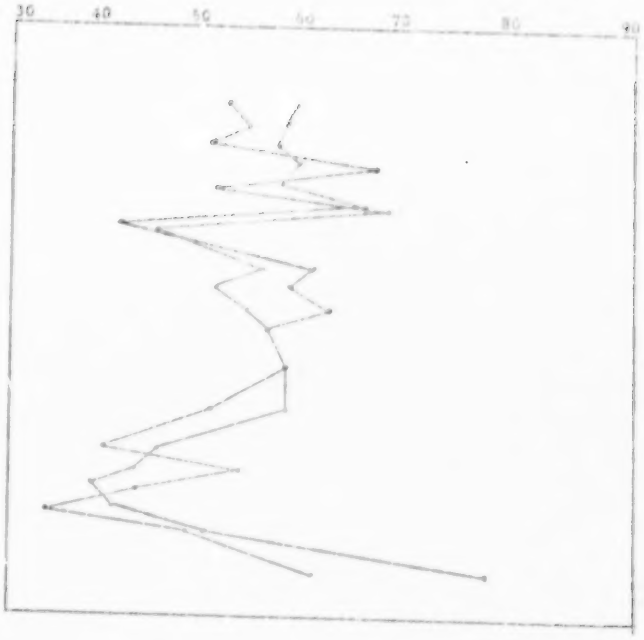
Number of students tested will vary because not all students were post-tested in every category of testing

OFFICE TECHNIQUES (Section 2)

CLASS AVERAGES

PRE-TEST S. R. A.
(Standardized)

%	
54	Reading %ile Rank
56	Reading Rate (Easy)
51	Reading Rate (Difficult)
68	Reading (Flexibility)
52	Reading (Retention)
70	Skimming and Scanning
45	Paragraph Comprehension
57	Writing %ile Rank
51	Language Mechanics
54	Sentence Patterns
56	Paragraph Patterns
58	Spelling %ile Rank
51	Vocabulary %ile Rank
40	Study Skills %ile Rank
54	Problem Solving
44	Underlining
33	Library Information
48	Study Skills Information
64	Inventory of Study Habits and Attitudes %ile Rank



POST-TEST S. R. A.
(Standardized)

%	
60	Reading %ile Rank
59	Reading Rate (Easy)
57	Reading Rate (Difficult)
60	Reading (Flexibility)
58	Reading (Retention)
67	Skimming and Scanning
41	Paragraph Comprehension
61	Writing %ile Rank
58	Language Mechanics
62	Sentence Patterns
56	Paragraph Patterns
58	Spelling %ile Rank
57	Vocabulary %ile Rank
43	Study Skills %ile Rank
38	Problem Solving
51	Underlining
41	Library Information
50	Study Skills Information
79	Inventory of Study Habits Attitudes %ile Rank

STUDENT CHARACTERISTICS: Students ranked in the 53rd percentile. They were all junior college students; some secretarial/business majors and some non-majors. The students were from small towns or rural areas.

TABLE XVII

CHANGES IN PERCENTILE RANK FOR INDIVIDUAL SCORES
OFFICE TECHNIQUES (Section 2)

	Number of Students Whose Score Increased	Number of Students Whose Score Remained The Same	Number of Students Whose Score Decreased
READING %ILE RANK			
Reading Rate (Easy)	5	0	3
Reading Rate (Difficult)	4	0	4
Reading (Flexibility)	5	2	1
Reading (Retention)	3	0	5
Skimming and Scanning	4	0	4
Paragraph Comprehension	4	1	3
	3	1	4
WRITING %ILE RANK			
Language Mechanics	6	1	2
Sentence Patterns	6	0	3
Paragraph Patterns	5	0	4
	4	0	4
SPELLING %ILE RANK	5	1	3
VOCABULARY %ILE RANK	7	0	2
STUDY SKILLS %ILE RANK			
Problem Solving	4	0	5
Underlining	2	0	7
Library Information	6	0	3
Study Skills Information	5	0	4
	4	0	5
INVENTORY OF STUDY HABITS AND ATTITUDES %ILE RANK	7	1	1

Number of students tested will vary because not all students were post-tested in every category of testing

RELATED

Community Characteristics:

The Northwest Kansas Area Vocational Technical school is located in Goodland, a somewhat isolated community of 6000. The community income is higher than average coming almost totally from farming and one major farm-related industry (sugar plant).

School Characteristics:

The school is situated in a campus-like setting with each department housed in its own individual facility. The related math room is adjacent to the drafting area. All equipment and materials are excellent.

Administration Characteristics:

The administration in this school was cooperative throughout the experiment.

Course/Classroom Characteristics:

The related course is designed for the student in the technical drafting department at NWKAVTS. The students have varied backgrounds in the related subjects, therefore, the course is designed to be as flexible as possible allowing for student ability through individualized tutoring and by its variety of methods of instruction listed below. The course stresses mathematical concepts as related to the draftsman with emphasis on problem recognition and a logical systematic solution to these problems. Because communications are essential to the student's understanding of these concepts, he will recognize the need to be able to communicate. The

students keep a daily log, class notes, book and lecture outlines in an organized manner so that these records can be utilized easily. The necessity to estimate and outline all problems before actual computation is emphasized throughout the two-year course of study.

This course is designed with the belief that objectives can best be achieved if the student is interested in the subject matter and if he is involved in something that is relevant to him. It is also believed that the student should be made aware of the responsibility he has for his actions.

In order to break away from the natural tendency to make the assignments pertinent to the instructor rather than the student, this course is also designed to be as different as possible from the traditional mathematics and communications courses. While there is a radical departure in the structure of the courses, the general goals are very similar to the traditional mathematics and communications courses. When the student has completed the two-year course he will be able to:

1. Interpret and solve problems at the engineering technician level.

2. Bridge the communications gap between the engineer and the draftsman.

3. Accept the job responsibility.

4. Be productive to the company with a minimum amount of supervision in a short length of time.

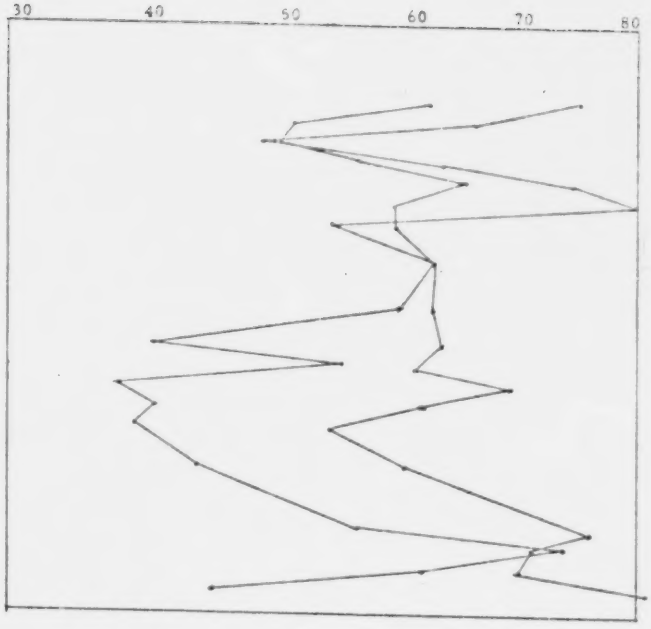
5. Strengthen his understanding of the world and his own experiences in it.

RELATED

CLASS AVERAGES

PRE-TEST S.R.A.
(Standardized)

%	
61	Reading %ile Rank
50	Reading Rate (Easy)
49	Reading Rate (Difficult)
55	Reading (Flexibility)
64	Reading (Retention)
58	Skimming and Scanning
58	Paragraph Comprehension
63	Spelling %ile Rank
58	Vocabulary %ile Rank
40	Study Skills %ile Rank
53	Problem Solving
35	Underlining
40	Library Information
38	Study Skills Information
44	Inventory of Study Habits and Attitudes %ile Rank
57	Mathematics %ile Rank
76	Arithmetic
62	Elementary Algebra
44	Intermediate Algebra



POST-TEST S.R.A.
(Standardized)

%	
76	Reading %ile Rank
65	Reading Rate (Easy)
47	Reading Rate (Difficult)
62	Reading (Flexibility)
75	Reading (Retention)
80	Skimming and Scanning
54	Paragraph Comprehension
63	Spelling %ile Rank
63	Vocabulary %ile Rank
64	Study Skills %ile Rank
58	Problem Solving
68	Underlining
58	Library Information
54	Study Skills Information
60	Inventory of Study Habits and Attitudes %ile Rank
77	Mathematics %ile Rank
74	Arithmetic
71	Elementary Algebra
82	Intermediate Algebra

INSTRUCTOR CHARACTERISTICS: Jim Paulsen was very interested in the COC program; in fact, he had done some work incorporating communicative skills before he became involved in the experiment. He had the full cooperation of the drafting instructor. He spent some time promoting the program on his campus to his fellow instructors.

STUDENT CHARACTERISTICS: These students were in the 45th percentile, were all post high school, and were enrolled in the related drafting class.

TABLE XVIII

CHANGES IN PERCENTILE RANK FOR INDIVIDUAL SCORES RELATED

	Number of Students Whose Score Increased	Number of Students Whose Score Remained The Same	Number of Students Whose Score Decreased
READING %ILE RANK	6	0	1
Reading Rate (Easy)	5	0	1
Reading Rate (Difficult)	5	0	1
Reading (Flexibility)	4	0	2
Reading (Retention)	4	0	3
Skimming and Scanning	5	0	2
Paragraph Comprehension	2	0	5
SPELLING %ILE RANK	2	1	3
VOCABULARY %ILE RANK	3	0	4
STUDY SKILLS %ILE RANK	7	0	0
Problem Solving	3	0	4
Underlining	7	0	0
Library Information	5	0	2
Study Skills Information	6	0	1
INVENTORY OF STUDY HABITS AND ATTITUDES %ILE RANK	6	1	0
MATHEMATICS	7	0	0
Arithmetic	3	0	4
Elementary Algebra	4	1	2
Intermediate Algebra	7	0	0

Number of students tested will vary because not all students were post-tested in every category of testing

PUBLICITY FOR THE COC PROGRAM

From the beginning of this experiment considerable publicity for the project was generated. The director and the participants were involved in numerous speaking engagements and visits to other facilities, and a number of publications were written. This publicity played an unexpected role in the eventual outcome of the experiment and exposed a number of areas where further research should be conducted.

Speaking Engagements

Publicity began during the time of the original institute. On August 11-15 Kansas State Teachers College (KSTC), Emporia, Kansas, held a workshop for about fifty vocational teachers in Kansas on the campus of KSTC. This workshop called "Basic Learning Skills for Vocational Education Students," was attended by all participants of this experiment. The participants were also a part of the program and presented a discussion on the project method of instruction. For the first time the concept of CO ORDINATED OCCUPATIONAL COMMUNICATIONS was presented to occupational instructors and the reaction was somewhat mixed. The participants learned from this reaction that the concept of CO-ORDINATED OCCUPATIONAL COMMUNICATIONS cannot be quickly assimilated and that great care must be taken in presentations if the idea was to be understood and its advantages implemented by vocational instructors.

With this lesson in mind, an immense amount of preparation went into a presentation on September 24, 1971, at Manhattan, Kansas. This presentation for the First Annual Seminar for Post Secondary Occupational Education had all administrators and coordinators for junior colleges, vocational technical schools, and four year colleges in attendance. The director of CO-ORDINATED OCCUPATIONAL COMMUNICATIONS and the Manhattan instructor delivered what was felt to be one of the major presentations of the year's experiment because the audience was composed of those who administrate most of the vocational programs in Kansas. A great deal of interest and publicity for CO ORDINATED OCCUPATIONAL COMMUNICATIONS was generated at this particular meeting.

On November 5, 1971, the director attended the Regional Vocational meeting at Wichita, Kansas. Mr. Wilbur Rawson spoke on the basic concepts of CO ORDINATED OCCUPATIONAL COMMUNICATIONS and was also available for questions and discussion.

On November 30, 1971, the director and two instructors from Coffeyville attended the fall regional conference for vocational instructors at Chanute, Kansas. While no institute participant was on the program, the host director, Mr. George Varley, from the Southeast Kansas Area Vocational Technical School, did discuss the experiment in his address, and all three participants discussed the CO-ORDINATED OCCUPATIONAL COMMUNICATIONS program with various vocational teachers and administrators that were in attendance.

The director, the instructor from Independence, and the student teacher assigned to the director from Kansas State College of Pittsburg, attended the KTYCEA (Kansas Two-Year College English Association) conference held at Hutchinson on October 29, 1971. As a result of this conference, numerous inquiries from English teachers throughout the state came about and the director was assigned as chairman of the research committee for this organization.

On January 9 and 10 the director attended the Kansas Association of Public Community Junior Colleges conference held in Wichita. The director served as chairman of a round table discussion on CO-ORDINATED OCCUPATIONAL COMMUNICATIONS and also set up a display describing the program. At this same meeting the director attended the business department section of the meeting and in a round table discussed the philosophy of the basic skills instructor as related to the business area.

On January 28, 1972, the director and the student teacher attended the Regional Business Occupational Conference at Hutchinson, Kansas. The director spoke on the topic "Is English Getting Your Vocational Students Down?"

On February 28, 1972, the director spoke to the faculty of the Flint Hills Area Vocational Technical School in Emporia for an in-service training program.

On March 15, 1972, the director was a guest speaker on the Kansas State University, Manhattan, Kansas, telenetwork program. This program went to vocational-technical teachers over the entire state.

Throughout the experiment the director spoke to numerous local civic groups. At the time it was felt that this was probably very limited publicity. However, the news items concerning these speaking engagements were widely read and faculties from other institutions interested in re-designing their curriculum made several visits to ICJC to get a clearer understanding of CO-ORDINATED OCCUPATIONAL COMMUNICATIONS. (Copies of the programs for these speaking engagements are attached as Appendix H.)

As a result of these speaking engagements a number of developments have come about. For example, in the fall of 1971, the directors of the vocational school at Kansas State College of Pittsburg, and the chairmen of the Education department and of the English department visited the ICJC campus to discuss the program. Following this visit, a student teacher for co-ordinated skills training was placed under the supervision of the director of the CO-ORDINATED OCCUPATIONAL COMMUNICATIONS program for the spring semester. This student teacher was carefully selected taking into consideration her personality and her work and educational backgrounds. She began training even before the second semester had started in order that she could become exceedingly well acquainted with the philosophy of vocational education. She accompanied the CO-ORDINATED OCCUPATIONAL COMMUNICATIONS director on a number of the speaking trips, and she visited, along with the director, most of the vocational technical schools in the state. As a result of this student teacher experiment, the Education, Vocational, and English departments at Kansas

State College of Pittsburg are seriously considering the establishment of an inter-departmental related program, and some enthusiasm for changing the curriculum of the training of English teachers has begun; however, much work still needs to be done in this area.

The results of the two-year English teacher conference in Hutchinson proved to be exceedingly fruitful. Evidence gathered from the research committee, chaired by the CO-ORDINATED OCCUPATIONAL COMMUNICATIONS director, indicated that from a six-state area only nine hours of composition is required for the training of the English teacher. Six of these required hours are in regular freshman composition classes with only three additional hours of composition required. Only two colleges in the whole six-state area offered classes in technical writing. These two technical writing classes are both geared for highly technical scientific writing and have no relationship whatsoever to the practical needs of the average student. Evidence such as this strongly demonstrates the need for curriculum change in English teacher training. This evidence was presented to the English department chairman at Kansas State College of Pittsburg and played a strong role in the placement of the student teacher under the supervision of the director of CO-ORDINATED OCCUPATIONAL COMMUNICATIONS. This evidence also led to the establishment of a technical writing class in that school. However, it is not part of the English teacher training curriculum.

This same research committee also investigated the testing and placement procedures for junior college students in the state of Kansas.

It was discovered that while a few junior colleges had no testing program whatsoever, the American College Testing series (ACT) was used almost exclusively in junior colleges for placement purposes. It should be noted that in a National Science Foundation (NSF) institute conducted on the University of Iowa campus in the department of statistics in the summer of 1971, it was discovered that ACT tests when compared with any other classification criteria such as background in mathematics, size of high school, level of education, honors courses, etc., proved to be the least reliable for predicting future academic achievement. It was also discovered by this Iowa group that the remedial classes designed for these ACT-placed students had no syllabus designs that were of a practical nature.

Also as a result of this KTYCEA committee, research was begun in a comparative study of the grade school reading texts and high school reading texts. While this research was not completed, it was observed that there is a big gap in levels. For example, the compound sentence is studied in the fifth grade but no reading text investigated incorporated a compound sentence until the eighth grade level. It was also observed that no publisher of textbooks makes any standardized provision for grade level materials in the texts published. Most publishers rely simply on the author of the text to provide what he considers to be the proper level. This preliminary study, which has been abandoned because the research group could not find time to pursue it, points to an immense need for correlation of materials both in level and in content.

Following each of the speaking engagements there have been numerous inquiries from administrators from all over the state of Kansas in vocational area schools, junior colleges, and four-year schools hoping to design a program such as CO-ORDINATED OCCUPATIONAL COMMUNICATIONS for their own schools. None of the speaking engagements were aimed in the direction of high school administrators.

Publications

Inquiries have also come from individual vocational teachers, particularly following the Kansas State University telenetwork program in which vocational teachers were enrolled and following the speaking engagements that were presented directly to various vocational faculties. A large percentage of the inquiries have come from English, reading, and related skills teachers who have experienced difficulty designing programs of a practical nature to accommodate their students. These were most evident following the Kansas two-year English teacher conference and following the Wichita, Kansas, professional meeting on January 9 and 10, 1972. It was at this Wichita meeting that a display was set up and a publication was presented to those interested participants. This publication called CO-ORDINATED OCCUPATIONAL COMMUNICATIONS was used throughout the state of Kansas. It contained an outline of the program along with the pre-test and post-test results of the office techniques class at ICJC that had been completed in the first semester.

One of the major sources of publicity came from students that had been enrolled in this office techniques class. These students so approved of the method of instruction that they became "recruiters" for the second semester,

and an office techniques class had to be added to the spring schedule of classes even though it had not been a planned offering. Even though CO-ORDINATED OCCUPATIONAL COMMUNICATIONS required more work, students were quick to recognize the relevance of the work required and even the slower students performed in an exemplary way.

A brochure entitled "Does English Bug You?" was designed to entice students into the vocational program at ICJC and was used and made available to approximately 600 students and their sponsors during ICJC's High School Competition Day activities. This brochure was the major contact with high school students and instructors that was made during the school year. This brochure was also used by the ICJC guidance counselor in his contacts with area high school students. As a result of these contacts, pre-enrollment at ICJC in the CO-ORDINATED OCCUPATIONAL COMMUNICATIONS program for the 1972 fall term has already exceeded expectations.

One article has been written for submission to the National English Journal; however, because of the traditional attitude of English instructors towards occupational education, the director does not feel the time for submission of the article is appropriate. In addition, several other articles for various trade and technical journals are in the initial stages of composition.

One article has been published in the April, 1972, issue of the American Vocational Association (AVA) Journal. This article was one of nine major articles that carried out the theme of better management of

learning in that issue. This article has generated national response from as far away as New Jersey, Minnesota, South Dakota, and New Mexico and as a direct result, the director was asked to serve as a consultant in designing the curriculum for an Indian school in Albuquerque, New Mexico.

Also as a result of the AVA Journal article inquiries have been received from publishers requesting that instructional materials be designed to be used in the vocational area. At the present time, there does not seem to be any instructional materials available. Some publishers have written this director as to her interest in developing these materials and personal contact through visits from publisher representatives has occurred.

Too, the publication of the article in the AVA Journal has given the program more acceptance both from the director's fellow faculty members and other institutions. Colleagues are now "taking another look at the COC program." Throughout the school year, the director has experienced difficulty with fellow faculty members in their understanding of the importance of the CO-ORDINATED OCCUPATIONAL COMMUNICATIONS program. Whether this stemmed from indifference, jealousy or personality differences is unknown. However, following the appearance of an article in this national journal, respect for both the program and its director become more apparent. In fact, one of the major problems associated with the program has been that the concept cannot be assimilated

in a quick explanation. And since it does require a great deal of self-analysis and careful study, many vocational teachers have been at first reluctant to accept it. Therefore, the constant publicity through visitations, speaking engagements, correspondence, and publications has played a prominent role in the wide acceptance of CO-ORDINATED OCCUPATIONAL COMMUNICATIONS. (Copies of brochures and articles are attached as Appendix I.)

CONCLUSIONS AND RECOMMENDATIONS

Throughout the experiment, monthly reports were mailed to the director of CO-ORDINATED OCCUPATIONAL COMMUNICATIONS from each area instructor. These reports contained any changes the instructor had made in his syllabus, evaluations of the teaching process, and student comments and criticisms. In addition to these reports, each area instructor filled out an evaluation sheet (attached as Appendix J) at the end of both the workshop hase and the teaching phase. From these reports and evaluation sheets there evolved a number of interesting observations.

For instance, according to the area teachers the ideal method of instruction is for the technical and communications instructors to work together in the same classroom. This method freed the technical teacher of the burden of teaching the communicative skills and allowed him to devote full time to technical techniques. This method also had the greatest acceptance by the students. The students liked being able to solve communicative problems the moment they occurred. However, this type instruction is limited to technical courses that never leave the classroom, for example, such classes as drafting, office techniques, and data processing. For classes that require field or shop work, such as auto mechanics, surveying and telephone linesmen, the area instructors felt that the communications

is best done when situated in a laboratory. The communications instructor in a laboratory situation can be available when the student has difficulty with writing skills. When there is no English instructor available, this places the total burden for the communications instruction on the occupational instructor. Often the occupational instructor is not adequately trained to teach communicative skills and, too, there is not sufficient time for him to teach both technical skills and communicative skills. Even though he may recognize the necessity, the load is too great.

In the first few months of the experiment, it was observed that the additional communicative skills the occupational student acquires increases his ability to understand his technical training. As he develops proficiency in communicating his technical subject, he more readily recognizes the problems existing in his occupational field. As a result, quite often the occupational teacher was able to increase the content of his syllabus, allowing the student a more advanced technical knowledge than was provided previously.

It was also discovered that the time required to teach the communicative skills diminished rapidly. If time was spent at the beginning of the training insisting that the student be thorough and accurate with his work, the student quickly grasped the connection between the two skills and saw its relevance. By the end of the first experimental period, the communications instructor was only consulted on special communicative problems.

However, the major observation was that all basic skills, not just communicative skills, could be embedded into the occupational teacher's syllabus. Math problems taught from a practical approach in a laboratory situation achieved far more success than when taught in the traditional method.

The biggest drawbacks to the program that were discovered were problems concerned with attitudes. An analysis of these drawbacks by the area instructors included curricular constraints such as scheduling, facilities, materials, class size and teacher specialization. Of particular concern was the idea that because of the rigid time element which has been designated by the state, the occupational instructor makes a restrictive effort to "stick to" that time limitation. In doing this, he adopts an attitude that limits his creative thoughts and those of his students. In fact, a thorough discussion of these drawbacks by the original area instructors revealed that for the most part they consisted of attitudes--attitudes of students, of communities, of administrators, and of instructors. Fellow instructors have negative attitudes about the classroom loads and scheduling. Students have negative attitudes about communicative skills, communities and administrators have negative attitudes about costs. Too often, the administrator must work within a restricted budget that stifles his concern for the teacher and the student. The area instructors observed that since there is little an instructor can do to change these attitudes, he can only change his own, and by changing his own attitudes hope to bring about a change

in the attitude of others. His own attitudes can only be changed after he has clearly defined them. Therefore, the vocational instructor must devote time to the definition of these attitudes and understand them thoroughly if he is to help the student become totally self-sufficient.

The CO-ORDINATED OCCUPATIONAL COMMUNICATIONS director discovered that many of the occupational instructors' attitudes come about because they are not experienced in the preparation of lesson plans and are not familiar with ways to achieve expected behavior from students. This inexperience demonstrates the need for a change in the methods of training for vocational teachers.

The CO-ORDINATED OCCUPATIONAL COMMUNICATIONS director also discovered that methods of training for the occupational English teacher are inadequate. It takes a certain type of English instructor to teach within the occupational environment. The traditional "English teacher image" is so embedded in the minds of the students that they are reluctant to cooperate. Therefore, the English teacher must be one that is not only flexible, but also willing to subordinate himself to the occupational teacher. He must understand that the occupational instructor's needs are foremost and that communicative skills are to be supplemental tools for the occupational student. The English instructor must be willing to abandon his traditional methods of teaching. Of course, what this points to is an English instructor who has wide practical experience and who has been especially trained for work in occupational schools. Unfortunately, this type training for English instructors is not available in the state of Kansas at the present time.

Since it was discovered that all basic skills can be embedded into the syllabus, TABLE IX on page 25 clearly demonstrates a need for a change in the methods of training math teachers as well as English teachers. A careful analysis of this table shows that the related area (where the math was taught from a practical approach) increased its percentile rank by 20, while the auto mechanics, drafting, and electronics areas (which were assisted by related math instructors that taught in the traditional lecture method) actually decreased the math percentile rank by an average of 8.

Since evidence such as this so clearly indicated the need for additional training for vocational instructors and since the reaction of the instructors involved in CO-ORDINATED OCCUPATIONAL COMMUNICATIONS had been so favorable, and the results so immediate, very early in the program discussions were held concerning the possibility of training more occupational teachers in the concept of CO-ORDINATED OCCUPATIONAL COMMUNICATIONS and also in incorporating all the basic skills into their teaching syllabus.

In January, 1972, a proposal was written that provided for the expansion of the CO-ORDINATED OCCUPATIONAL COMMUNICATIONS program and set up an in-service training program for twenty occupational instructors. This training program was to consist of a two-week institute to be held on the ICJC campus and would include as its instructors those teachers that had been involved in the original experiment. (A copy of this proposal is attached as Appendix K.)

The objective of the institute was to help the occupational instructor in identifying and defining his own attitudes towards teaching so that he could overcome his handicaps and take advantage of his strengths. Once these attitudes had been explored, then each occupational instructor would plan a syllabus for use in his own classroom during the school year. Working with the basic skills teachers the occupational instructor would design the behavioral objectives so that all the basic skills and technical skills were integrated. In addition to the institute training session, the proposal also provided for a vocational communications consultant throughout the school year who would locate and help eliminate sources of trouble that might occur for the occupational instructor as he taught his syllabus. It was felt that quite often all that would be needed was merely a word of encouragement. But occasionally a teacher might run into a special problem that needs a consultant to inspect the situation and advise ways that the particular problem might be solved. This proposal was approved by the Kansas State Department of Vocational Education in February, 1972.

From the time of the submission of this second proposal and the close of the school year, publicity for the CO-ORDINATED OCCUPATIONAL COMMUNICATIONS program was so widespread that interest developed in an unexpected area. Basic skills teachers, including reading, communications, and mathematics began to inquire about the possibility of acceptance to the institute in such numbers that it soon became evident that these

instructors should be included in the institute training program for twenty occupational instructors.

These basic skills instructors, realizing the inadequacies of their training background, recognized the institute as a possible source of help.

It was also in January that the Kansas State Department of Education recognized that there should be certification requirements for these basic skills instructors. Therefore, a study was begun. Mr. John Snyder, Assistant Commissioner of Vocational Education for the State of Kansas, asked the CO-ORDINATED OCCUPATIONAL COMMUNICATIONS director to submit a tentative outline of the certification requirements and on April 3, 1972, the following outline for certification requirements was submitted by the director:

VOCATIONAL COMMUNICATIONS INSTRUCTORS shall have:

Education.	A bachelor's degree in English from an accredited college or university
Teaching Experience:	Two years of successful teaching experience. EXCEPTION: persons who have completed a bachelor's degree with specialization in occupational English and have participated in the professional teaching block under the approved teacher education program.
Occupational Experience:	Two years experience as a wage earner in any field approved by the state division of vocational education. EXAMPLE: industry, home economics, health occupations, business. Since communications involves many different areas, the teacher should have a right to appeal to a commission of representatives to explain to this committee questionable work experience. EXAMPLES: commercial pilot, retail experience, agriculture.

Additional Education: Within the first three years of this certification, the communications instructor must have completed a three-week workshop that includes the following courses:

1. Principles and Philosophy of Vocational Education
2. Co-ordinated Occupational Communications
3. Vocational or Curriculum Design

Even though certification requirements are being investigated and a proposal has been approved for in-service training of occupational instructors, it is still felt that there are further changes that need to come about in vocational education. Therefore, the following recommendations are submitted:

1. The clock-hour time restruction used in the vocational technical area schools should be investigated. This restriction hampers flexibility of course design and does not accommodate the variety of student abilities.

2. The semester time restrictions used in junior colleges should be investigated for the same reasons.

3. There should be an investigation into the availability of testing and teaching materials that are designed especially for the occupational teacher.

4. Basic skills centers should be provided for students enrolled in vocational technical area schools and in junior colleges and staffed with vocational basic skills instructors.

5. The instructors for these basic skills centers should have special training provided and should be certified by the Kansas State Department of Vocational Education.

6. Since there is no program provided in Kansas for the special training of basic skills teachers, a curriculum design committee should be established.

7. The methods of training occupational teachers in the state of Kansas should be investigated. A primary concern is course content since a number of the courses required for teacher training are not only repetitive, but the content is also meaningless. Deficiencies in the curriculum should also be investigated.

8. Immediate steps should be taken to eliminate the artificial fragmentation of subject matter and the isolation of faculties. If this were eliminated in the methods of teacher training, it probably would "spill over" into the occupational classroom.

BIBLIOGRAPHY

BIBLIOGRAPHY

RAYGOR, Alton L., McGraw-Hill Basic Skills System. McGraw-Hill, Inc. DelMonte Research Park, Monterey, California, 1970.

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APPENDIX A

APPENDIX B

APPENDIX C

SUGGESTED COMMUNICATIVE AREAS

LETTERS	FORMS	REPORTS	ORAL
Application letter/ Personal Data Sheet	Estimates	Efficiency (self-evaluation, departmental, instructor, classmate)	Introductions
Follow-up letter	Financial Forms	Public Relations (news releases)	Telephone (orders, requests for information, sales)
Thank you letter	Job Sheets (applica. to area)	Planning/Organizing meetings	Special speeches
Reference Letter	Payroll	Manuals	Tours (department, school, shop)
Sales Letter	Purchase Requistions	Step-by-step procedures reports applicable to area	Interviews
Complaint Letter	Sales Invoices	Special reports	Explain step-by-step procedures
Etc.	Taxes (state, federal, local)		
	Telephone/Memo		
	Insurance		
	Inventory Control		

Technical writing books that might be useful in your classroom

Modern Technical Writing, Theodore Sherman, Prentice Hall, Englewood Cliffs, N. J.
The Technician Writes, Sklaret Boyd & Fraser Publishing Co., 308 Lucas St., San Francisco, Calif. 94118
Manual of Technical Writing, Sypherd, Fountain, & Gibbens, Scott, Foresman & Co., Chicago, Ill.
Reporting Technical Information, Houp & Pearsall, Glencoe Press, Beverly Hills, California
English Skills for Technicians, Block & Labonville, McGraw Hill, New York
Handbook for Technical Writers, Tracy & Jennings, American Technical Society, 848 E. 58th, Chicago, Ill. 60637
Writing and Reading Technical English, Pickett and Laster, Canfield Press, San Francisco, Calif.

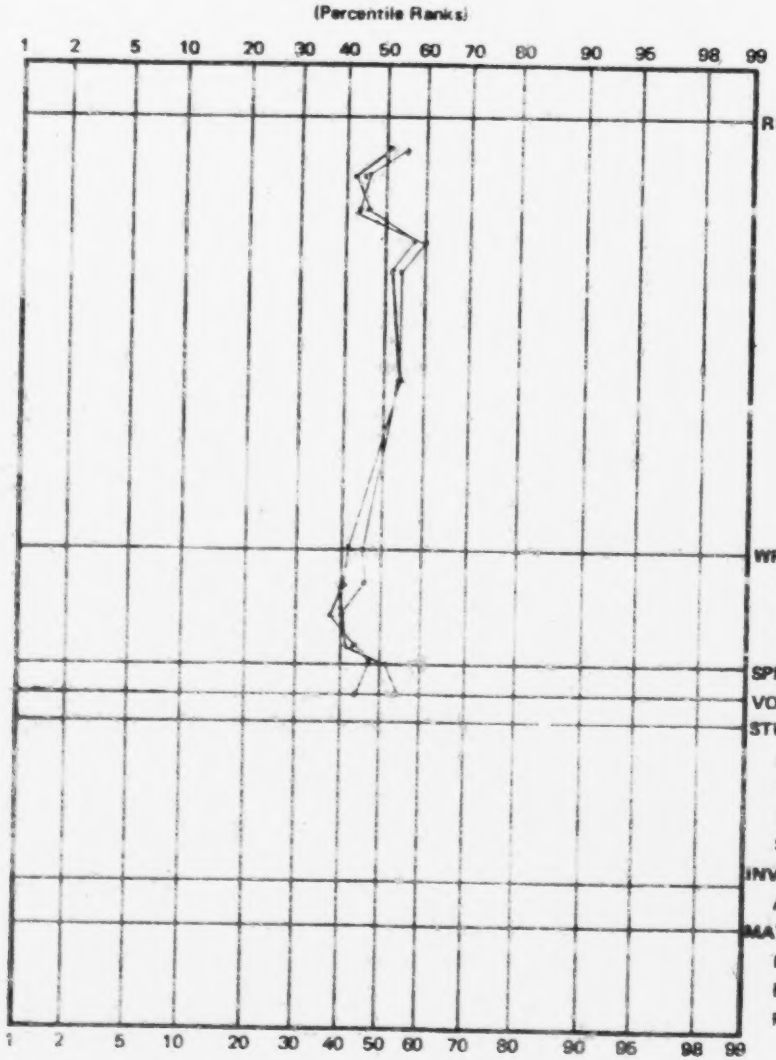
APPENDIX D

APPENDIX E

APPENDIX F

INDEPENDENCE COMMUNITY JUNIOR COLLEGE FRESHMEN

Class Averages



TESTS	%ILE RANK Pre-	Post
READING TEST (Total)	51	55
Rate 1 (easy)	43	44
Rate 2 (difficult)	45	44
Flexibility	50	49
Retention	58	60
Skimming and Scanning	51	52
Paragraph Comprehension	53	53+
WRITING TEST (Total)	42	45
Language Mechanics	40	46
Sentence Patterns	39	40
Paragraph Patterns	43	41
SPELLING TEST (Total)	47	51
VOCABULARY TEST (Total)	44	52
STUDY SKILLS TEST (Total)		
Problem Solving		
Underlining		
Library Information		
Study Skills Information		
INVENTORY OF STUDY HABITS AND ATTITUDES		
MATHEMATICS TEST (Total)		
Part I		
Part II		
Part III		

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APPENDIX G

NAME _____

Student Number	Age	Sex	School	READING Raw	READING %	VOC.	SPELLING	STUDY SKILLS	MATH	WRITING	End Course GRADE

MHBSS TEST SCORES

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APPENDIX H

APPENDIX I

APPENDIX J

EVALUATION FOR COORDINATED OCCUPATIONAL COMMUNICATIONS WORKSHOP

Were workshop facilities suitable?

Was equipment display suitable?

Were supplies available?

Was introduction of program clearly outlined?

Were the objectives for the workshop clearly presented?

Was planning procedure well organized?

Was explanation of goals or aims clarified?

Was definition of program objectives made clear?

Was adequate time allotted for the preliminary study?

Was sufficient time allowed for preparing the material?

Are monthly evaluation sheets practical?

Do you feel the workshop has been helpful to you? Why?

Do you feel that this experience will create better organized teaching situations during the coming year?

Do you fully understand your responsibilities for the fall workshop?

Was the selection of personnel for the workshop a well diversified group?

Do you feel more subject areas should have been included in the workshop?

COMMENTS:

EVALUATION OF COORDINATED COMMUNICATIONS PROGRAM

Implementing the COC Program

1. Discuss any advantages or favorable reaction/disadvantages or difficulties you might have encountered in implementing the COC program in your classrooms:

a. Faculty

b. students enrolled

c. parents of students

d. from community

e. administration

2. Comment on any difficulties you might have encountered because of the additional compensation awarded you during the summer workshop and/or school year:

a. from fellow faculty

b. from administration

Grading Under the COC Program

1. Did implementing the COC program method require any additional grading on your part? _____Yes _____No

2. If yes, did you have an assistant grader? ____Yes ____No To what extent did you have assistance? ____15 hours week; ____30 hours week; other_____

3. Do you feel it requires a specially trained individual to handle grading?

4. Was it necessary for you to do all grading without assistance? ___Yes____No

5. Compare the traditional method of teaching with the COC method with respect to grading.

Pre-and Post-Testing Required under the COC Program

1. Did you encounter any student resistance to testing?

2. Did you encounter any resistance to testing from skills center personnel?

3. Did you encounter any resistance from other faculty/administration?

4. Do you plan to continue the testing in your vocational calsses?

5. If yes, for your benefit?

for the students'

Implementing the COC Syllabus

1. Did you feel you had adequate communication skills embedded in your syllabus? _____Yes _____No

2. If not, did you add skills after the summer workshop session? What were they:

3. Do you plan to use the same syllabus approach next year? If not, why?

4. What improvements do you plan to make in your syllabus?

5. Do you feel the COC method required more/less teaching time? Comment:

6. Were sufficient reference books available? If not, was financial assistance available to purchase needed books? Did your students USE the reference books available?

7. Do you have a basic skills center on your campus? ____Yes ____No. If yes, did you use the center? Do you plan to continue using the center? Will you be able to continue the program without the aid of a skills senter? Do you anticipate any problems whthout the aid of a skills center?

Feed Back/Follow up

1. Did you have any feed-back from students enrolled in the program?

2. From students outside your program who asked to be included?

3. From other faculty members who wanted to initiate the program?

Comments on Coordinator of COC Program

1. Closer supervision required

2. Would have helped to have a "trouble shooter" during the program

3. Too much supervision

4. Problems encountered because we did not follow original reporting plans/etc.

5. Too many reports/meetings required

6. Did workshop or meetings interfere with administration/faculty/student plans?

7. Did you fully understand what was expected of you during the school year?

APPENDIX K

VT 019 594
OCCUPATIONAL EXPLORATION: HOW TO MAKE A CAREER EDUCATION PROGRAM WORK IN YOUR SCHOOL.

NEW ENGLAND SCHOOL DEVELOPMENT COUNCIL, CAMBRIDGE, MASS.
NEW ENGLAND REGIONAL COMMISSION.; NEW ENGLAND RESOURCE CENTER FOR OCCUPATIONAL EDUCATION, NEWTON, MASS.
MF AVAILABLE IN VT-ERIC SET.
PUB DATE - SEP72 21P.

DESCRIPTORS - PROGRAM GUIDES; *GUIDELINES; *CAREER EDUCATION; SECONDARY GRADES; *PILOT PROJECTS; *OCCUPATIONAL INFORMATION; CLASSROOM TECHNIQUES; *PROGRAM DESCRIPTIONS
IDENTIFIERS - OCCUPATIONAL EXPLORATION; *NEW ENGLAND

ABSTRACT - IN 1969 THE STATES OF MAINE, NEW HAMPSHIRE, AND VERMONT JOINED A PILOT PROJECT DESIGNED TO ASSIST RURAL SCHOOL STUDENTS IN GRADES 7-10 TO LEARN ABOUT THE BROAD SPECTRUM OF OCCUPATIONAL OPPORTUNITIES AVAILABLE TO THEM. THIS MONOGRAPH IS A REVIEW OF SOME OF THE PROBLEMS ENCOUNTERED, SOME STRATEGIES DEVELOPED, AND SOME SUCCESSFUL TACTICS EMPLOYED IN IMPLEMENTING THE PROGRAM AND IS INTENDED AS A GUIDE FOR EDUCATORS SEEKING TO ESTABLISH A SIMILAR CAREER EDUCATION PROGRAM. SOME OF THE TOPICS DISCUSSED ARE THE PILOT SITE SELECTION, STAFF TRAINING METHODS, EFFECTIVE CLASSROOM ACTIVITIES, TEACHER MANUALS, COMMUNITY INVOLVEMENT, AND REINFORCEMENT ACTIVITIES TO ENCOURAGE PARTICIPATING TEACHERS. (KH)

VT 019 594

OCCUPATIONAL EXPLORATION

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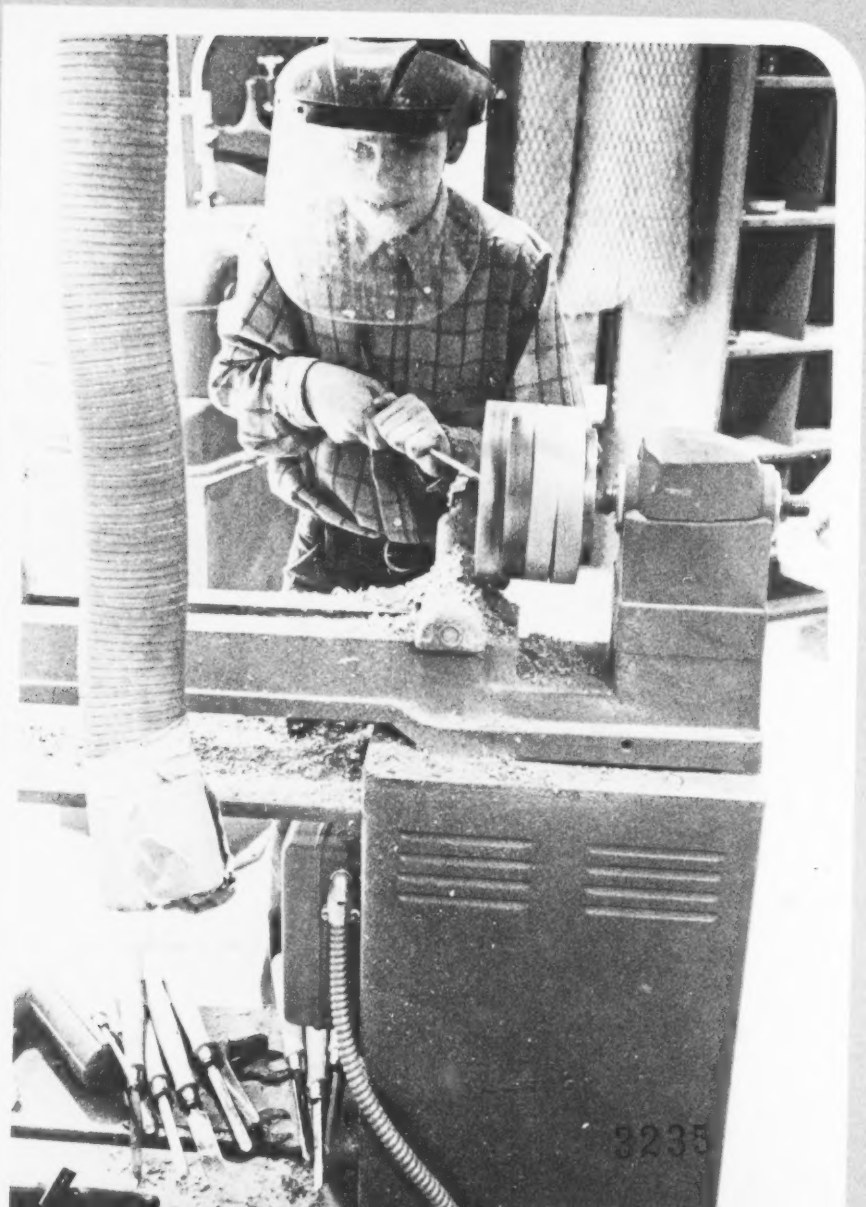
HOW TO MAKE A CAREER EDUCATION PROGRAM WORK IN YOUR SCHOOL



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OCCUPATIONAL EXPLORATION

How to Make a Career Education Program Work in Your School

September 1972

A Cooperative Venture Funded by

The New England Regional Commission
and
The New England Resource Center for Occupational Education

Administered by

The New England School Development Council
55 Chapel Street
Newton, Massachusetts 02160

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PREFACE

In 1969 the three northern New England states of Maine, New Hampshire, and Vermont joined in a pilot project funded by the New England Regional Commission and later by the New England Resource Center for Occupational Education and administered by the New England School Development Council (NESDEC). An advisory committee was formed comprising the three northern State Commissioners of Education, the Directors of Vocational-Technical Education, a business leader from each state, and the Executive Secretary of NESDEC.

The project addressed the problem of assisting students who attend rural schools to learn about the entire spectrum of occupations from which they may select their own careers. The purposes of the project were twofold: 1) to develop an exploratory occupational program for children in Grades 7-10; and 2) to provide a range of experiences through study and exploration that would aid students in rural schools to make a more sensible career selection when the time comes for such decisions. The project recognized three "boundary conditions" during its development and implementation: 1) the program must serve *all students* whatever their career aspirations might be; 2) project activities, while developed for schools in rural areas, should be readily adaptable to any school setting; and 3) the project should utilize the skills and talents of existing staff members and should not require additional staff.

This monograph is *not* a report of this project, but is a review of some of the problems encountered, some strategies developed, and some successful tactics employed in implementing the program. It was prepared by NESDEC in the hope that it might be of some assistance to those who believe that wise career decision-making is the responsibility of wise educators.

NESDEC wishes to acknowledge the contributions of Neal A. Wiggin, Project Director, and James D. Turley, Associate Professor, Rhode Island College for their major efforts in the preparation of this monograph. Without their assistance, this report would not have been possible.

John R. Sullivan, Jr.
Executive Secretary
NESDEC

PILOT SITE SELECTION

One of the first tasks confronting the director and the advisory committee of this pilot project was the selection of appropriate sites to begin the project. Successes and failures were anticipated but it was of great interest to determine the specific factors that contributed to all outcomes so as to draw some conclusions about conditions necessary for successful site selection.

As in so many projects of this nature, *people* are the major factor in successful site selection. If a project's success is to be insured, one must seek out the places where the personnel are receptive to new ideas, eager to try new programs, and have a history of developing or adapting innovative practices, or who otherwise *clearly demonstrate* a willingness to do so. State departments of education and other federal, state, and privately funded agencies can be of great assistance in recommending sites where such personnel can be found.

Sometimes a request comes from a district asking to be considered for a project. Such requests can be legitimate and may signify a genuine interest in the goals of the project. Occasionally, however, requests for consideration are made for less attractive reasons. It is necessary, therefore, that all parties be particularly clear about mutual expectations.

The evaluation team of the project made a strong recommendation that the site selection process include a contract with the school district, listing in behavioral terms what is expected. The project did not enjoy this process, and as a result there was wide variance in the quantity and quality of staff effort expended; no districts had any performance criteria by which they could be evaluated.

At one of the schools which joined the project in the third year, the principal, after deciding that he was interested in the project, said, "I'll tell you what—you present the project to our staff, and if they want to do it, we'll do it; and if they don't, we'll drop the idea."

This proved to be most effective. A presentation was made to the staff and those who were interested were asked to leave their names at the office. This avoided any sudden commitment, and made it a private choice rather than a public one. Even so, two or three who originally signified an interest never really became involved.

A follow-up meeting with those who wanted to "join" revealed a very interesting fact, one which appeared in two other successful schools. *Those who really became actively involved and later made the project "swing," were*

those who already had private goals similar to those of the project and saw a means of helping them attain their goals. It seems reasonable to conclude when selecting sites, that one should ask, "Where can we find people already doing in a small way what we want this project to do?" or "Where are there people who already know they want to do these things but need the specific help the project can provide to get them started?"

If the project is one of a pilot nature, it is not wise to select a district or group where the staff needs to be convinced that the project is worthwhile. The duration of a pilot project is probably not long enough to allow for staff conversion. Some people need to see an example of a thing successfully implemented before they will try it. If the staff in a prospective school seems to be of this type, it is probably better to move on and not spend any more time at that site.

One way to get teachers to identify with the goals of the project is to have available some clearly stated objectives for them to read. Then the teachers who perceive these goals to be consistent with their own can signify an interest in participating.

* * * * * * *

"Project activities can be applied to any school setting."

MAINE

Narraguagus High, Harrington
Leavitt Area High, Turner
Fort Kent Elementary, Fort Kent

NEW HAMPSHIRE

Kennett High, Conway
Conant High, Jaffrey
Kearsarge Regl. High, North Sutton

VERMONT

Lake Region Union High, Orleans
South Royalton High, South Royalton
Whitcomb High, Bethel

These nine districts actually have twenty-one school buildings involved in project activities. These are rural schools without close access to a variety of occupations. Most districts stayed under the $500.00 per year budget; most expense was for field trips. Some money was used for photo materials and tapes to record interviews. A school could spend large amounts or get along with very little by capitalizing on local sources for their needs.

IMPLEMENTATION

"Staff training" rated high among the priorities of participating teachers in responding to the question, "If you could suggest one thing to improve the project, what would that be?" Everybody concedes the value of staff training, but it is frightening to see how little of the available resources are devoted to such training in most schools, with or without a project.

Staff training for a project can spell the difference between success and failure in at least two respects. First, the staff is made aware of the relative importance of the project to the district and the degree of commitment to the project required by the administration. Secondly, the staff is assisted in knowing how the goals of the project can be achieved without detracting in any way from the goals of the curriculum.

Regarding career education, staff training must provide an understanding of the scope of the project and the firm commitment of the administration to its goals. The training should include a knowledge of the changing labor, technical, and professional needs of the nation, a realization of the problems of young people in making occupational decisions, an understanding that one does not need to be an expert on all careers to provide assistance to students.

Some teachers in all pilot schools expressed that they did not have time enough to do project activities, even though we indicated that they probably couldn't do these things *in addition* to everything else; they should make a choice. They *made* the choice, but it was not, in these cases, the goals of the project which they chose. Staff training, supported and participated in by the administrator/supervisor, would have helped to make the difference.

Support from Line and Staff

Where guidance plays an active role, much can be done to supply the classroom teacher with materials and other assistance in implementing activities. One counselor had such a range of experience himself, as well as a superb occupational file, that he became a great source of information to other schools in the project. Within his own school he enlisted the aid of students in sponsoring a career information week. They saturated the building with career materials, and conducted a week-long program with resource people describing their particular occupations.

Support from the Vocational Director in another school enabled a science teacher to abandon the traditional curriculum in one class and begin a more

relevant program in which students studied local occupations in relation to science. A sewer project was their first effort. They studied earth and rock formation, learned the process of locating buried water lines and techniques of surveying, and became conscious of occupations related to their project. Contractors came to the school and talked with the students about how science related to their work.

Counselor Steve Buckley, Jaffrey, New Hampshire, provides students with a career information tape. This office has a variety of printed and A-V material on hundreds of occupations, and provides group and individual counseling in career selection for all students, whether they need post-secondary education or not.

In still another school, a high degree of visible involvement came from the building administration. The principal provided and attended workshops to further project goals and invited neighboring districts to participate. The central administration also cooperated and attended the conference.

In another district, however, less success was achieved. Biweekly training sessions were established to bring together a variety of resource people; but at the session in which the project director demonstrated techniques to get teachers started, neither principal of the two buildings involved was present. The superintendent did attend and involved himself actively; however, it is the building principal who has the greatest influence over continuing pro-

grams in the school. He must support the program *actively* if the project is to succeed.

Emphasize the How

At an early stage, identify goals and scope of the project and explain the philosophy. Then get on with the methods and materials. Referring to behaviorally stated objectives, spell out a method or activity that leads toward that objective and show how to measure it. Identify objective, learning activity, and method of measurement, in that order.

Most effective in staff training were those activities which were demonstrations rather than lectures. Sometimes the staff can act as a class for the demonstrator, and at other times, students may come to the session and be a live class for the teacher-demonstrator. The important point discovered in this project, however, is that teachers in staff training need and prefer demonstrations of how-to-do-it followed by a "hands-on" experience. Lecturing simply will not work.

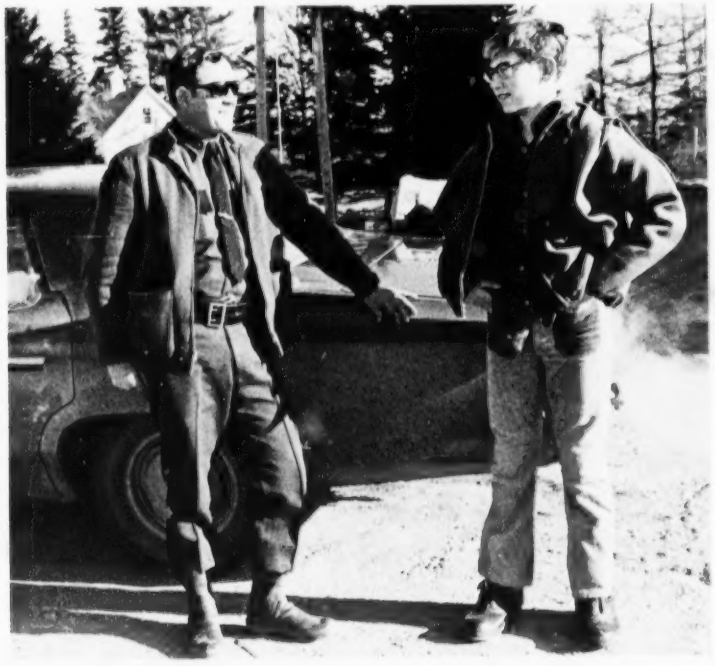
CLASSROOM ACTIVITIES

One assumption of the project was that the closer the pupils got to the occupation and the people working in that occupation, the better the aims of the project could be accomplished. Accordingly, those activities that required pupils to have a "hands-on" experience were encouraged and seemed to be the most successful. The successes of the project, however, were achieved through a variety of activities.

Student at Harrington, Maine, getting hands-on experience in a local ladies' shop.

The type of activity which the teacher can do in his own classroom is the kind that teachers used most frequently. There are several reasons for this. First, it is easier. Arranging transportation, chaperones, permissions, and so

on, is time-consuming and unrewarding. The teacher resents the loss of instructional time he has to devote to these tasks. Secondly, the classroom activity is more flexible in terms of time. Since the teacher need satisfy no one else's time requirements, he may schedule the activity any time he wants. He may introduce it at the end of a period, for example, when he has finished the planned lesson and the bell hasn't rung yet. Next, no conflict arises with colleagues who complain when students are absent on someone else's field trip. Conflicts produce tensions and frustrations; it is perfectly normal for teachers to avoid these situations. Finally, over the years the role of the teacher has been that of master in his domain, provider of information, leader of the classroom. Getting *out* of that habit and bringing resource people in or arranging for the students to go "on the job" is a sufficient variation from the norm that it requires an attitudinal modification.



An eighth grader at Harrington, Maine, spends the day with a Conservation Officer.

One frequently, however, must begin with the classroom activities and proceed to others later.

Among the successful classroom activities are several which got widespread use. The pilot schools used them, and so did teachers in other schools, who

learned about them from workshops or the newsletter of the project. Some of these appear below. These can be adapted to goals other than those in career education, as indeed they were adapted to career education in the first place. And they can be adapted to suit other grade levels than those in this project.

Values Clarification

Every career decision contains a bundle of value decisions, some obvious and some not. For example, one's choice of where one wants to live limits a career choice more than any other decision made. All of one's values involved in a choice of residence are also involved in a career choice (along with other values, of course).

What does the school do to help individuals develop a clear set of values? Dr. Sidney Simon and others* have contributed a great deal toward enabling the classroom teacher to initiate activities in which students find themselves, so to speak. A number of these ideas and principles were used in developing self-awareness in relation to career choice.

An excellent device is the "I wonder" activity. Briefly, it consists of asking every student to complete the sentence beginning with the words "I wonder." Let anyone say "I pass" if he cannot think of anything or he does not wish to tell what he wonders. *But call on all of them.* Don't let a youngster leave the room imagining what your reasons were for not calling on him.

If a number of responses refer to things unrelated to school, don't be surprised. The responses indicate that students are thinking of lots of things besides what teachers think they should be concentrating on. Just remember that when you call on Susie and she says, "Huh?" the correct response is not "Sit up and pay attention." But then, there aren't any teachers who do that, are there?

After all the students have expressed what they wonder about, the teacher can refer to any response he wishes to pursue by asking if anyone else in the group ever wonders about that, too.

EXAMPLE:

Mary Lou has said "I wonder what I'll be when I grow up."

When all have said their statement, ask if any others ever wonder what they will be when they grow up. Ask if any have a current notion of what they might like to be. See if any have drawn conclusions about occupations of their parents or other relatives. Do

---

*Louis Raths, et al., *Values and Teaching; Working with Values in the Classroom*, C. E. Merrill Books, Columbus, Ohio, 1966.

they want to do what Daddy does? Why or why not? Have they ever talked to anyone who does what he wants to do for an occupation? What do they think they can do to help themselves become what they want to be? What do the others think about how they are going to decide what they want to be? What are their interests, aptitudes and abilities? How can they learn more about themselves?

It is endless, and can produce fruitful activity all year.

Public Interview

This activity is useful with students and can readily be adapted for visitors, such as book salesmen, repairmen, and other delivery or sales personnel. At first the teacher is interviewer, but once the kids get the hang of it, they can conduct the interview. The student interviewer asks any question he likes. The interviewee has the option of answering or saying "I pass." When the interviewer has finished, the tables are turned, and the interviewee asks the questions. This activity was found to be most successful when the interviewer states at the outset that when the tables are turned he will be willing to answer any question he has asked, but will retain the option of "passing" on other questions.

On the first attempt, students find it difficult to think of questions to ask of the interviewee. If the teacher lets them know that he will conduct the activity again, the next time he will get more volunteers and they will be ready with questions to ask.

Now, what sort of question does the teacher ask? Start off with simple factual things like "What is your name?", "What is your father's occupation?" and so on; then ask value laden questions, being careful that no cues are given that would tend to impose *your values* on the student. Such questions as the following are useful:

"When you have free time that you can use to do anything you want, what kinds of things do you do?"

"Is there anyone else you have ever thought you might like to be?"

"Why would you like to be that person?"

"If you could be any place else in the world right now, where would that be?"

"Why would you like to be there?"

"Would you like to live there?"

"What kinds of sports do you like?"

"What is your worst school subject?"

"Do you have any hobbies?"

"How much time did you spend last week working at your hobby?"

The idea is to have the person examine his own values, make a "public" commitment to things he feels strongly about, and to hear how others feel about the same things. While the teacher is interviewing one person, the others are silently answering the questions, too.

Attitude questionnaires, interest surveys, and the like are sources of ideas for questions.

Rank Order

In one activity three occupations were described and students ranked them in order of least preference, so that No. 1 was the one they would least like to do. Then the class results were tabulated and students were called upon to tell why they ranked them the way they did. It usually develops that the reasons why one person rejected an occupation are the same reasons that someone else gave for choosing the occupation. The device points the individual preferences involved in career choice, and it helps students realize that all occupations have disadvantages; occupational choice hinges somewhat upon how we feel the advantages outweigh the disadvantages.

Cryptogram/Word Puzzle

An elementary teacher has students select an occupation they might like to pursue, and develop a picture code, with the correct answer on the back. These are posted, and students use free time to examine each other's work and try to solve the puzzle. These are the puzzle types which employ the addition and subtraction of letters, such as ACTION + CUT - 2000 LBS. + MOUSE - IUM + AL - STEAL + NT + ANT (Answer: Accountant). Pictures replace words wherever possible in the puzzle.

Talking Bulletin Board

Make a loop of audio tape by cutting a piece off a reel and splicing the ends together. The loop should be slightly larger than the bulletin board. Drape the loop around the board, using metal or plastic pipe clamps that will allow the tape to pass smoothly through it. Beneath the bulletin board, place a table on which you set a reel-to-reel recorder, minus the reels. Run the tape through the tape head, plug in your mike, set at slow speed and put your sound on the tape. You can narrate the board, use sound effects and so on. A display of tools, pictures in sequence taken at a local job site, pictures or other material relating to a cluster of occupations and many other things will make excellent displays. Emphasize the visual rather than the verbal. Put these in halls, cafeteria, even in classrooms and study halls if you can supply a headset so that the sound will not disturb others. When one group makes a bulletin board, assign it to the rest for "homework."

Students at Kearsarge Regional High School, North Sutton, New Hampshire, make a talking bulletin board on careers in computers.

Other Activities

Among the other activities found to be most interesting to teachers and students were role-playing, slide/tape shows, some commercially available kits, and black and white photo albums of local occupations and industries. This latter has some advantages over slides.

(1) It is cheaper.

(2) If the school has a darkroom, students can make their own prints and enlargements, getting some hands-on experience in photography at the same time.

(3) High speed black and white film is readily available, permitting pictures to be taken in areas where light levels are low and flash bulbs are not permitted, as in some of the factories we visited.

(4) When placed in an album and properly annotated, other students can use them at once without going through the red tape necessary to use a slide projector and screen.

Teachers at Kearsarge sponsored an extensive role-playing activity, where industriology was the basis for a unit in which students formed a corporation, made real products and marketed them.

Showing Teachers How

Some means has to be provided for introducing teachers to these devices. A workshop will be effective, particularly if the teachers can be part of a "class" for the teacher-demonstrator, and if the simple audio-visual skills required can be taught, like placing slides in a projector, taking good pictures, splicing audio tape, and so on. These techniques should be taught using the devices themselves. Released time for workshops will signify a higher priority than will a request for teachers to attend workshops at the end of a full day's work.

In the case of a project, the evaluation team of this project concurred that the project should be staffed by a person or persons well-versed in the "how" of making things work. He need not be a specialist; indeed he might preferably be a generalist, with the talent to generate interest and enthusiasm and supported by ample sources of information on careers.

TEACHER MANUALS

In the beginning of this project an extensive teacher manual was prepared and handed out to those teachers working with the project in each of the pilot schools. The manual contained detailed lessons and specific procedures for implementing the project. The teachers, however, felt that the manual was "too much," resented the "cookbook" approach and, as a result, ignored the manual.

It was the experience of this project that, if a manual was to be used, it should be concise (no more than 15 pages), have a list of sources of information on careers, and feature several *sample lesson plans*, in a variety of subject fields, aimed at specific objectives of the project. Moreover, the sample lesson plans would include activities in several categories, i.e., role-playing, hands-on, field trips, extended observation, self-awareness, and so on. The manual should list some sample media activities, including some commercial material.

COMMUNITY INVOLVEMENT

Two special activities helped to develop and implement more community involvement. A Citizens Committee on Career Education in one district became a task force who set for themselves the goal of placing 50 students into one-to-one contact with an occupational resource person within a thirty-day period. They made the contacts with people at the various sites, helped arrange transportation, and helped schedule students into the program.

Chelsea, Vermont, students talk with a resource person in the field of real estate.

They also printed a newsletter which was mailed to all registered voters in the community. They explained their purpose and their activities and helped to develop a list of local resources.

In another district, the project paid two teachers a stipend and expenses to spend February vacation visiting local industries, building a list of resources,

and determining possible sites for individual observation, hands-on activity, or group field trips. They explained that the school would be writing career education activities into its social studies curriculum and that the local economy was to be part of that curriculum. The response was most favorable; local employers were greatly pleased that the school was showing an interest in them. The total cost was about $350.00.

REINFORCEMENT ACTIVITIES

One wonders why it is necessary to refer to obvious things; we are speaking of the necessity of recognizing those who are working toward their commitment and achieving a degree of success.

How many times have you heard teachers say, "The only time you hear from the office is when you're doing something wrong? They never tell you when you're doing it right." A number of reinforcement techniques can be effective if seasoned with a great deal of sincerity. No amount of phony backslapping will help.

This project issued a newsletter to describe activities in the pilot schools. It was a way of disseminating among the project staff news of successful practices in the schools; but the simple fact that someone paid attention to what teachers were doing and told others about it made a great deal of difference in the attitude of teachers toward the extra effort they were putting forth.

In addition, other teachers who were not participating could see that in order to achieve a little of that attention, one needs to make an effort. Efforts made with good intentions are turned off by lack of recognition, lack of cooperation, and lack of good manners. It costs very little to say, "Thank you"; it costs a great deal *not* to say it.

Inviting a participating teacher to a workshop to demonstrate or explain to his colleagues an activity he has successfully carried out can serve a dual purpose. First of all, it has all the attributes of peer teaching, and secondly it says to the teacher who is asked to participate, "We think you are doing a great job; otherwise we wouldn't ask you." This is letting your actions speak louder than your words.

A certificate, letter of recognition, and money are among the other ways to say, "Thank you for a good job." If the person directing the project is other than a ranking superior of the participants, his letter of thanks should provide a carbon copy to that superior for the teacher's evaluation file.

Whoever is responsible for implementing the project needs to be sensitive to the fact that ignoring a request from a teacher, or a slow response to it, is sure to be perceived as a lack of interest on his part. To do so will surely turn the teacher off. Rapid response, and whenever possible, rapid *fulfillment* of the request, will produce a positive attitude toward the project. Every action of the project depends upon teachers for implementation; lose them, and you lose everything.

A student at Harrington, Maine, gets hands-on experience at the Post Office.

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VT 019 664
A STUDY OF CAREER GUIDANCE IN MARYLAND.

MARYLAND STATE ADVISORY COUNCIL ON
VOCATIONAL-TECHNICAL EDUCATION.
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DESCRIPTORS - SURVEYS; *VOCATIONAL
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SECONDARY GRADES; JUNIOR HIGH SCHOOLS;
*GUIDANCE FUNCTIONS; *COUNSELING PROGRAMS;
ADVISORY COMMITTEES
IDENTIFIERS - *MARYLAND

ABSTRACT - IN AN EFFORT TO ASSESS THE STATUS
OF CAREER GUIDANCE PROGRAMS CURRENTLY BEING
IMPLEMENTED IN THE MARYLAND PUBLIC SCHOOLS AS
WELL AS TO MAKE RECOMMENDATIONS THAT WOULD
AID IN THEIR IMPROVEMENT, THIS STUDY,
INVOLVING COUNTY SCHOOL SUPERINTENDENTS,
HEADS OF COUNSELOR EDUCATION PROGRAMS, ADULTS
IN FREDERICK COUNTY, AND JUNIOR AND SENIOR
HIGH SCHOOL STUDENTS WAS CONDUCTED.
INTERVIEWS AND QUESTIONNAIRES WERE USED TO
OBTAIN THE DATA. FINDINGS WHEN ANALYZED
REVEALED THAT: (1) THERE IS A NEED FOR
VOCATIONAL COUNSELING IN SCHOOLS, (2) THERE
EXISTS A DESIRE BY THE ADULT COMMUNITY FOR
JOB PLACEMENT TO BECOME A PERMANENT PART OF
THE SCHOOL PROGRAM, (3) SEEMINGLY, ALL HIGH
SCHOOL COUNSELORS PERFORM SOME VOCATIONAL
COUNSELING DUTIES, HOWEVER, DIFFERENCES EXIST
WITHIN LEVELS OF INTENSITY, (4) ALL SCHOOLS
SURVEYED OFFER AT LEAST ONE REQUIRED COURSE
IN THE AREA OF CAREER GUIDANCE, AND (5) WIDE
VARIATIONS EXIST IN THE RECOGNITION OF THE
IMPORTANCE OF CAREER GUIDANCE.
RECOMMENDATIONS ARE INCLUDED. (SN)

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A STUDY OF

CAREER GUIDANCE

IN MARYLAND

BY

MARYLAND STATE ADVISORY COUNCIL

ON

VOCATIONAL TECHNICAL EDUCATION

September, 1972

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ON
VOCATIONAL TECHNICAL EDUCATION

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PURPOSE AND METHOD

Interest in providing career education and guidance in the public schools has steadily increased since the passage of the Vocational Education Amendments of 1968 (Public Law 90-576). The Maryland Advisory Council on Vocational and Technical Education, who have sponsored and published this paper, was created following the passage of this bill in order to evaluate vocational programs, services and activities in Maryland and to make recommendations as to improvement of these programs.

This report deals specifically with vocational guidance in the public schools, grades kindergarten through twelve. Its preparation involved gathering data from a variety of sources in order to gain an in-depth picture of the present status of vocational guidance, as well as the attitudes and opinions of educators, students and the general public in this area. Specifically, data was gathered through interviews with county school superintendents, heads of counselor education programs, adults in Frederick County, and through a needs assessment survey of junior and senior high school students in Maryland. Further information was gathered through a review of the current literature focusing on vocational guidance as well as through a survey of Maryland programs in career guidance (1968-1972) and studies done in other states.

Summaries of the findings in each of the above-mentioned areas follows, concluded by an analysis of program objectives in career guidance and recommendations as to improving current programs.

REVIEW OF THE LITERATURE

The passage of the Vocational Education Amendments in 1968 appears to have spurred current interest in providing vocational guidance in the school system (Bottoms and O'Kelley, 1971). Research revealed some school systems to have implemented career development programs which include all students, from kindergarten through the twelfth grade (Miller, 1968; Roman and Doenges, 1971). Career

development was reported to be one function of high school counselors, although only a minority of most counselor's time was found to be spent in career development counseling (Phillips, 1971). In a 1968 General Report, the National Advisory Committee on Vocational Education concluded that less than 50 per cent of the high schools provide vocational guidance in any form to their students. Some of the reasons that many students were found to receive inadequate vocational guidance included: lack of time and/or appropriate training on the part of the counselor (Holt, 1970), the finding that many counselors work primarily with middle class, college-bound students while neglecting the lower class student -- disadvantaged students are a problem for the counselor who typically has little training to work with this group (Graff, Gorrell and MacLean, 1971; Mahoney, 1970), lack of adequate vocational information on the part of the schools to present to students (Towne, 1970), and the overburdening of counselors with remedial and other non-counselor duties (Stevenson and Sandlin, 1970).

Counselor training was found to be a primary reason that counselors were both unprepared and often uninterested in career counseling (Swain, 1971). It was also noted that state certification requirements for counselors seldom require courses in vocational counseling (and Maryland is one of those states that does not), a factor which contributes to poor counselor training in this area (counselor training curriculums are often based on state certification requirements).

A number of diverse programs have been designed and often implemented by the public schools across the nation in an effort to improve career guidance. These programs often include one or more of the following: (1) utilization of existing community agencies and creation of new ones (HEW, 1971; Page, 1971); (2) more relevant use of testing (Loudermilk and DiMinico, 1969); (Tarrier, 1971); (3) creation of specialized jobs for support personnel (Martin, 1970; Page, 1971); (4) development of more meaningful and relevant counselor training (Swain, 1971), (5) institution of placement services in the schools (Gambino and Briant, 1969; Wehrwein, 1970);

(6) employment of audio-visual and automated materials (Harris, 1970; Roberts, 1970); and (7) creation of special programs to assist the handicapped and disadvantaged student (Miller, 1968).

The use of support personnel trained in fields other than education was found to be a practice gaining greater acceptance among educators (APGA, 1968; Matson, 1971). A variety of training programs were reported and proposed for these personnel, at the college level as well as in business and industry. The discovery that differential staffing enabled school systems to provide increased services in career guidance without increased cost was one advantage given for employing this method. Support personnel were found to be particularly useful in the areas of testing, data gathering, giving information, and performing clerical duties.

STUDENT NEEDS ASSESSMENT SURVEY

As a means of assessing student needs in career guidance, 7,871 Maryland junior and senior high school students filled out a 30-item survey questionnaire which asked them to describe themselves and their need for career counseling. Results indicated that 60.2 per cent of the students indicated a present need for career counseling. When asked to indicate the type of help that they most needed, the results were as follows:

%	Type Help
19.5	High school course selection
18.3	Jobs or occupations after high school
18.0	College or college plans
14.2	Tests that will help me with my career plans and decisions
5.6	Personal problems
19.9	No help needed at this time
6.8	Other

A related question asking students to indicate the specific type of help needed in career planning was answered as follows:

%	Type Help
25.3	Training requirements
3.6	Salaries and pay scales
3.3	Work and social roles
4.9	Job skills and behaviors
7.4	Job trends and opportunities
24.3	All of the above
21.9	No help needed at this time
6.7	Other

The majority of students participating in this survey indicated a present need for career counseling. Their needs are varied, an indication that school guidance programs need to provide information, counseling and additional services in a variety of related areas. With this survey in mind, school officials should take a critical look at their career guidance programs to determine if they are capable of filling student needs in this area.

In summary, the research review indicated that counselors, for the most part, do little vocational counseling. However, many innovative programs (for example, programs in Baltimore City, Washington County and Prince George's County) are now being established in an effort to improve the quality and quantity of career counseling offered in the public school systems of the State of Maryland.

Survey of Public Attitudes Toward Vocational
Technical Education in Frederick County

The above-named study was recently (June, 1972) completed for the Frederick County Vocation Technical Advisory Council and the Maryland Advisory Council on Vocational and Technical Education. Five hundred and fifty-nine male

and female heads of households participated by answering a set of standardized questions. Many of the questions asked were relevant to this study of vocational guidance and are summarized to provide an indication of public opinion in this area.

More than 70 per cent of the adults participating in this study indicated that they believed the "schools should take an active part in planning each child's education toward a job". The eighth or ninth grade was designated by about half as the point at which schools should begin providing students with vocational information. Of the 90 per cent who believed the school should be active in career guidance, two-thirds believed that career information and preparation should take into account job availability as well as the interest and aptitudes of each student. Over half of the participants also indicated that they would like to see the school system place its graduates in jobs. When asked if they would like to see the county school system spend greater amounts of money on job counseling, over half indicated affirmatively.

In summary, the majority of adults in this survey think career guidance is the job of the school and should be started in the middle school or junior high school. They support their belief in career guidance by indicating their desire to see more money spent on job counseling.

Furthermore, they would like to see career information become relevant as well as see job placement provided by the school system. It appears, therefore, that this sample of adults indicates that the public desires vocational guidance provided in the public schools and would like to see programs in this area expanded.

Interviews With County School Superintendents

Interviews were conducted with superintendents of the eight county school systems* in order to determine current practices, policies and needs in vocational guidance. (Interview results can be found in Appendix A).

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*Washington, Allegany, Queen Anne, Somerset, Kent, Caroline, Talbot, and Prince George's.

Results indicated that all superintendents saw vocational guidance as a responsibility of the school system. Half of the eight systems reported having a person responsible on a system-wide basis for vocational guidance; three of these four systems assigned additional duties to this person, with only one system having an individual responsible for vocational guidance as his only duty. Two systems reported having a specialist in career counseling in each high school, with a third system having a career counseling specialist in two high schools. Only one system had this type of specialized counselor in the middle schools, and none in the elementary school. Three of the five systems having vocational technical centers reported assigning counselors with specialized functions related to career guidance.

All superintendents indicated their high schools' counselors have vocational counseling duties; five of the superintendents also assigned junior high counselors this function. (No elementary school counselors were assigned this function.) Four counties assigned counselors in their vocational technical centers, career counseling duties.

Over half of the superintendents indicated they saw a need for counselor specialization in college counseling, counseling for vocational students, job development and placement. One superintendent reported mixed feelings about this question, with the remaining superintendents indicating that they believed counselors should be able to perform any type of function required of school counselors. Five systems reported hiring specialized and general counselors. Two superintendents commented that lack of funds hindered their ability to employ counselors with specialized functions.

A variety of replies were obtained from the question, "What kinds of preparation and experiences would you like to see persons involved in vocational guidance have?" These included: vocationally related coursework, work experience, work internships and group counseling coursework. These superintendents also reported that they would like to see counselor certification requirements changed to permit

entry of non-educators with work experience into vocational guidance, to require vocational experience by counselors, and to require that counselors take more than one course in the area of career guidance.

Six of the eight superintendents also indicated that they believe that state boards of education should establish state-wide policy concerning responsibility in providing students with vocational counseling. Suggestions as to the other services in regard to vocational aspects of guidance that should be provided students included administration of the General Aptitude Test Battery to all students, establishment of a computerized information service, assignment of special counselors to work with underachievers, increased school and student interaction with industry and with state and federal agencies.

Interviews with superintendents made apparent the differing levels of importance accorded vocational guidance in Maryland school systems. It follows that the manner in which these educators viewed vocational guidance affects the quality and quantity of vocational guidance provided in their school systems. Many progressive suggestions were noted from these interviews and were considered in formulating the recommendations.

Interviews With Heads of Counselor Education Programs

Since the review of the research revealed counselor training to be generally inadequate in the area of vocational guidance, a survey of six counselor education programs in the State of Maryland and the District of Columbia was conducted in order to ascertain the number and types of courses in the area of vocational counseling now being offered, or being planned. Further information was gathered concerning the views of counselor educators toward vocational counseling and toward the role of differential staffing in career counseling.

All schools surveyed offered one required course in the area of career guidance with the course usually built around vocational theory and/or location and

cataloging of occupational information. Several program directors indicated interest in implementing additional courses in career counseling including courses taught as seminars, and those which would utilize field experiences.

The counselor educators were not in agreement as to the desirability of using differential staffing when training was gained in fields other than that of counselor education. (The American Personnel and Guidance Association have recognized the value of differential staffing and published guidelines for their use: Support Personnel for the Counselor - Their Technical and Nontechnical Role and Preparation.)

This disagreement appears to be centered around the question of the role of the counselor, i.e., should counselors be trained to perform all duties now required of a school counselor or should they specialize in their training and performance of duties. This disagreement was also noted in the interview of the superintendents. It appears that the way in which the counselor educators and superintendents view the role of the counselor has played, and will play, a major role in the manner in which vocational counseling will develop. Specifically, this question affects counselor certification requirements, counselor education programs and hiring and assignment of counselors to school systems. The manner in which counselor educators perceived a counselor's function appeared to be related to their planning of additional courses in vocational counseling, i.e., those who saw counselors as specialists were planning more courses.

The counselor educators did agree that the use of support personnel could ease counselor loads and enable student services to be improved. The University of Maryland and the State Department of Education are now involved in a program which trains paraprofessional guidance workers for Annapolis Senior High School. One of the functions of these individuals is in the area of career development and includes working with career advisers, developing and maintaining career information, helping students to use this information, and helping students to make career inquiries.

Several educators indicated they would like to see more specialization of counselor roles with a program which would train a career counselor curriculum specialist. A need for specialized internships was also expressed. It was apparent, however, that although counselor educators indicated vocational counseling to be one role of the school counselor, no school seemed to be adequately preparing its graduates to fill this role at this time.

Career Development and Guidance Practices in Maryland

Wide variations have been noted in the manner in which State school systems have recognized the importance of career development and began to provide services to students in this area. There are indications, however, that a variety of progressive programs in career development are being implemented throughout the State, including the use of a computer and placement programs in Baltimore City and the Washington County career counseling program.

The majority of the school systems are now providing some career development activities in the elementary grades. Over half of the systems now offer courses or units in the secondary schools on occupational information, the world of work or career exploration. Seventeen of the 24 systems presently use standardized test instruments related to career development. Eleven systems reported operating job placement programs (this is a drop of three from 1968).

This report presented evidence that many Maryland school systems are moving forward in their presentation of career development. The wide variations in the recognition of the importance of career guidance and implementation of programs in this area indicates, however, that the schools have a long way to go in developing a uniformly effective vocational guidance program throughout the State.

Analysis of Needs

The importance of providing vocational guidance in the schools is gaining increasing recognition among educators, both national and local. A review of the

research focusing on vocational guidance revealed both increased awareness of the need for vocational guidance in the schools, as well as the establishment of a variety of programs to fill this need. As previously noted, State supervisors and counselor educators expressed the belief that vocational guidance was one function of the school counselor. Programs of career development are being provided throughout the State on a limited basis. However, in order to provide comprehensive career development services to all public school students in the State, it is important to identify the needs. These needs are identified as program objectives and personnel skills. The recommendations of the Advisory Council are provided for suggesting ways of meeting the career counseling needs of the students.

Program Objectives

1. Career Information

   Occupational information -- broad and specific.

   Regional job availability and competencies needed to perform these jobs.

   How to make career decisions.

   Specific job-related skills

   - How to interview for a job.
   - How to fill out employment applications and resumes.
   - How to look for a job.
   - How to keep a job.

2. Self-Exploration

   Information on skills, aptitudes and interests.

   Vocational counseling.

3. Additional Services

   Placement and Follow-up.

Personnel Skills

A variety of experiences and training are required of the counselor and other personnel who provide career development services to students. Those professionals who are designated to assist a student in gaining occupational information should have training in the following areas: career psychology, occupational information specifically related to national, state and local needs, and the world of work (how to help students acquire specific skills related to finding and keeping a job). Actual work experience outside the field of education should be required.

It should be noted that many of the needs of students for vocational information could be competently handled by trained personnel from fields such as business and industry.

The task of keeping up with employment trends would seem to be a full-time job. This job could be filled by someone whose duties included, not only employment needs, requirements and trends in the State, but dissemination of the information to the students, perhaps through the use of a computer. This individual would need leadership ability as well as skill in the planning and evaluation of programs.

Personnel assisting students in self-exploration should have training in administering and interpreting interest and aptitude tests. Here again, trained instructional aides could effectively schedule, administer and score students tests. Counselors, trained in test interpretation and vocational counseling, could then counsel with each student about their tests and vocational future.

The competencies required of the individual serving as the placement specialist would include work experience as well as training in effective placement procedures. This specialist would be sure that each student had learned specific job-related skills such as job interviewing, and filling out employment applications. (The use of video tape, together with role-playing by students, has been found to be an extremely effective method of teaching job interview skills.)

Recommendations

After taking into consideration information gathered from the variety of sources previously reviewed in this report, as well as the needs which an effective career development program must fill, the following recommendations are being offered:

1. Provide greater funding for personnel in the area of career development, guidance, counseling and placement.

2. Develop and maintain a State-wide occupational data system available to all school systems.

3. Change the certification requirements so that counselors are required to have taken more than one course in the vocational area; courses which focus on practical application of career counseling techniques and regional occupational information should be stressed. Certification could also be changed to allow counselor certification in specialty areas with work experience required for certification in some specialty areas.

4. Recognize by certification, support personnel trained in areas other than education as eligible to work in the school system.

5. Counselor education programs, particularly in the larger schools, should be encouraged to establish a major in career guidance, with appropriate courses provided, such as:

   Techniques of career counseling.

   Planning and managing career guidance and placement programs.

   Occupational information from the standpoint of national, state and local needs.

   Career needs of special populations such as disadvantaged and handicapped students.

   Testing -- specifically related to career tests.

   Practicums and internships in career counseling.

Each counselor education program should evaluate the course(s) in career counseling now being offered in terms of relevancy and usefulness to the school counselor. The course(s) should then be changed, if necessary, with other appropriate courses (using the above list as a reference) added to the program.

6. Training programs should be offered in the schools (on-the-job training as is being carried out at Annapolis High School), and community colleges for support personnel. Areas in which support personnel might be trained are: placement and follow-up; vocational and occupational information; and vocational test administration and scoring.

7. Evaluate present guidance and counseling services now afforded by the school systems, particularly in view of student needs and their views on the services that they want offered. Each system should have a plan for career guidance with clearly stated program objectives.

8. Encourage all school systems to employ an individual responsible only for career development. This person would be responsible for ensuring that vocational guidance is provided in all schools and as effectively as possible.

9. Encourage each system to determine the composition of each school in terms of relative career goals of the students and the educational needs beyond high school. Determine percentage of disadvantaged students -- then assign counselors accordingly. Counselors working with the disadvantaged should have special training in providing career guidance to this group, since disadvantagement affects interpretation of test scores, grades and attitudes toward employment.

10. Provide in-service training in career development for counselors already employed in the school system. If specialization was desired, one counselor from

each school could receive the training. Training should stress practical application of knowledge.

11. Encourage each school system to provide interest and aptitude tests for all secondary level students, as well as meaningful interpretation.

12. Provide placement and follow-up services for all students requesting the service including drop-outs. The most effective placement service would probably be operated on a system-wide basis. In this way the greatest number of job listings would be available for matching with the greatest number of students. Have available, current occupational information for student use (perhaps through computer).

13. Provide counselors and other personnel in a ratio that would allow all students to receive career guidance.

14. Offer a conference on vocational guidance to school superintendents and counselor educators. Use this opportunity to further progressive and positive attitudes toward vocational education. Provide information on state and national programs in this area and allow time for discussion.

15. The State Career Guidance Committee has prepared a program which includes an expenditure of 1.2 million dollars for career counseling beginning in Fiscal Year 1974. This Council recommends that the State Board support this program with recommended full funding.

SUMMARY

The State of Maryland is making progress toward the goal of providing vocational guidance to meet the needs of all students. Recognition of the importance of providing comprehensive career education to all students is steadily increasing. Hopefully, the information and recommendations contained in this report will be used to make vocational guidance in Maryland the best in the nation.

Appendix A

Interviews with Superintendents

Question 1: Is vocational guidance seen as a responsibility of the school system?

	Number	%
Yes	8	100
No	0	-

Comments: "It is recognized that while this is a responsibility of the school system, it is a weak point and total reorganization of the concept must be developed."

Question 2. Do you have a person on a system-wide basis responsible for vocational guidance?

	Number	%
Yes	4	50
No	4	50

Question 3: What other responsibilities does this person have?

All guidance and counseling, pupil personnel, testing placement	3
An assistant superintendent who participates in curriculum planning and administration of work-study program.	1

Question 4: Do you have a specialist in vocational guidance in each of the high schools?

Yes	2	(One has at 2 high schools)
No	6	

Middle or Senior High

Yes	1
No	7

Elementary Schools

Yes	0
No	8

Vocational Technical Center

Yes	3
No	2
N/A	3

Question 5: Do you have counselors at these schools that have career counseling as one of their functions?

High School

Yes	7
No	0

Middle School

Yes	5
No	2

Vocational Technical Center

Yes	4
No	2
N/A	1

Elementary School

Yes	0
No	7

(One superintendent indicated this question was not applicable.)

Question 6: Do you employ specialized counselors?

Yes	5
No	1
No Answer	2

General Counselors

Yes	5
No	0
No Answer	3

Question 7: Do you believe there should be specialization in counseling: Such as

(Of those who answered)

(a) Counseling for college

Yes	5
No	-

(b) Counseling for vocational students

Yes	5
No	-

(c) Job development counselors

Yes	5
No	1

(d) Placement counselors

Yes	4
No	1
Limited	1

Comments: "Mixed feelings. Six years ago would have answered "no", sees a place for specialization today, but would require tripling of guidance staff which is hardly in this system.

If enough available along with funds.

Each of these functions should be a leadership responsibility of a counselor who also does personal counseling with all students who choose to come to him.

(a) Depending upon size of the system and number of individuals preparing for college would govern a full-time individual in this position.

(b) Will be responsible in the vocational technical center.

Question 8: What kinds of preparation and experiences would you like to see persons involved in vocational guidance have?

Number	
1	Courses in occupations, labor market information, etc.
2	Ability to identify and relate to students. Background in career education, psychology of attitude development.
6	Work experience outside education as well as training work release program wherein school system subsidized counselor on the job in local industry.
	Knowledge of employment for handicapped individuals.

Question 9: What changes would you like to see at the University level in counselor preparation?

Comments: Relate preparation to world of work.

Six month internship in a variety of career areas.

2 More work in career education, group counseling techniques.

Less emphasis on college entrance. Work experience before certification. Better rounded courses in all areas of counseling such as labor market information, job duties and assignments.

Question 10: What changes would you like to see in counselor certification?

Comments: Accept college degree plus significant experience in industry or government.

3 Permit entry of non-educators with actual work experience.

Workshop experience in career education.

More than one three-hour course in vocational guidance for counseling certification.

Vocational experience by counselors such as working in industry or related state or county agencies such as vocational rehabilitation or the Maryland State Employment Service.

Question 11: Do you feel the State Board of Education should establish state-wide policy concerning responsibility in providing students with vocational aspects of guidance.

Yes	6
No	2

Comments: Stronger effort to get the right kind of people in the field.

Recommend review of primary standards for the certification of vocational guidance counselors more in keeping with the expertise of individuals capable of doing the job.

Question 12: Are there other services in regard to vocational aspects of guidance you feel should be provided students.

Comments: Vocational guidance counselors should be totally aware of job opportunities in the immediate area.

Relationship of curriculum to job duties to which student aspires.

Ability to communicate realistically to students about course curriculum and job opportunities.

Counselors in elementary and junior high schools.

Counselors assigned to work with under-achievers.

State leadership in upgrading counselors.

Create responsibility of counselors to work with all students.

K-12 curriculum in career education give all students the General Aptitude Test Battery.

Wholesome viewpoint of work concern about attitudes and restoration of work ethic.

Computerized information service.

Increased interaction with industry, state and federal agencies.

Pre-vocational training and screening counseling during training, and placement after training.

BIBLIOGRAPHY

Bottoms, Gene, and O'Kelley, George L., "Vocational Education as a Developmental Process," American Vocational Journal, 1971, 46:3, 21-24.

Carey, Neil E., "Vocational Guidance for All," American Vocational Journal, April, 1970.

Gambino, Thomas W., and Briant, Robert A., Career Development Job Placement: A Guidebook for Counselors, State of New Jersey, 1969.

Graff, Robert W., Gorrell, William T., and MacLean, Donald G., "Socio-Economic Status and Students' Reactions Toward School Guidance," The High School Counselor, 1971, 54:8, 484-492.

Harris, Edward E., "What's Ahead for D.E.," American Vocational Journal, 1971, 46:1, 53-55.

Holt, Kenneth A., "Vocational Guidance for All -- New Kinds of Personnel Needed," American Vocational Journal, 1970, 45:5, 62.

Loudermilk, Kenneth M., and DiMinico, Gerald, Instruments for Vocational Guidance Selection and Placement: A Review and Synthesis of Research in Idaho, HEW, Washington, D.C., March, 1969.

Mahoney, Harold J., "Information Services," The High School Counselor, 1970, 54:4, 276-286.

Martin, Ann M., "An Interactive Media for Student and Teacher Growth," Audio-visual Instruction, 1970, 15, 53-56.

Matson, Jane E., "Student Personnel Services in Two Year Colleges; A Time for Charting New Direction," Peabody Journal of Education, 1971, 48:4, 276-281.

Miller, C. H., "A Pilot Project for Vocational Guidance in Economically Underdeveloped Areas," Illinois State Office of The Superintendent of Public Instruction, Springfield, 1968.

National Advisory Council on Vocational Education, Counseling and Guidance: A Call for Change, June, 1972, HEW.

"Opinions About Vocational Education in Michigan," A Study by the Michigan Advisory Council on Vocational Education, June, 1971.

Pate, Robert H., "Placement and Follow-up in the Guidance Program," The High School Journal, 1971, 54:4, 287-294.

Phillips, Wallace, "Guidance Services: Range and Scope," The High School Journal, 54:4, 1971, 243-250.

"Public Attitudes Toward Vocational Technical Education in Frederick County," June, 1972.

"A Report on the Practice and Procedures of Career Guidance," March, 1972.

"Report of the Survey of Career Development and Guidance Practices in Maryland Public Schools," Maryland State Department of Education, Division of Research, Evaluation and Information Services.

Roberts, Tommy L., "Total Guidance Information Support System," The Personnel and Guidance Journal, 1971, 49:3, 194-195.

Roman, Robert J., and Doenges, Jama L., "Career Week at McTigue Junior High," American Vocational Journal, 1971, 46:6, 62-63.

Stevenson, William W., and Sandlin, Blan E., Evaluating Guidance Counseling and Placement, Oklahoma State Department of Education, December, 1970.

Support Personnel for the Counselor: Their Technical and Nontechnical Role and Preparation, American Personnel and Guidance Association, Washington, D.C. 1971.

Swain, Emeliza, "A Training Program for Career Exploration Teachers," American Vocational Journal, 1971, 46"8, 81-82.

Svran, Robert J., "Some Thoughts on Career Development," California State College, 1972.

The System Approach: An Emerging Behavioral Model for Vocational Guidance. The Center for Vocational and Technical Education, Ohio State University, 1971.

Tarrier, Randolph B. "Career Counseling: Prediction or Exploration," Paper presented at American Personnel and Guidance Association, New Jersey, April 4-8, 1971.

Towne, Douglas C., "Rural Area Application of Vocational Education Innovations Resulting from Research and Development Programs," Final Report, Office of Education, Bureau of Research. December, 1970.

Vocational Education: Innovations Revolutionize Career Training Education, U.S.A. Special Report, HEW, 1971.

Wehrwein, Austin C., "Work Opportunity Center," The High School Journal, 1970, 53:8, 449-454.

VT 019 881
GRADUATE FOLLOW-UP: STATISTICAL DATA ON CONNECTICUT STUDENTS COMPLETING VOCATIONAL PROGRAMS IN 1971.

CONNECTICUT STATE DEPT. OF EDUCATION, HARTFORD. DIV. OF VOCATIONAL EDUCATION.
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ABSTRACT - AN EFFORT TO PROVIDE VOCATIONAL EDUCATORS IN CONNECTICUT WITH A BASE UPON WHICH TO PLAN MORE EFFECTIVE PROGRAMS. THIS DOCUMENT HIGHLIGHTS STATISTICAL DATA OBTAINED FROM A FOLLOW-UP STUDY OF THE 1971 GRADUATES OF SECONDARY AND POST-SECONDARY VOCATIONAL PROGRAMS IN SCHOOLS WITH IN THE STATE. DOCUMENTS CONTAINING SURVEY RESULTS FOR THE TERMS 1968 TO 1970 ARE AVAILABLE AS VT 009 754, VT 013 074, AND VT 014 905 WHICH CAN BE FOUND IN ARM FALL 1971, ARM VOL. 5, NO. 1, AND ARM VOL. 5, NO. 4 RESPECTIVELY. (SN)

VT 019 881

Graduate Follow Up

Statistical Data on Connecticut Students Completing Vocational Programs in 1971

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Graduate Follow Up

Statistical Data on Connecticut Students Completing Vocational Programs in 1971

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Foreword

This year's Graduate Follow Up Report, a result of a survey conducted yearly by the Research and Planning Unit of the Division of Vocational Education, has been expanded to include data about adults as well as secondary and post-secondary vocational education graduates. Placement information is included from state, community, and technical colleges and local, vocational-technical, and special schools. All eight vocational fields are shown.

This report is distributed throughout the state in order to help vocational educators and others to evaluate the progress of vocational programs in Connecticut, to more effectively plan new programs, and to improve present program offerings. We hope that the information contained herein is meaningful and of assistance in accomplishing these goals.

Our appreciation is extended to all the individuals responsible for compiling and submitting the graduate data which make up the content of this booklet.

Joseph F. Murphy
Associate Commissioner and Director
Division of Vocational Education

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Introduction

One hundred and sixty-three schools, colleges, and other institutions reported a total of 15,281 students, representing eight program fields in vocational education in Connecticut, graduating from preparatory courses.

A total of 13,174 graduates completed secondary level programs, 147 completed adult preparatory programs, while the remaining 1,987 graduates came from post-secondary programs offered in state, community, and technical colleges and vocational-technical schools.

It should be noted that 72.3 per cent of those graduates who were available for placement were employed in occupations for which they were trained or in related occupations. The average hourly wage for this group was $2.35 per hour. Of the available graduates 1,479, or 16.8 per cent of the available graduates, were employed in non-related occupations.

Graduates continuing their education on a full-time basis represented 28.2 percent of the total. Of the number of graduates available for placement 708, or 8.0 per cent, were unemployed.

Research and Planning Unit

Herbert Righthand – *Co-Director*
Richard C. Wilson – *Co-Director*
Charles J. Bertagna
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Highlights

	Number	Percent
Total Number of Vocational Graduates	15281	
Not Available for Placement	6504	
Continued Full-Time School	4302	28.2
Entered Armed Services	611	4.0
Status Unknown	1119	7.3
Other Reasons	472	3.1
Available for Placement	8777	
Employed in Occupation Trained or Related	6350	72.3
Employed in Occupation Unrelated to Training	1479	16.8
Employed Part-Time	240	2.7
Unemployed	708	8.0
Mean Hourly Wage	$2.35	

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Vocational Programs Placement Summary

(1)	Total No. of Graduates (2)	Entered Armed Service (3)	Continued Training in Full-Time School (4)	Status Unknown (5)	Other (6)	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13) (7)	Employed In Occupation for Which Trained or in Related Occupation: Number (8)	Percent (9)	Mean Hourly Wage (10)	Unrelated Occupation (11)	Part Time (12)	Unemployed (13)
Vocational Agriculture	330	12	147	3	1	167	106	63	2.15	39	5	17
Business and Office Education	8696	196	2794	778	316	4612	3241	70	2.15	800	148	423
Cooperative Work Experience/ Diversified Occupations	1027	61	164	37	42	723	575	80	2.34	93	26	29
Distributive Education	1182	73	324	57	30	698	579	83	2.16	65	18	36
Health Occupations	1125	7	195	74	35	814	706	87	2.89	53	20	35
Home Economics for Gainful Employment	244	14	63	22	19	126	63	50	2.25	40	3	20
Technical Education	724	49	230	59	6	380	251	66	3.58	73	5	51
Trade and Industrial Education	1953	199	385	89	23	1257	829	66	2.65	316	15	97
GRAND TOTAL	15281	611	4302	1119	472	8777	6350	72	2.35	1479	240	708

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Vocational Agriculture	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Secondary												
East Haddam (Nathan Hale-Ray High)	6	0	4	0	0	2	1	50	2.20	0	0	1
Glastonbury High	6	0	2	0	1	3	2	67	2.87	0	0	1
Killingly High	11	1	3	0	0	7	5	71	1.84	2	0	0
Lebanon (Lyman Memorial High)	4	0	2	0	0	2	2	100	3.75	0	0	0
Ledyard High	15	0	5	0	0	10	3	30	2.35	7	0	0
Middletown (Woodrow Wilson High)	68	3	32	0	0	33	8	24	2.16	15	0	10
Norwalk (Center Voc. Arts)	8	1	0	0	0	7	6	86	2.45	1	0	0
Rockville High	28	0	23	0	0	5	3	60	2.25	2	0	0
Southington High	34	3	9	3	0	19	11	58	2.50	5	0	3
Suffield High	14	0	10	0	0	4	3	75	2.28	0	0	1
Trumbull High	17	0	12	0	0	5	4	80	2.10	1	0	0
Wallingford (Lyman Hall High)	26	2	11	0	0	13	12	92	2.10	1	0	0
Housatonic Valley (Reg. Dist. #1)	5	0	1	0	0	4	3	75	1.88	1	0	0
Wamogo (Reg. Dist. #6)	26	0	10	0	0	16	10	63	2.12	3	3	0
Woodbury (Reg. Dist. #14)	23	0	9	0	0	14	13	93	1.85	0	1	0
Norwich Free Academy	17	1	3	0	0	13	13	100	1.92	0	0	0
Woodstock Academy	3	1	1	0	0	1	1	100	2.00	0	0	0
Storrs (E. O. Smith High)	19	0	10	0	0	9	6	67	1.86	1	1	1
TOTAL	330	12	147	3	1	167	106	63	2.15	39	5	17

Business and Office Education

(1)	Total No. of Graduates (2)	Entered Armed Service (3)	Continued Training in Full-Time School (4)	Status Unknown (5)	Other (6)	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13) (7)	Employed In Occupation for Which Trained or in Related Occupation: Number (8)	Percent (9)	Mean Hourly Wage (10)	Unrelated Occupation (11)	Part Time (12)	Unemployed (13)
Secondary												
Bookkeeping, Accounting	1502	58	541	122	50	731	538	74	2.14	122	26	45
Data Processing	978	51	371	79	44	433	246	58	2.17	127	17	43
General Clerk-Typist	3691	80	1072	361	135	2043	1338	66	2.01	403	79	223
Stenographic Secretary	2055	6	661	134	68	1186	968	82	2.18	130	23	65
Total-Secondary	8226	195	2645	696	297	4393	3090	70	2.10	782	145	376
Post-Secondary												
Bookkeeping, Accounting	80	0	36	8	0	36	24	67	3.98	2	0	10
Data Processing	17	1	5	6	0	5	3	60	3.52	0	0	2
Management	8	0	2	3	0	3	2	67	—	1	0	0
Stenographic Secretary	122	0	15	20	0	87	79	91	2.66	1	1	6
Supervisory Adm. Mgt.	177	0	91	30	0	56	36	64	4.43	8	1	11
Total-Post-Secondary	404	1	149	67	0	187	144	77	3.35	12	2	29
Adult												
Bookkeeping	3	0	0	0	0	3	2	67	—	0	1	0
Clerk-Typist	45	0	0	13	15	17	3	18	—	0	0	14
Data Processing	10	0	0	0	0	10	0	—	—	6	0	4
Stenography	8	0	0	2	4	2	2	100	—	0	0	0
Total-Adult	66	0	0	15	19	32	7	22	—	6	1	18

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Business and Office Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Secondary												
Ansonia High	24	0	9	1	0	14	11	79	1.90	3	0	0
Berlin High	51	0	12	4	0	35	35	100	2.13	0	0	0
Bethel High	49	3	9	0	2	35	34	97	2.08	1	0	0
Bloomfield High	54	0	11	4	0	39	32	82	2.28	2	3	2
Bolton Jr.-Sr. High	18	0	6	0	1	11	7	64	2.23	4	0	0
Branford High	56	0	27	0	0	29	19	66	2.34	10	0	0
Bridgeport (Bassick High)	111	1	18	0	2	90	61	68	2.17	7	0	22
Bridgeport (Central High)	233	2	32	43	13	143	108	76	2.22	12	13	10
Bridgeport (Harding High)	194	4	30	32	17	111	91	82	2.24	9	8	3
Bristol Central High	75	5	15	30	0	25	14	56	2.15	11	0	0
Bristol Eastern High	32	0	16	2	1	13	5	38	2.15	1	1	6
Brookfield High	31	0	4	1	0	26	12	46	2.01	13	1	0
Canton High	20	0	11	1	0	8	5	63	2.03	2	0	1
Cheshire High	93	5	18	13	10	47	38	81	2.00	9	0	0
Clinton (The Morgan School)	24	0	11	5	1	7	4	57	1.97	2	1	0
Colchester (Bacon Academy)	59	8	23	0	3	25	24	96	2.30	1	0	0
Coventry High	61	1	15	9	0	45	38	84	2.10	2	1	4
Cromwell High	18	0	2	1	2	13	6	46	2.17	3	3	1
Danbury High	158	6	50	18	8	76	65	86	2.06	8	0	3
Derby High	34	0	20	0	0	14	14	100	1.86	0	0	0

Business and Office Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Secondary (contd.)												
East Granby Jr.-Sr. High	8	0	0	0	0	8	6	75	2.13	1	0	1
East Haddam (Nathan Hale-Ray High)	24	1	13	0	0	10	5	50	1.96	1	0	4
East Hampton High	12	0	7	0	0	5	5	100	1.93	0	0	0
East Hartford High	142	11	37	6	1	87	65	75	2.44	20	0	2
East Hartford (Penney High)	142	4	32	24	0	82	48	59	2.11	18	0	16
East Haven Sr. High	127	4	19	3	5	96	46	48	1.95	23	24	3
East Lyme High	33	0	16	2	1	14	10	71	2.15	2	0	2
East Windsor High	45	1	11	8	0	25	17	68	1.89	8	0	0
Ellington High	32	0	12	4	0	16	12	75	2.10	2	0	2
Enfield High	217	4	57	22	16	118	69	58	1.96	44	0	5
Fairfield (Roger Ludlowe High)	74	0	43	3	2	26	13	50	1.98	9	0	4
Fairfield (Andrew Warde High)	67	0	34	3	0	30	17	57	2.12	10	0	3
Farmington High	37	1	8	6	1	21	15	71	2.48	1	3	2
Granby Memorial High	44	0	11	0	1	32	28	88	2.15	2	2	0
Greenwich High	66	3	10	5	0	48	40	83	2.39	6	0	2
Groton (Fitch Sr. High)	99	1	16	9	0	73	45	62	1.85	2	14	12
Guilford Sr. High	28	1	8	5	0	14	12	86	1.98	1	1	0
Hamden High	99	0	27	26	0	46	41	89	2.01	0	0	5
Hamden-New Haven (Coop. Ed. Ctr.)	33	0	13	1	9	10	8	80	2.25	1	0	1
Hartford (Bulkeley High)	62	1	13	4	0	44	36	82	1.93	4	0	4

Business and Office Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Secondary (contd.)												
Hartford Public High	207	3	48	0	24	132	86	65	1.98	25	0	21
Hartford (Weaver High)	123	4	66	4	8	41	14	34	2.13	17	0	10
Lebanon (Lyman Memorial)	17	1	6	0	0	10	3	30	2.20	5	0	2
Ledyard High	17	0	8	2	1	6	6	100	1.85	0	0	0
Litchfield High	23	3	6	0	0	14	11	79	2.15	1	0	2
Madison (Hand High)	15	0	5	0	2	8	6	75	2.09	2	0	0
Manchester High	86	0	37	4	2	43	27	63	2.13	9	3	4
Meriden (Maloney High)	57	0	8	0	0	49	46	94	1.95	0	0	3
Meriden (Platt High)	72	0	19	1	0	52	47	90	1.98	0	3	2
Middletown High	7	0	0	6	0	1	0	—	—	1	0	0
Milford High	63	0	29	0	0	34	29	85	2.20	2	0	3
Milford (Jonathan Law High)	89	0	47	0	1	41	24	59	2.24	15	1	1
Monroe (Masuk High)	23	0	6	0	2	15	15	100	2.12	0	0	0
Montville High	79	1	10	14	5	49	33	67	1.93	9	3	4
New Britain Sr. High	131	0	15	62	0	54	45	83	2.08	1	1	7
New Britain (Pulaski High)	27	0	7	4	0	16	14	88	2.06	0	0	2
New Canaan Sr. High	33	0	14	10	0	9	8	89	2.79	0	1	0
New Haven (Wilbur Cross High)	228	2	48	43	18	117	76	65	2.06	24	7	10
New Haven (Hillhouse High)	94	6	14	13	7	54	31	57	1.87	18	3	2
New Haven (Richard C. Lee High)	91	2	33	8	1	47	26	55	1.93	12	1	8

Business and Office Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Secondary (contd.)												
New Milford High	36	0	8	0	3	25	10	40	2.02	4	0	11
Newtown High	29	0	13	0	4	12	12	100	2.19	0	0	0
North Branford High	34	3	12	3	1	15	14	93	1.97	0	0	1
North Haven High	98	1	46	2	2	47	27	57	1.94	10	4	6
Norwalk High	90	1	46	3	0	40	39	98	2.22	1	0	0
Norwalk (Brien McMahon High)	95	2	36	4	1	52	43	83	2.23	7	0	2
Norwalk (Center Voc. Arts)	17	0	2	0	3	12	9	75	2.15	2	0	1
Norwich Free Academy	113	10	22	7	7	67	45	67	1.85	15	0	7
Old Saybrook High	15	1	8	0	1	5	4	80	2.00	1	0	0
Plainfield High	43	0	12	3	6	22	8	36	1.94	10	0	4
Plainville Sr. High	51	1	11	12	0	27	19	70	2.49	3	2	3
Plymouth (Terryville High)	22	0	3	3	4	12	8	67	2.03	4	0	0
Portland High	42	1	13	1	2	25	19	76	2.00	4	0	2
Putnam High	36	1	2	7	3	23	10	43	2.24	10	0	3
Ridgefield High	32	1	19	0	1	11	5	45	2.45	4	1	1
Rocky Hill High	38	1	23	4	4	6	4	67	2.10	2	0	0
Seymour Sr. High	49	1	19	0	0	29	18	62	1.86	6	0	5
Shelton High	74	0	36	8	0	30	16	53	2.02	6	0	8
Simsbury High	53	0	8	0	0	45	41	91	2.15	2	1	1
Southington High	92	2	45	8	7	30	30	100	1.94	0	0	0

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Business and Office Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Secondary (Contd.)												
South Windsor High	26	0	10	2	0	14	12	86	2.07	1	0	1
Stafford High	37	0	6	0	3	28	19	68	2.10	5	0	4
Stamford High	202	2	124	0	0	76	64	84	2.30	11	1	0
Stamford (Rippowam High)	134	0	86	0	0	48	46	96	2.27	2	0	0
Stratford High	96	2	18	4	4	68	37	54	1.82	20	0	11
Stratford (Bunnell High)	106	1	45	4	6	50	26	52	1.81	11	0	13
Suffield High	24	1	7	0	1	15	15	100	2.13	0	0	0
Thomaston Jr.-Sr. High	17	0	2	0	1	14	8	57	1.91	5	0	1
Tolland High	30	1	14	0	2	13	7	54	1.97	3	1	2
Torrington High	97	1	44	2	1	49	28	57	1.93	11	0	10
Trumbull High	83	3	42	1	2	35	29	83	2.18	5	0	1
Vernon (Rockville High)	76	4	23	5	2	42	35	83	2.16	7	0	0
Wallingford (Lyman Hall High)	151	1	58	2	14	76	27	36	1.88	31	0	18
Waterbury (Crosby High)	75	1	33	14	0	27	11	41	1.85	3	2	11
Waterbury (Wilby High)	99	4	26	22	5	42	36	86	2.03	6	0	0
Waterbury (Kennedy High)	109	4	30	17	8	50	29	58	1.98	16	1	4
Watertown High	32	0	6	2	2	22	14	64	1.82	4	2	2
Westbrook Jr.-Sr. High	11	0	2	0	2	7	3	43	1.85	4	0	0
West Hartford (Conard High)	51	5	13	1	0	32	21	66	1.97	9	2	0
West Hartford (Hall High)	41	0	12	1	0	28	25	89	2.06	3	0	0

Business and Office Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Secondary (contd.)												
West Haven High	237	6	54	9	11	157	128	82	2.18	18	7	4
Westport (Staples High)	56	3	24	3	1	25	18	72	2.48	3	1	3
Wethersfield High	44	1	19	0	0	24	23	96	2.22	0	0	1
Wilton High	9	1	3	0	0	5	1	20	2.00	4	0	0
Winchester (The Gilbert School)	46	0	21	0	2	23	21	91	2.14	2	0	0
Windham High	180	2	39	29	0	110	59	54	1.98	24	11	16
Windsor High	176	7	87	22	1	59	50	85	2.15	9	0	0
Windsor Locks High	105	2	45	0	0	58	28	48	2.14	22	0	8
Wolcott High	39	0	11	4	3	21	13	62	2.09	1	5	2
Woodstock Academy	29	10	9	0	0	10	4	40	1.94	6	0	0
Valley Regional High (Dist. #4)	44	7	14	1	3	19	16	84	2.11	3	0	0
Amity Regional High (Dist. #5)	93	1	44	9	0	39	23	59	1.91	16	0	0
Wamogo Regional High (Dist. #6)	36	1	22	0	0	13	3	23	1.96	7	0	3
Northwestern Reg. High (Dist. #7)	23	0	5	2	0	16	5	31	2.01	8	1	2
RHAM Jr.-Sr. High (Reg. Dist. #8)	76	5	39	0	4	28	22	79	2.22	6	0	0
Joel Barlow High (Reg. Dist. #9)	20	0	9	1	0	10	10	100	1.77	0	0	0
Lewis S. Mills High (Reg. Dist. #10)	66	2	12	5	0	47	38	81	2.35	5	1	3
Durham (Reg. Dist. #13)	34	0	13	7	3	11	7	64	2.47	4	0	0
Nonnewaug (Reg. Dist. #14)	16	0	2	1	0	13	13	100	1.85	0	0	0
Southbury (Reg. Dist. #15)	33	2	10	8	0	13	9	69	1.93	0	4	0

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Business and Office Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Secondary (contd.)												
American School for the Deaf	26	0	15	0	0	11	11	100	2.08	0	0	0
ACES (North Haven)	3	0	2	0	0	1	1	100	2.00	0	0	0
Lark Industries (Torrington)	11	0	3	2	0	6	6	100	2.33	0	0	0
Total-Secondary	8226	195	2645	696	297	4393	3090	70	2.10	782	145	376
Post-Secondary												
Central Conn. State College	29	0	0	0	0	29	29	100	2.50	0	0	0
Greater Hartford Community Col.	22	0	5	4	0	13	11	85	–	1	1	0
Housatonic Community College	79	0	49	7	0	23	20	87	–	2	0	1
Manchester Community College	87	1	19	27	0	40	27	68	3.78	3	0	10
Mattatuck Community College	42	0	12	0	0	30	12	40	–	2	1	15
Middlesex Community College	33	0	6	22	0	5	5	100	3.26	0	0	0
Northwestern Community College	26	0	10	3	0	13	10	77	–	2	0	1
Norwalk Community College	80	0	42	4	0	34	30	88	3.84	2	0	2
South Central Community College	6	0	6	0	0	0	0	–	–	0	0	0
Total-Post-Secondary	404	1	149	67	0	187	144	77	3.35	12	2	29
Adult												
Corrections Inst. (Niantic)	66	0	0	15	19	32	7	22	–	6	1	18
Total-Adult	66	0	0	15	19	32	7	22	–	6	1	18
TOTAL	8696	196	2794	778	316	4612	3241	70	2.15	800	148	423

3299

Cooperative Work Experience/ Diversified Occupations

(1)	Total No. of Graduates (2)	Entered Armed Service (3)	Continued Training in Full-Time School (4)	Status Unknown (5)	Other (6)	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13) (7)	Employed In Occupation for Which Trained or in Related Occupation: Number (8)	Percent (9)	Mean Hourly Wage (10)	Unrelated Occupation (11)	Part Time (12)	Unemployed (13)
Secondary												
Bethel High	37	5	9	0	0	23	22	96	2.25	1	0	0
Branford High	26	3	7	0	5	11	4	36	2.27	7	0	0
Bridgeport (Bassick High)	14	0	0	1	1	12	9	75	2.51	0	3	0
Bridgeport (Central High)	31	1	3	1	1	25	18	72	2.33	3	3	1
Bridgeport (Harding High)	18	2	1	0	4	11	9	82	2.69	1	1	0
Bristol Central High	16	2	2	0	3	9	7	78	2.22	0	0	2
Bristol Eastern High	20	0	7	0	3	10	10	100	2.45	0	0	0
Danbury High	30	3	11	3	0	13	12	92	2.07	1	0	0
East Hartford (Penney High)	3	0	0	0	0	3	3	100	1.90	0	0	0
Ellington High	26	5	1	2	0	18	14	78	2.42	3	0	1
Enfield High	85	4	25	0	3	53	48	91	2.32	5	0	0
Hamden High	61	5	7	0	4	45	41	91	2.74	3	1	0
Hartford Public High	2	1	0	0	0	1	0	—	—	1	0	0
Hartford (Weaver High)	2	0	0	0	0	2	1	50	2.13	1	0	0
Manchester High	28	0	0	0	0	28	28	100	2.45	0	0	0
Middletown High	5	0	0	0	0	5	5	100	2.03	0	0	0
Middletown (Woodrow Wilson High)	27	1	0	0	0	26	22	85	1.89	4	0	0
Monroe (Masuk High)	20	1	0	0	1	18	12	67	2.87	6	0	0
New Britain High	8	0	0	2	0	6	4	67	—	0	0	2

3300

Cooperative Work Experience/ Diversified Occupations	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Secondary (contd.)												
New Haven (Wilbur Cross High)	68	5	9	10	0	44	32	73	2.58	3	0	9
New Haven (Hillhouse High)	38	3	8	0	0	27	17	63	2.29	4	1	5
New Haven (Richard C. Lee High)	32	2	3	1	2	24	13	54	2.18	5	4	2
Newtown High	28	0	9	0	2	17	16	94	2.33	1	0	0
North Haven High	34	2	4	0	0	28	17	61	2.11	11	0	0
Norwalk (Brien McMahon High)	9	0	0	0	0	9	7	78	2.20	0	0	2
Plainville High	44	5	6	2	6	25	21	84	2.17	4	0	0
Portland High	10	0	0	0	0	10	8	80	1.91	1	1	0
Southington High	47	0	7	1	0	39	37	95	2.23	1	1	0
Stamford High	45	0	6	0	0	39	25	64	2.41	4	10	0
Stamford (Rippowam High)	45	0	13	0	0	32	29	91	2.10	3	0	0
Stonington High	17	2	2	1	0	12	8	67	2.13	3	0	1
Wallingford (Lyman Hall High)	24	2	0	2	0	20	20	100	2.27	0	0	0
Waterbury (Kennedy High)	8	0	0	1	4	3	0	—	—	0	0	3
West Hartford (Conard High)	18	1	2	1	2	12	10	83	2.90	2	0	0
West Hartford (Hall High)	9	2	3	0	0	4	1	25	2.75	3	0	0
Westport (Staples High)	49	3	9	9	1	27	19	70	2.15	7	1	0
Wethersfield High	10	1	2	0	0	7	6	86	2.14	0	0	1

3301

Cooperative Work Experience/ Diversified Occupations	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Secondary (contd.)												
Windsor High	30	0	8	0	0	22	18	82	2.58	4	0	0
Southbury (Reg. Dist. #15)	2	0	0	0	0	2	1	50	2.35	1	0	0
Total–Secondary	1026	61	164	37	42	722	574	80	2.34	93	26	29
Adult												
Portland High	1	0	0	0	0	1	1	100	2.40	0	0	0
Total–Adult	1	0	0	0	0	1	1	100	2.40	0	0	0
TOTAL	1027	61	164	37	42	723	575	80	2.34	93	26	29

Distributive Education

(1)	Total No. of Graduates (2)	Entered Armed Service (3)	Continued Training in Full-Time School (4)	Status Unknown (5)	Other (6)	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13) (7)	Employed In Occupation for Which Trained or in Related Occupation: Number (8)	Percent (9)	Mean Hourly Wage (10)	Unrelated Occupation (11)	Part Time (12)	Unemployed (13)
Secondary												
Ansonia High	19	0	7	0	0	12	7	58	1.94	4	0	1
Bethel High	15	2	6	0	0	7	7	100	2.17	0	0	0
Bloomfield High	26	4	8	9	0	5	3	60	–	2	0	0
Branford Sr. High	21	2	5	0	0	14	11	79	2.08	3	0	0
Bridgeport (Bassick High)	7	2	0	0	0	5	5	100	2.40	0	0	0
Bridgeport (Central High)	11	0	2	0	2	7	4	57	2.53	0	2	1
Bridgeport (W. Harding High)	18	0	3	3	0	12	11	92	2.57	0	0	1
Danbury High	32	0	8	0	1	23	23	100	2.05	0	0	0
Derby High	46	1	15	0	0	30	27	90	2.05	2	1	0
East Hartford High	9	0	4	0	0	5	5	100	2.15	0	0	0
East Hartford (Penney High)	53	5	17	0	1	30	30	100	2.15	0	0	0
Enfield High	4	0	0	3	0	1	1	100	1.[illegible]	0	0	0
Greenwich High	18	1	5	0	0	12	12	100	2.30	0	0	0
Groton (Fitch High)	46	5	15	1	7	18	13	72	2.02	4	1	0
Hartford (Bulkeley High)	15	1	9	0	0	5	3	60	2.11	2	0	0
Hartford Public High	12	1	4	1	0	6	5	83	2.34	0	0	1
Hartford (Weaver High)	29	4	12	3	2	8	6	75	2.18	2	0	0
Manchester High	16	2	4	0	0	10	10	100	2.02	0	0	0
Meriden (Maloney High)	13	1	2	0	0	10	8	80	2.11	0	1	1

Distributive Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Secondary (contd.)												
Meriden (Platt High)	22	0	7	1	1	13	6	46	2.28	3	2	2
Middletown High	23	1	5	0	0	17	16	94	2.20	0	0	1
Milford High	16	0	6	1	0	9	9	100	2.55	0	0	0
Milford (Jonathan Law High)	24	5	7	0	3	9	9	100	2.13	0	0	0
Montville High	4	1	1	0	0	2	2	100	2.25	0	0	0
New Haven (Wilbur Cross High)	22	0	1	1	0	20	11	55	2.12	7	0	2
New Haven (Hillhouse High)	24	2	4	2	0	16	12	75	2.00	4	0	0
New Haven (Richard C. Lee High)	13	0	4	1	4	4	4	100	2.20	0	0	0
New Milford High	4	0	1	1	0	2	2	100	1.85	0	0	0
Newtown High	9	1	4	0	0	4	2	50	2.18	2	0	0
North Haven High	6	1	2	0	0	3	1	33	2.10	2	0	0
Norwalk High	52	6	19	3	0	24	22	92	2.23	2	0	0
Norwalk (Brien McMahon High)	19	0	10	0	0	9	9	100	2.20	0	0	0
Norwalk (Center Voc. Arts)	4	1	0	1	0	2	2	100	2.55	0	0	0
Norwich Free Academy	31	1	5	2	0	23	18	78	1.93	4	1	0
Plymouth (Terryville High)	8	0	1	0	1	6	6	100	1.86	0	0	0
Ridgefield High	2	0	1	0	0	1	0	—	—	0	1	0
Shelton High	18	0	9	2	0	7	7	100	2.40	0	0	0
Southington High	39	1	0	0	0	38	28	74	2.30	3	7	0
Stamford High	30	0	9	0	0	21	13	62	2.00	6	0	2

3304

Distributive Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Secondary (contd.)												
Stamford (Rippowam High)	10	0	5	0	0	5	5	100	2.22	0	0	0
Thomaston Jr.-Sr. High	4	0	1	0	0	3	1	33	2.50	1	0	1
Torrington High	33	1	5	1	0	26	23	88	1.90	0	0	3
Trumbull High	17	1	2	1	0	13	12	92	2.05	1	0	0
Wallingford (Lyman Hall High)	17	1	7	3	0	6	3	50	1.89	1	2	0
Waterbury (Crosby High)	46	1	16	4	3	22	21	95	2.06	0	0	1
Waterbury (Wilby High)	23	2	4	2	0	15	15	100	1.90	0	0	0
Waterbury (Kennedy High)	39	3	7	2	1	26	23	88	2.10	1	0	2
Watertown High	16	1	3	0	0	12	10	83	2.19	1	0	1
West Hartford (Conard High)	31	1	4	0	0	26	26	100	2.00	0	0	0
West Hartford (Hall High)	11	1	8	0	0	2	2	100	2.25	0	0	0
West Haven High	8	2	2	0	0	4	4	100	2.50	0	0	0
Wethersfield High	20	1	4	1	2	12	12	100	2.26	0	0	0
Windham High	15	2	2	0	1	10	8	80	1.88	2	0	0
Windsor High	13	2	1	0	1	9	7	78	2.19	1	0	1
Wolcott High	14	0	1	0	0	13	12	92	2.10	0	0	1
Woodbridge (Amity High Reg. Dist. #5)	8	0	3	0	0	5	5	100	1.81	0	0	0
Total–Secondary	1105	70	297	49	30	659	559	85	2.12	60	18	22

3305

Distributive Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Post-Secondary												
Central Conn. State College	6	0	0	0	0	6	6	100	2.30	0	0	0
Greater Hartford Community College	7	0	5	2	0	0	0	—	—	0	0	0
Manchester Community College	21	1	6	4	0	10	7	70	3.28	2	0	1
Mattatuck Community College	15	0	3	0	0	12	0	—	—	1	0	11
Northwestern Community College	6	1	4	1	0	0	0	—	—	0	0	0
Norwalk Community College	22	1	9	1	0	11	7	64	3.75	2	0	2
Total—Post-Secondary	77	3	27	8	0	39	20	51	3.12	5	0	14
TOTAL	1182	73	324	57	30	698	579	83	2.16	65	18	36

3306

Health Occupations	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Secondary												
Animal Technician	25	2	13	0	0	10	5	50	2.75	5	0	0
New Haven (Richard C. Lee High)	5	0	4	0	0	1	1	100	2.75	0	0	0
New Haven (Wilbur Cross High)	20	2	9	0	0	9	4	45	–	5	0	0
Medical Laboratory Assistant	42	4	20	14	0	4	2	50	–	2	0	0
New Haven (Hillhouse High)	13	2	7	2	0	2	1	50	–	1	0	0
New Haven (Richard C. Lee High)	19	0	7	12	0	0	0	–	–	0	0	0
New Haven (Wilbur Cross High)	10	2	6	0	0	2	1	50	–	1	0	0
Nurses Aide	300	1	125	18	28	128	76	59	2.12	33	6	13
Ansonia High	12	0	4	2	0	6	3	50	2.00	3	0	0
Bloomfield High	35	0	32	2	0	1	1	100	–	0	0	0
Branford High	12	0	3	2	2	5	2	40	2.25	3	0	0
Bridgeport (Central High)	6	0	1	1	0	4	3	75	1.85	1	0	0
Danbury High	11	0	4	0	0	7	5	41	2.09	2	0	0
Derby High	6	0	1	0	5	0	0	–	–	0	0	0
Groton (Fitch Sr. High)	12	0	4	0	3	5	0	–	–	0	5	0
Hamden-New Haven (Coop. Educ. Ctr.)	26	0	12	0	6	8	7	88	1.80	1	0	0

Health Occupations	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Secondary (contd.)												
Hartford (Bulkeley High)	7	0	4	0	0	3	0	—	—	3	0	0
Hartford (Weaver High)	15	0	5	0	0	10	3	30	2.00	1	0	6
Hartford Public High	5	0	2	1	0	2	0	—	—	1	0	1
Litchfield (Wamogo High Dist. #6)	15	1	6	0	6	2	0	—	—	2	0	0
Manchester High	13	0	9	0	0	4	3	75	2.22	1	0	0
Meriden (Platt High)	11	0	8	0	0	3	3	100	2.29	0	0	0
New Britain Sr. High	20	0	5	0	3	12	6	50	2.57	2	1	3
Norwalk Center Voc. Arts	3	0	0	1	0	2	0	—	—	1	0	1
Ridgefield High	8	0	3	0	1	4	2	50	2.65	2	0	0
Shelton High	20	0	11	2	0	7	3	42	2.35	3	0	1
Southington High	21	0	10	0	1	10	7	70	1.85	3	0	0
Stamford High	4	0	0	0	0	4	2	50	1.85	2	0	0
Stamford (Rippowam High)	4	0	0	0	0	4	4	100	1.87	0	0	0
Wallingford (Lyman Hall High)	15	0	0	7	0	8	8*	100	2.25	0	0	0
Watertown High	19	0	1	0	1	17	14	88	2.20	2	0	1

Health Occupations	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Secondary (contd.)												
Psychiatric Aide	6	0	0	0	0	6	0	—	—	2	2	2
Groton (Fitch High)	6	0	0	0	0	6	0	—	—	2	2	2
Radiologic Technician	11	0	7	1	1	2	0	—	—	0	0	2
New Haven (Wilbur Cross High)	11	0	7	1	1	2	0	—	—	0	0	2
Total—Secondary	384	7	165	33	29	150	83	55	2.13	42	8	17
Post-Secondary												
Dental Assistant	65	0	2	4	0	59	45	71	2.48	6	2	6
Eli Whitney Tech.	22	0	2	0	0	20	13	65	2.19	2	0	5
A.I. Prince Tech.	14	0	0	4	0	10	10	100	2.00	0	0	0
J.M. Wright Tech.	14	0	0	0	0	14	12	86	2.75	1	1	0
Windham Tech.	15	0	0	0	0	15	10	67	2.56	3	1	1

Health Occupations	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Post-Secondary (contd.)												
Urban Professional	6	0	6	0	0	0	0	–	–	0	0	0
Housatonic Community College	6	0	6	0	0	0	0	–	–	0	0	0
Inhalation Therapy	1	0	0	0	0	1	1	100	4.00	0	0	0
Norwalk Community College	1	0	0	0	0	1	1	100	4.00	0	0	0
Medical Laboratory Assistant	17	0	7	1	0	9	9	100	3.00	0	0	0
Housatonic Community College	17	0	7	1	0	9	9	100	3.00	0	0	0
Nursing	15	0	0	0	0	15	15	100	4.00	0	0	0
Norwalk Community College	15	0	0	0	0	15	15	100	4.00	0	0	0
Occupational Therapy	17	0	0	3	0	14	11	79	2.75	3	0	0
Manchester Community College	17	0	0	3	0	14	11	79	2.75	3	0	0

Health Occupations	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Post-Secondary (contd.)												
Practical Nursing	590	0	15	33	6	536	515	96	3.00	2	9	10
Bullard-Havens Tech.	67	0	5	0	0	62	62	100	3.00	0	0	0
Henry Abbott Tech.	32	0	4	1	0	27	24	89	2.87	0	3	0
Eli Whitney Tech.	77	0	1	2	0	74	74	100	3.17	0	0	0
A.I. Prince Tech.	123	0	0	29	0	94	92	98	2.00	2	0	0
Vinal Tech.	24	0	2	0	0	22	22	100	2.90	0	0	0
E.C. Goodwin Tech.	62	0	2	0	0	60	56	90	3.12	0	4	0
Norwich Tech.	25	0	1	0	0	24	24	100	2.86	0	0	0
J.M. Wright Tech.	67	0	0	0	0	67	60	89	3.35	0	4	3
W.F. Kaynor Tech.	74	0	0	0	6	68	68	100	2.55	0	0	0
Windham Tech.	39	0	0	1	0	38	33	87	3.00	0	1	4
Radiologic Technician	7	0	0	0	0	7	4	57	3.20	0	1	2
Middlesex Community College	7	0	0	0	0	7	4	57	3.20	0	1	2
Surgical Technician	6	0	0	0	0	6	6	100	3.25	0	0	0
Manchester Community College	6	0	0	0	0	6	6	100	3.25	0	0	0
Total—Post-Secondary	724	0	30	41	6	647	606	93	2.99	11	12	18

Health Occupations	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Adult												
Health Occupations	17	0	0	0	0	17	17	100	–	0	0	0
Hamden-New Haven (Coop. Educ. Ctr.)	17	0	0	0	0	17	17	100	–	0	0	0
Total–Adult	17	0	0	0	0	17	17	100	–	0	0	0
TOTAL	1125	7	195	74	35	814	706	87	2.89	53	20	35

3312

Home Economics For Gainful Employment

(1)	Total No. of Graduates (2)	Entered Armed Service (3)	Continued Training in Full-Time School (4)	Status Unknown (5)	Other (6)	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13) (7)	Employed In Occupation for Which Trained or in Related Occupation: Number (8)	Percent (9)	Mean Hourly Wage (10)	Unrelated Occupation (11)	Part Time (12)	Unemployed (13)
Secondary												
Care & Guidance of Children	16	0	5	3	1	7	3	43	1.95	2	1	1
Bridgeport (Central High)	16	0	5	3	1	7	3	43	1.95	2	1	1
Clothing Management	11	0	7	0	4	0	0	—	—	0	0	0
Nonnewaug High (Reg. Dist. #14)	11	0	7	0	4	0	0	—	—	0	0	0
Food Management	195	14	50	18	13	100	47	47	2.56	38	2	13
Branford High	19	3	8	2	1	5	0	—	—	3	0	2
Bridgeport (Central High)	16	1	1	1	1	12	6	50	2.50	3	1	2
Hamden High	15	0	4	1	3	7	5	71	2.05	2	0	0
Hamden-New Haven (Coop. Educ. Ctr.)	18	1	3	1	0	13	11	85	3.50	1	0	1
New Britain Sr. High	10	2	1	1	2	4	2	50	2.25	1	0	1
New Britain Sr. High (Spec. Ed.)	4	0	0	0	0	4	3	75	—	0	0	1
New Britain (Pulaski Sr. High)	9	0	0	0	0	9	5	56	2.25	2	0	2
North Haven High	14	0	5	2	0	7	2	29	2.50	4	1	0
Norwalk Center for Voc. Arts	3	0	1	0	1	1	0	—	—	1	0	0
Southington High	19	0	0	3	1	15	3	20	2.10	8	0	4
Waterbury (Wilby High)	40	5	16	6	0	13	5	38	1.95	8	0	0

Home Economics For Gainful Employment	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Secondary (contd.)												
Watertown High	4	0	1	0	0	3	2	67	2.50	1	0	0
Windham High	8	0	2	1	0	5	2	40	—	3	0	0
RHAM High (Reg. Dist. #8)	8	2	3	0	1	2	1	50	2.10	1	0	0
Nonnewaug High (Reg. Dist. #14)	8	0	5	0	3	0	0	—	—	0	0	0
Home Furnishings	1	0	0	1	0	0	0	—	—	0	0	0
Nonnewaug High (Reg. Dist. #14)	1	0	0	1	0	0	0	—	—	0	0	0
Occupational Home Economics	5	0	1	0	0	4	3	75	2.03	0	0	1
J.M. Wright Tech.	5	0	1	0	0	4	3	75	2.03	0	0	1
Total–Secondary	228	14	63	22	18	111	53	48	2.49	40	3	15
Adult												
Care & Guidance of Children	16	0	0	0	1	15	10	67	1.85	0	0	5
Danbury High	16	0	0	0	1	15	10	67	1.85	0	0	5
Total–Adult	16	0	0	0	1	15	10	67	1.85	0	0	5
TOTAL	244	14	63	22	19	126	63	50	2.25	40	3	20

3314

Technical Education

(1)	Total No. of Graduates (2)	Entered Armed Service (3)	Continued Training in Full-Time School (4)	Status Unknown (5)	Other (6)	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13) (7)	Employed In Occupation for Which Trained or in Related Occupation: Number (8)	Percent (9)	Mean Hourly Wage (10)	Unrelated Occupation (11)	Part Time (12)	Unemployed (13)
Post-Secondary												
Agricultural Technology	31	1	7	6	0	17	17	100	–	0	0	0
Ratcliffe-Hicks School of Agric. (University of Connecticut)	31	1	7	6	0	17	17	100	–	0	0	0
Police Science Technology	28	0	6	2	0	20	17	85	3.75	1	1	1
Manchester Community College	28	0	6	2	0	20	17	85	3.75	1	1	1
State Technical Colleges												
Chemical Technology	33	2	18	1	0	12	7	58	3.45	3	0	2
Norwalk	7	2	0	1	0	4	4	100	3.67	0	0	0
Thames Valley (Norwich)	18	0	12	0	0	6	2	33	3.37	2	0	2
Waterbury	8	0	6	0	0	2	1	50	3.00	1	0	0
Civil Technology	47	4	13	5	1	24	24	100	3.85	0	0	0
Hartford	47	4	13	5	1	24	24	100	3.85	0	0	0

3315

Technical Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Post-Secondary (contd.)												
Data Processing Technology	109	6	30	6	1	66	38	58	3.34	16	0	12
Hartford	37	2	10	4	1	20	16	80	3.37	3	0	1
Norwalk	29	1	10	0	0	18	9	50	3.26	9	0	0
Thames Valley (Norwich)	19	3	7	2	0	7	3	43	3.25	4	0	0
Waterbury	24	0	3	0	0	21	10	48	3.41	0	0	11
Electrical Technology	181	15	55	10	2	99	65	66	3.60	19	0	15
Hartford	39	3	11	3	2	20	13	65	3.68	6	0	1
Norwalk	50	6	16	2	0	26	17	65	3.53	9	0	0
Thames Valley (Norwich)	28	4	7	0	0	17	13	76	3.48	4	0	0
Waterbury	64	2	21	5	0	36	22	61	3.70	0	0	14
Electro-Mechanical Technology	12	0	5	1	0	6	6	100	4.07	0	0	0
Norwalk	12	0	5	1	0	6	6	100	4.07	0	0	0
Industrial Drafting Technology	51	1	13	6	0	31	7	23	2.52	13	4	7
Norwalk	15	0	6	6	0	3	2	67	2.50	1	0	0
Thames Valley (Norwich)	14	1	2	0	0	11	2	18	2.95	4	0	5
Waterbury	22	0	5	0	0	17	3	18	2.25	8	4	2

3316

Technical Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation: Number	Percent	Mean Hourly Wage	Unrelated Occupation	Part Time	Unemployed
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Post-Secondary (contd.)												
Manufacturing Technology	60	8	14	5	1	32	18	56	3.54	8	0	6
Norwalk	8	0	1	0	0	7	3	43	3.31	4	0	0
Thames Valley (Norwich)	24	4	3	2	1	14	12	86	3.65	2	0	0
Waterbury	28	4	10	3	0	11	3	27	3.65	2	0	6
Materials Technology	12	0	4	2	0	6	5	83	3.40	1	0	0
Norwalk	12	0	4	2	0	6	5	83	3.40	1	0	0
Mechanical Technology	105	10	45	11	1	38	21	55	3.81	10	0	7
Hartford	24	1	6	3	0	14	6	43	4.21	6	0	2
Norwich	36	3	14	6	0	13	10	77	3.69	3	0	0
Thames Valley (Norwich)	15	1	8	2	1	3	2	67	4.00	0	0	1
Waterbury	30	5	17	0	0	8	3	38	3.35	1	0	4
Nuclear Technology	15	2	10	0	0	3	3	100	4.05	0	0	0
Hartford	15	2	10	0	0	3	3	100	4.05	0	0	0

3317

Technical Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Post-Secondary (contd.)												
Surveying Technology	20	0	9	4	0	7	4	57	3.00	2	0	1
Hartford	20	0	9	4	0	7	4	57	3.00	2	0	1
Tool Technology	5	0	1	0	0	4	4	100	3.75	0	0	0
Hartford	5	0	1	0	0	4	4	100	3.75	0	0	0
Total–Post Secondary	709	49	230	59	6	365	236	65	3.58	73	5	51
Adult												
Police Science Technology	15	0	0	0	0	15	15	100	5.53	0	0	0
Norwalk Community College	15	0	0	0	0	15	15	100	5.53	0	0	0
Total–Adult	15	0	0	0	0	15	15	100	5.53	0	0	0
TOTAL	724	49	230	59	6	380	251	66	3.58	73	5	51

3318

Trade and Industrial Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Secondary												
Vocational-Technical Schools												
Air Conditioning	7	0	0	0	0	7	3	43	2.75	4	0	0
Oliver Wolcott	7	0	0	0	0	7	3	43	2.75	4	0	0
Aircraft Mechanics	23	3	1	0	0	19	7	37	3.13	12	0	0
H.H. Ellis	23	3	1	0	0	19	7	37	3.13	12	0	0
Automobile Paint and Body	7	1	1	1	0	4	4	100	3.00	0	0	0
W.F. Kaynor	7	1	1	1	0	4	4	100	3.00	0	0	0
Automotive Mechanics	171	17	13	2	0	139	101	73	2.69	25	4	9
Emmett O'Brien	14	0	2	0	0	12	12	100	2.50	0	0	0
Bullard-Havens	16	2	1	0	0	13	8	62	2.29	2	1	2
Henry Abbott	13	0	1	0	0	12	7	58	2.92	3	1	1
H.H. Ellis	5	0	0	0	0	5	3	60	3.62	0	0	2
Eli Whitney	18	1	4	0	0	13	7	54	2.22	3	0	3
A.I. Prince	15	4	0	0	0	11	11	100	3.00	0	0	0
Howell Cheney	10	0	0	0	0	10	8	80	2.75	2	0	0

3319

Trade and Industrial Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Vocational-Technical Schools (contd.)												
Automotive Mechanics (contd.)												
H.C. Wilcox	13	4	0	0	0	9	6	64	2.20	3	0	0
Vinal	6	0	0	0	0	6	3	50	2.50	2	0	1
E.C. Goodwin	14	2	1	0	0	11	8	73	2.37	3	0	0
Norwich	7	1	0	0	0	6	6	100	3.90	0	0	0
J.M. Wright	6	1	1	0	0	4	4	100	2.85	0	0	0
Oliver Wolcott	13	1	0	0	0	12	9	75	2.50	3	0	0
W.F. Kaynor	9	1	1	2	0	5	4	80	2.75	1	0	0
Windham	12	0	2	0	0	10	5	50	2.80	3	2	0
Baking	6	1	1	0	0	4	1	25	2.50	1	0	2
Bullard-Havens	6	1	1	0	0	4	1	25	2.50	1	0	2
Beauty Culture	78	0	1	7	1	69	46	67	1.81	13	4	6
Bullard-Havens	7	0	0	0	0	7	5	71	1.90	1	0	1
H.H. Ellis	7	0	0	0	0	7	7	100	1.83	0	0	0
Eli Whitney	12	0	0	0	0	12	8	67	1.79	3	0	1
A.I. Prince	12	0	0	1	1	10	10	100	1.85	0	0	0
H.C. Wilcox	11	0	0	2	0	9	4	44	1.70	3	2	0

3320

Trade and Industrial Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Vocational-Technical Schools (contd.)												
Beauty Culture (contd.)												
E.C. Goodwin	11	0	0	0	0	11	5	45	1.62	3	1	2
J.M. Wright	7	0	0	4	0	3	2	67	2.00	1	0	0
Oliver Wolcott	2	0	0	0	0	2	1	50	1.85	0	1	0
W.F. Kaynor	9	0	1	0	0	8	4	50	1.89	2	0	2
Carpentry	181	29	11	10	0	131	87	66	2.97	30	0	14
Emmett O'Brien	5	0	0	0	0	5	5	100	2.85	0	0	0
Bullard-Havens	12	0	0	0	0	12	2	17	2.00	1	0	9
Henry Abbott	9	1	1	0	0	7	3	43	3.50	4	0	0
H.H. Ellis	10	1	1	0	0	8	5	63	2.75	3	0	0
Eli Whitney	12	6	0	0	0	6	4	67	3.06	2	0	0
A.I. Prince	16	3	0	1	0	12	11	92	4.00	1	0	0
Howell Cheney	7	2	1	0	0	4	4	100	2.75	0	0	0
H.C. Wilcox	13	3	3	0	0	7	4	57	3.00	2	0	1
Vinal	8	1	0	1	0	6	4	67	2.60	2	0	0
E.C. Goodwin	20	3	0	1	0	16	11	69	2.70	2	0	3
Norwich	10	2	0	2	0	6	5	83	2.50	1	0	0
J.M. Wright	12	4	0	3	0	5	3	60	3.10	2	0	0
Oliver Wolcott	14	2	0	0	0	12	10	83	3.00	2	0	0

3321

Trade and Industrial Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Vocational-Technical Schools (contd.)												
Carpentry (contd.)												
W.F. Kaynor	19	0	4	2	0	13	6	46	2.72	6	0	1
Windham	14	1	1	0	0	12	10	83	2.85	2	0	0
Chemistry, Industrial	7	1	3	1	0	2	1	50	2.75	1	0	0
J.M. Wright	7	1	3	1	0	2	1	50	2.75	1	0	0
Drafting, Aeronautical	1	0	0	0	0	1	0	—	—	1	0	0
H.H. Ellis	1	0	0	0	0	1	0	—	—	1	0	0
Drafting, Architectural	21	1	6	0	0	14	7	50	3.05	5	0	2
Bullard-Havens	9	0	4	0	0	5	2	40	2.35	1	0	2
H.H. Ellis	11	1	2	0	0	8	4	50	3.23	4	0	0
Windham	1	0	0	0	0	1	1	100	3.75	0	0	0
Drafting, Machine	130	15	56	3	2	54	17	31	2.66	33	0	4
Emmett O'Brien	8	1	1	0	0	6	3	50	3.00	3	0	0
Bullard-Havens	5	1	3	0	0	1	1	100	2.90	0	0	0
Henry Abbott	10	1	2	0	0	7	3	43	2.50	4	0	0

3322

Trade and Industrial Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Vocational-Technical Schools (contd.)												
Drafting, Machine (contd.)												
H.H. Ellis	5	1	3	0	0	1	0	—	—	1	0	0
Eli Whitney	13	4	4	0	0	5	2	40	2.63	2	0	1
A.I. Prince	7	1	2	3	0	1	1	100	2.35	0	0	0
Howell Cheney	6	1	3	0	0	2	2	100	3.25	0	0	0
H.C. Wilcox	16	1	8	0	0	7	2	29	2.00	5	0	0
Vinal	5	0	1	0	0	4	1	25	3.00	3	0	0
E.C. Goodwin	7	2	1	0	0	4	0	—	—	2	0	2
Norwich	13	0	9	0	2	2	1	50	2.50	1	0	0
J.M. Wright	4	0	2	0	0	2	0	—	—	2	0	0
Oliver Wolcott	14	2	4	0	0	8	1	13	2.25	7	0	0
W.F. Kaynor	15	0	13	0	0	2	0	—	—	1	0	1
Windham	2	0	0	0	0	2	0	—	—	2	0	0
Electrical	232	24	46	6	0	156	91	58	2.91	44	1	20
Emmett O'Brien	12	3	3	0	0	6	3	50	2.75	3	0	0
Bullard-Havens	24	0	5	2	0	17	4	24	3.00	5	0	8
Henry Abbott	16	1	1	0	0	14	7	50	2.56	6	0	1
H.H. Ellis	11	1	3	0	0	7	3	43	3.30	3	0	1
Eli Whitney	21	5	4	0	0	12	6	50	2.27	4	0	2

3323

Trade and Industrial Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Vocational-Technical Schools (contd.)												
Electrical (contd.)												
A.I. Prince	18	2	0	1	0	15	13	87	4.00	2	0	0
Howell Cheney	16	4	2	0	0	10	10	100	3.25	0	0	0
H.C. Wilcox	12	1	0	2	0	9	7	78	2.35	2	0	0
Vinal	12	1	2	0	0	9	6	63	3.00	3	0	0
E.C. Goodwin	17	0	2	1	0	14	8	57	2.47	3	0	3
Norwich	21	1	11	0	0	9	5	56	2.50	4	0	0
J.M. Wright	12	2	2	0	0	8	3	38	2.80	1	0	4
Oliver Wolcott	15	0	2	0	0	13	7	54	2.75	6	0	0
W.F. Kaynor	8	1	5	0	0	2	2	100	2.50	0	0	0
Windham	17	2	4	0	0	11	7	64	2.80	2	1	1
Electronics, Industrial	186	19	84	5	3	75	39	52	2.81	33	1	2
Emmett O'Brien	16	3	9	0	0	4	4	100	3.00	0	0	0
Bullard-Havens	18	0	16	0	0	2	1	50	2.50	1	0	0
Henry Abbott	11	1	6	0	1	3	1	33	2.50	2	0	0
H.H. Ellis	3	2	0	0	0	1	1	100	2.28	0	0	0
Eli Whitney	15	1	6	0	0	8	2	25	2.10	5	0	1
A.I. Prince	21	3	6	2	0	10	8	80	2.75	2	0	0
Howell Cheney	5	1	1	0	0	3	3	100	2.75	0	0	0

3324

Trade and Industrial Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Vocational-Technical Schools (contd.)												
Electronics, Industrial (contd.)												
H.C. Wilcox	15	2	6	2	0	5	2	40	2.75	3	0	0
Vinal	8	0	2	0	0	6	4	67	2.75	2	0	0
E.C. Goodwin	12	0	9	1	0	2	0	—	—	2	0	0
J.M. Wright	15	1	5	0	0	9	9	100	3.21	0	0	0
Oliver Wolcott	19	4	5	0	0	10	3	30	2.75	7	0	0
W.F. Kaynor	19	0	10	0	0	9	1	11	2.60	6	1	1
Windham	9	1	3	0	2	3	0	—	—	3	0	0
Fashion Design	51	0	12	1	2	36	15	42	2.02	8	3	10
Bullard-Havens	16	0	4	0	0	12	—	—	2.75	2	3	7
Eli Whitney	11	0	6	0	0	5	3	60	1.85	1	0	1
A.I. Prince	9	0	1	1	2	5	4	80	2.00	1	0	0
E.C. Goodwin	9	0	0	0	0	9	6	67	1.85	2	0	1
W.F. Kaynor	6	0	1	0	0	5	2	40	2.34	2	0	1
Food Trades	15	1	2	2	1	9	7	78	3.40	2	0	0
E.C. Goodwin	11	0	2	2	1	6	6	100	3.64	0	0	0
J.M. Wright	4	1	0	0	0	3	1	33	2.00	2	0	0

3325

Trade and Industrial Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Vocational-Technical Schools (contd.)												
Machine	165	20	40	7	3	95	57	60	2.46	33	0	5
Emmett O'Brien	14	0	5	0	0	9	9	100	2.50	0	0	0
Bullard-Havens	20	3	1	3	2	11	4	36	2.27	7	0	0
Henry Abbott	13	4	3	0	0	6	4	67	2.50	1	0	1
H.H. Ellis	7	3	2	0	0	2	2	100	2.90	0	0	0
Eli Whitney	7	1	3	0	0	3	0	—	—	3	0	0
A.I. Prince	4	0	1	1	0	2	2	100	2.50	0	0	0
Howell Cheney	5	1	2	0	0	2	2	100	2.50	0	0	0
H.C. Wilcox	18	1	5	2	0	10	4	40	2.00	5	0	1
Vinal	3	1	1	0	0	1	1	100	2.50	0	0	0
E.C. Goodwin	6	0	1	0	0	5	2	40	2.15	0	0	3
Norwich	18	1	3	1	0	13	5	38	2.65	8	0	0
J.M. Wright	2	0	0	0	0	2	2	100	2.50	0	0	0
Oliver Wolcott	7	1	0	0	0	6	3	50	2.25	3	0	0
W.F. Kaynor	28	2	12	0	0	14	13	93	2.48	1	0	0
Windham	13	2	1	0	1	9	4	44	2.77	5	0	0

3326

Trade and Industrial Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Vocational-Technical Schools (contd.)												
Masonry	13	1	0	1	0	11	7	64	3.20	4	0	0
Bullard-Havens	4	1	0	0	0	3	2	67	2.50	1	0	0
H.H. Ellis	4	0	0	0	0	4	2	50	4.00	2	0	0
A.I. Prince	5	0	0	1	0	4	3	75	3.15	1	0	0
Oil Burner Repair	2	0	0	0	0	2	2	100	3.85	0	0	0
A.I. Prince	2	0	0	0	0	2	2	100	3.85	0	0	0
Painting and Decorating	5	0	2	0	0	3	3	100	4.00	0	0	0
Bullard-Havens	5	0	2	0	0	3	3	100	4.00	0	0	0
Plumbing	53	7	1	5	0	40	26	65	2.74	8	0	6
Bullard-Havens	7	1	1	0	0	5	2	40	3.15	0	0	3
Eli Whitney	15	1	0	0	0	14	10	72	2.58	4	0	0
A.I. Prince	7	1	0	1	0	5	5	100	3.00	0	0	0
E.C. Goodwin	18	3	0	4	0	11	4	36	2.27	4	0	3
Norwich	3	0	0	0	0	3	3	100	3.00	0	0	0
J.M. Wright	3	1	0	0	0	2	2	100	3.03	0	0	0

3327

Trade and Industrial Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Vocational-Technical Schools (contd.)												
Printing and Lithography	60	5	7	3	0	45	35	78	2.50	8	1	1
Bullard-Havens	9	0	1	0	0	8	7	87	2.55	0	0	1
Eli Whitney	14	2	2	0	0	10	8	80	2.41	1	1	0
A.I. Prince	8	1	1	2	0	4	2	50	2.50	2	0	0
H.C. Wilcox	10	1	2	0	0	7	4	57	2.50	3	0	0
E.C. Goodwin	6	1	0	0	0	5	5	100	2.25	0	0	0
J.M. Wright	13	0	1	1	0	11	9	82	2.70	2	0	0
Screw Machine	10	0	0	0	0	10	5	50	2.83	4	0	1
E.C. Goodwin	10	0	0	0	0	10	5	50	2.83	4	0	1
Sheet Metal	27	1	2	6	0	18	15	83	2.97	1	0	2
A.I. Prince	6	0	0	6	0	0	0	—	—	0	0	0
H.C. Wilcox	16	0	2	0	0	14	11	79	3.15	1	0	2
Norwich	5	1	0	0	0	4	4	100	2.50	0	0	0

Trade and Industrial Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Vocational-Technical Schools (contd.)												
Tool and Die	93	4	21	4	0	64	53	83	2.70	9	0	2
H.H. Ellis	3	1	0	0	0	2	2	100	2.58	0	0	0
Eli Whitney	10	0	4	0	0	6	5	83	2.67	1	0	0
A.I. Prince	18	1	2	3	0	12	11	92	3.00	1	0	0
Howell Cheney	8	0	1	0	0	7	6	86	2.80	1	0	0
H.C. Wilcox	13	0	4	0	0	9	9	100	2.50	0	0	0
Vinal	15	1	4	0	0	10	10	100	2.80	0	0	0
E.C. Goodwin	10	0	1	1	0	8	2	25	2.25	4	0	2
J.M. Wright	5	1	1	0	0	3	3	100	2.47	0	0	0
Oliver Wolcott	11	0	4	0	0	7	5	71	2.50	2	0	0
Total—V.T.S. (secondary)	1544	150	310	64	12	1008	629	62	2.70	279	14	86

Trade and Industrial Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Secondary												
Local High Schools												
Appliance Repair	27	8	7	0	0	12	9	75	2.73	3	0	0
Hartford Public High	22	7	7	0	0	8	7	88	2.75	1	0	0
New London High	5	1	0	0	0	4	2	50	2.68	2	0	0
Auto Paint and Body	2	0	0	0	0	2	2	100	2.50	0	0	0
American School for the Deaf	2	0	0	0	0	2	2	100	2.50	0	0	0
Automotive Mechanics	11	3	5	1	0	2	2	100	3.00	0	0	0
Hartford Public High	11	3	5	1	0	2	2	100	3.00	0	0	0
Automotive Servicing	68	10	20	2	1	35	32	91	2.44	3	0	0
Danbury High	32	2	15	0	0	15	14	93	2.10	1	0	0
Hartford (Bulkeley High)	4	1	1	1	1	0	0	—	—	0	0	0
Hartford (Weaver High)	12	3	3	0	0	6	6	100	—	0	0	0
New London High	10	3	1	0	0	6	6	100	2.85	0	0	0
Norwalk (Center Voc. Arts)	10	1	0	1	0	8	6	75	2.85	2	0	0

3330

Trade and Industrial Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Local High Schools (contd.)												
Building Maintenance	19	1	3	0	0	15	14	93	2.55	1	0	0
Norwalk (Center Voc. Arts)	8	1	2	0	0	5	5	100	2.30	0	0	0
Watertown High	11	0	1	0	0	10	9	90	2.70	1	0	0
Draftsman, Learner	12	0	4	1	0	7	5	71	1.85	1	1	0
New London High	4	0	2	0	0	2	0	—	—	1	1	0
Woodbury (Reg. Dist. #14)	8	0	2	1	0	5	5	100	1.85	0	0	0
Electronics Assembler	11	1	1	0	0	9	9	100	2.06	0	0	0
Bridgeport (Central High)	5	1	1	0	0	3	3	100	2.45	0	0	0
American School for the Deaf	6	0	0	0	0	6	6	100	1.87	0	0	0
Graphic Arts	7	0	2	2	0	3	3	100	2.50	0	0	0
American School for the Deaf	7	0	2	2	0	3	3	100	2.50	0	0	0
Machine Operator	112	22	20	6	3	61	47	77	2.45	10	0	4
American School for the Deaf	9	0	3	2	0	4	4	100	2.85	0	0	0
Danbury High	18	2	5	0	0	11	10	91	2.30	0	0	1
Groton (Fitch High)	6	2	0	0	1	3	3	100	2.58	0	0	0
Hartford Public High	16	7	4	1	1	3	3	100	2.80	0	0	0

3331

Trade and Industrial Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Local High Schools (contd.)												
Machine Operator (contd.)												
Manchester High	9	1	2	0	0	6	5	83	2.48	1	0	0
New Britain High	13	5	1	0	0	7	6	86	2.30	1	0	0
New Britain (Pulaski High)	15	4	2	1	0	8	6	75	2.30	1	0	1
New London High	10	1	1	0	0	8	4	50	2.75	2	0	2
Norwalk (Center Voc. Arts)	4	0	1	0	1	2	2	100	2.20	0	0	0
Seymour High	12	0	1	2	0	9	4	44	2.40	5	0	0
Mechanical Inspector	28	2	6	2	0	18	14	78	2.34	4	0	0
Danbury High	9	2	1	0	0	6	5	83	2.04	1	0	0
Manchester High	10	0	2	2	0	6	5	83	2.40	1	0	0
Watertown High	9	0	3	0	0	6	4	67	2.65	2	0	0
Welder, Learner	7	0	0	1	0	6	5	83	2.87	1	0	0
Bridgeport (Central High)	7	0	0	1	0	6	5	83	2.87	1	0	0
Total–Local High Schools	304	47	68	15	4	170	142	84	2.44	23	1	4
Total–Secondary	1848	197	378	79	16	1178	771	65	2.65	302	15	90

3332

Trade and Industrial Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Post-Secondary												
Vocational-Technical Schools												
Barbering	20	1	0	0	0	19	16	84	1.87	0	0	3
Bullard-Havens	10	1	0	0	0	9	6	67	2.00	0	0	3
A.I. Prince	10	0	0	0	0	10	10	100	1.80	0	0	0
Construction Design Drafting	19	0	4	3	0	12	12	100	2.50	0	0	0
A.I. Prince	19	0	4	3	0	12	12	100	2.50	0	0	0
Machine Drafting	12	1	1	1	0	9	0	—	—	7	0	2
W.F. Kaynor	12	1	1	1	0	9	0	—	—	7	0	2
Precision Machine	10	0	0	1	0	9	6	67	2.81	3	0	0
W.F. Kaynor	10	0	0	1	0	9	6	67	2.81	3	0	0
Tool and Die	12	0	2	5	0	5	2	40	2.50	3	0	0
A.I. Prince	12	0	2	5	0	5	2	40	2.50	3	0	0
Total—V.T.S. (post-secondary)	73	2	7	10	0	54	36	67	2.29	13	0	5

3333

Trade and Industrial Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Adult												
Special Schools												
Automobile Servicing	10	0	0	0	6	4	1	25	2.35	1	0	2
Greater Htfd. Assoc./Retarded	10	0	0	0	6	4	1	25	2.35	1	0	2
Custodial Services	4	0	0	0	1	3	3	100	1.85	0	0	0
DATAHR, Inc.	3	0	0	0	0	3	3	100	1.85	0	0	0
Greater Htfd. Assoc./Retarded	1	0	0	0	1	0	0	—	—	0	0	0
Dry Cleaning	2	0	0	0	0	2	2	100	1.20	0	0	0
Mansfield Training Center	2	0	0	0	0	2	2	100	1.20	0	0	0
Machine Operator	3	0	0	0	0	3	3	100	2.20	0	0	0
DATAHR, Inc.	3	0	0	0	0	3	3	100	2.20	0	0	0
Total–Special Schools (Adults)	19	0	0	0	7	12	9	75	1.88	1	0	2

3334

Trade and Industrial Education	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Adult												
Vocational-Technical Schools												
Masonry	13	0	0	0	0	13	13	100	4.00	0	0	0
A.I. Prince	13	0	0	0	0	13	13	100	4.00	0	0	0
Total—V.T.S. (adult)	13	0	0	0	0	13	13	100	4.00	0	0	0
Total—Adult	32	0	0	0	7	25	22	88	3.13	1	0	2
TOTAL	1953	199	385	89	23	1257	829	66	2.65	316	15	97

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School Totals	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Vocational-Technical Schools												
Emmett O'Brien (Ansonia)	69	7	20	0	0	42	36	86	2.67	6	0	0
Bullard-Havens (Bridgeport)	235	10	44	5	2	174	110	63	2.77	22	4	38
Henry Abbott (Danbury)	104	8	18	1	1	76	49	64	2.81	20	1	6
H.H. Ellis (Danielson)	90	13	12	0	0	65	36	55	2.87	26	0	3
Eli Whitney (Hamden)	247	21	36	2	0	188	142	76	2.76	31	1	14
A.I. Prince (Hartford)	339	16	19	64	3	237	222	94	2.54	15	0	0
Howell Cheney (Manchester)	57	9	10	0	0	38	35	92	2.92	3	0	0
H.C. Wilcox (Meriden)	137	13	30	8	0	86	53	62	2.51	27	2	4
Vinal (Middletown)	81	4	12	1	0	64	51	80	2.83	12	0	1
E.C. Goodwin (New Britain)	213	11	19	10	1	172	118	69	2.78	29	5	20
Norwich (Norwich)	102	6	24	3	2	67	53	78	2.86	14	0	0
J.M. Wright (Stamford)	176	12	16	9	0	139	114	82	3.07	12	5	8
Oliver Wolcott (Torrington)	102	10	15	0	0	77	42	55	2.66	34	1	0
W.F. Kaynor (Waterbury)	216	6	49	7	6	148	110	74	2.56	29	1	8
Windham (Willimantic)	122	6	11	1	3	101	70	69	2.88	20	5	6
Total	2290	152	335	111	18	1674	1241	74	2.74	300	25	108

School Totals	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation		Mean Hourly Wage	Unrelated Occupation	Part Time	Unemployed
							Number	Percent				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Local High Schools												
Ansonia High	55	0	20	3	0	32	21	66	1.93	10	0	1
Berlin High	51	0	12	4	0	35	35	100	2.14	0	0	0
Bethel High	101	10	24	0	2	65	63	97	2.15	2	0	0
Bloomfield High	115	4	51	15	0	45	36	80	2.29	4	3	2
Bolton High	18	0	6	0	1	11	7	64	2.23	4	0	0
Branford High	134	8	50	4	8	64	36	56	2.25	26	0	2
Bridgeport (Bassick High)	132	3	18	1	3	107	75	70	2.23	7	3	22
Bridgeport (Central High)	325	5	45	50	18	207	150	72	2.27	22	20	15
Bridgeport (Harding High)	230	6	34	35	21	134	111	83	2.32	10	9	4
Bristol Central High	91	7	17	30	3	34	21	62	2.18	11	0	2
Bristol Eastern High	52	0	23	2	4	23	15	65	2.35	1	1	6
Brookfield High	31	0	4	1	0	26	12	46	2.01	13	1	0
Canton High	20	0	11	1	0	8	5	63	2.03	2	0	1
Cheshire High	93	5	18	13	10	47	38	81	2.01	9	0	0
Clinton (The Morgan School)	24	0	11	5	1	7	4	57	1.98	2	1	0
Colchester (Bacon Academy)	59	8	23	0	3	25	24	96	2.30	1	0	0
Coventry High	61	1	15	0	0	45	38	84	2.11	2	1	4
Cromwell High	18	0	2	1	2	13	6	46	2.18	3	3	1

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School Totals	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Local High Schools (contd.)												
Danbury High	306	15	94	21	10	166	144	87	2.07	13	0	9
Derby High	86	1	36	0	5	44	41	93	1.99	2	1	0
East Granby High	8	0	0	0	0	8	6	75	2.13	1	0	1
East Haddam (Nathan Hale-Ray High)	30	1	17	0	0	12	6	50	2.00	1	0	5
East Hampton High	12	0	7	0	0	5	5	100	1.93	0	0	0
East Hartford High	151	11	41	6	1	92	70	76	2.43	20	0	2
East Hartford (Penney High)	198	9	49	24	1	115	81	70	2.12	18	0	16
East Haven Sr. High	127	4	19	3	5	96	46	48	1.96	23	24	3
East Lyme High	33	0	16	2	1	14	10	71	2.15	2	0	2
East Windsor High	45	1	11	8	0	25	17	68	1.89	8	0	0
Ellington High	58	5	13	6	0	34	26	76	2.28	5	0	3
Enfield High	306	8	82	25	19	172	118	68	2.12	49	0	5
Fairfield (Andrew Warde High)	67	0	34	3	0	30	17	57	2.13	10	0	3
Fairfield (Roger Ludlowe High)	74	0	43	3	2	26	13	50	1.99	9	0	4
Farmington High	37	1	8	6	1	21	15	71	2.48	1	3	2
Glastonbury High	6	0	2	0	1	3	2	67	2.88	0	0	1
Granby Memorial High	44	0	11	0	1	32	28	88	2.16	2	2	0
Greenwich High	84	4	15	5	0	60	52	87	2.37	6	0	2
Groton (Fitch Sr. High)	169	8	35	10	11	105	61	58	1.92	8	22	14
Guilford Sr. High	28	1	8	5	0	14	12	86	1.99	1	1	0

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School Totals	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Local High Schools (contd.)												
Hamden High	175	5	38	27	7	98	87	89	2.36	5	1	5
Hartford (Bulkeley High)	88	3	27	5	1	52	39	75	1.95	9	0	4
Hartford Public High	275	22	70	4	25	154	103	67	2.10	28	0	23
Hartford (Weaver High)	181	11	86	7	10	67	30	45	2.13	21	0	16
Killingly High	11	1	3	0	0	7	5	71	1.85	2	0	0
Lebanon (Lyman Memorial High)	21	1	8	0	0	12	5	42	2.82	5	0	2
Ledyard High	32	0	13	2	1	16	9	56	2.02	7	0	0
Litchfield High	23	3	6	0	0	14	11	79	2.15	1	0	2
Madison (Daniel Hand High)	15	0	5	0	2	8	6	75	2.09	2	0	0
Manchester High	162	3	54	6	2	97	78	80	2.28	12	3	4
Meriden (Francis Maloney High)	70	1	10	0	0	59	54	92	1.98	0	1	4
Meriden (Orville Platt High)	105	0	34	2	1	68	56	82	2.03	3	5	4
Middletown High	35	1	11	0	0	23	21	91	2.16	1	0	1
Middletown (Woodrow Wilson High)	95	4	32	0	0	59	30	51	1.96	19	0	10
Milford High	79	0	35	1	0	43	38	88	2.29	2	0	3
Milford (Jonathan Law High)	113	5	54	0	4	50	33	66	2.21	15	1	1
Monroe (Masuk High)	43	1	6	0	3	33	27	82	2.46	6	0	0
Montville High	83	2	11	14	5	51	35	69	1.95	9	3	4
New Britain Sr. High	186	7	22	65	5	87	66	76	2.16	5	2	14

School Totals	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Local High Schools (contd.)												
New Britain (Pulaski High)	51	4	9	5	0	33	25	76	2.16	3	0	5
New Canaan Sr. High	33	0	14	10	0		8	89	2.79	0	1	0
New Haven (Wilbur Cross High)	359	11	80	55	19	194	124	64	2.21	40	7	23
New Haven (Hillhouse High)	169	13	33	17	7	99	61	62	2.01	27	4	7
New Haven (Richard C. Lee High)	160	4	51	22	7	76	44	58	2.05	17	5	10
New London High	29	5	4	0	0	20	12	60	2.79	5	1	2
New Milford High	40	0	9	1	3	27	12	44	2.00	4	0	11
Newtown High	66	1	26	0	6	33	30	91	2.27	3	0	0
North Branford High	34	3	12	3	1	15	14	93	1.98	0	0	1
North Haven High	152	4	57	4	2	85	47	55	2.03	27	5	6
Norwalk High	142	7	65	6	0	64	61	95	2.23	3	0	0
Norwalk (Brien McMahon High)	123	2	46	4	1	70	59	84	2.23	7	0	4
Norwalk (Center Voc. Arts)	57	4	6	3	5	39	30	77	2.41	7	0	2
Norwich Free Academy	161	12	30	9	7	103	76	74	1.88	19	1	7
Old Saybrook High	15	1	8	0	1	5	4	80	2.00	1	0	0
Plainfield High	43	0	12	3	6	22	8	36	1.94	10	0	4
Plainville Sr. High	95	6	17	14	6	52	40	77	2.33	7	2	3
Plymouth (Terryville High)	30	0	4	3	5	18	14	78	1.96	4	0	0
Portland High	53	1	13	1	2	36	28	78	1.99	5	1	2
Putnam High	36	1	2	7	3	23	10	43	2.24	10	0	3

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School Totals	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Local High Schools (contd.)												
Ridgefield High	42	1	23	0	2	16	7	44	2.51	6	2	1
Rocky Hill High	38	1	23	4	4	6	4	67	2.10	2	0	0
Seymour High	61	1	20	2	0	38	22	58	1.96	11	0	5
Shelton High	112	0	56	12	0	44	26	59	2.16	9	0	9
Simsbury High	53	0	8	0	0	45	41	91	2.16	2	1	1
Southington High	252	6	71	15	9	151	116	77	2.17	20	8	7
South Windsor High	26	0	10	2	0	14	12	86	2.08	1	0	1
Stafford High	37	0	6	0	3	28	19	68	2.10	5	0	4
Stamford High	281	2	139	0	0	140	104	74	2.28	23	11	2
Stamford (Rippowam High)	193	0	104	0	0	89	84	94	2.19	5	0	0
Stonington High	17	2	2	1	0	12	8	67	2.13	3	0	1
Stratford High	96	2	18	4	4	68	37	54	1.82	20	0	11
Stratford (Bunnell High)	106	1	45	4	6	50	26	52	1.81	11	0	13
Suffield High	38	1	17	0	1	19	18	95	2.16	0	0	1
Thomaston Jr.-Sr. High	21	0	3	0	1	17	9	53	1.98	6	0	2
Tolland High	30	1	14	0	2	13	7	54	1.98	3	1	2
Torrington High	130	2	49	3	1	75	51	68	1.92	11	0	13
Trumbull High	117	4	56	2	2	53	45	85	2.14	7	0	1
Vernon (Rockville High)	104	4	46	5	2	47	38	81	2.17	9	0	0

3341

School Totals	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Local High Schools (contd.)												
Wallingford (Lyman Hall High)	233	6	76	14	14	123	70	57	2.08	33	2	18
Waterbury (Crosby High)	121	2	49	18	3	49	32	65	1.99	3	2	12
Waterbury (Kennedy High)	156	7	37	20	13	79	52	66	2.04	17	1	9
Waterbury (Wilby High)	162	11	46	30	5	70	56	80	1.99	14	0	0
Watertown High	91	1	15	2	3	70	53	76	2.23	11	2	4
Westbrook Jr.-Sr. High	11	0	2	0	2	7	3	43	1.85	4	0	0
West Hartford (Conard High)	100	7	19	2	2	70	57	81	2.15	11	2	0
West Hartford (Hall High)	61	3	23	1	0	34	28	82	2.10	6	0	0
West Haven High	245	8	56	9	11	161	132	82	2.20	18	7	4
Westport (Staples High)	105	6	33	12	2	52	37	[illegible]	2.38	10	2	3
Wethersfield High	74	3	25	1	2	43	41	95	2.22	0	0	2
Wilton High	9	1	3	0	0	5	1	20	2.00	4	0	0
Winchester (The Gilbert School)	46	0	21	0	2	23	21	91	2.15	2	0	0
Windham High	203	4	43	30	1	125	69	55	1.98	29	11	16
Windsor High	219	9	96	22	2	90	75	83	2.26	14	0	1
Windsor Locks High	105	2	45	0	0	58	28	48	2.15	22	0	8
Wolcott High	53	0	12	4	3	34	25	74	2.10	1	5	3
Woodstock Academy	32	11	10	0	0	11	5	45	1.96	6	0	0
Total	10899	384	3269	811	383	6052	4366	72	2.15	1018	195	473

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School Totals	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Regional High Schools												
Housatonic Valley (Reg. Dist. #1)	5	0	1	0	0	4	3	75	1.88	1	0	0
Valley (Reg. Dist. #4)	44	7	14	1	3	19	16	84	2.11	3	0	0
Amity (Reg. Dist. #5)	101	1	47	9	0	44	28	64	1.90	16	0	0
Wamogo (Reg. Dist. #6)	77	2	38	0	6	31	13	42	2.09	12	3	3
Regional (Dist. #7)	23	0	5	2	0	16	5	31	2.01	8	1	2
Rham (Reg. Dist. #8)	84	7	42	0	5	30	23	77	2.22	7	0	0
Joel Barlow (Reg. Dist. #9)	20	0	9	1	0	10	10	100	1.78	0	0	0
Lewis S. Mills (Reg. Dist. #10)	66	2	12	5	0	47	38	81	2.36	5	1	3
Durham (Reg. Dist. #13)	34	0	13	7	3	11	7	64	2.47	4	0	0
Woodbury (Reg. Dist. #14)	67	0	25	3	7	32	31	97	1.85	0	1	0
Southbury (Reg. Dist. #15)	35	2	10	8	0	15	10	67	1.98	1	4	0
Total	556	21	216	36	24	259	184	71	2.09	57	10	8
Other Institutions												
Hamden-New Haven Coop.	94	1	28	2	15	48	43	90	2.66	3	0	2
Storrs (E.O. Smith High)	19	0	10	0	0	9	6	67	1.89	1	1	1
American School for the Deaf	50	0	20	4	0	26	26	100	2.23	0	0	0
Mansfield Training School	2	0	0	0	0	2	2	100	1.20	0	0	0
Conn. Correctional Ctr. (Niantic)	66	0	0	15	19	32	7	22	—	6	1	18

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School Totals	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Other Institutions (contd.)												
ACES (North Haven)	3	0	2	0	0	1	1	100	2.00	0	0	0
DATAHR (Danbury)	6	0	0	0	0	6	6	100	—	0	0	0
HARC (Hartford)	11	0	0	0	7	4	1	25	—	1	0	2
LARK (Torrington)	11	0	3	2	0	6	6	100	—	0	0	0
Total	262	1	63	23	41	134	98	73	2.41	11	2	23
Total High Schools & Institutions	1717	406	3548	870	448	6445	4648	72	2.15	1086	207	504
State Technical Colleges												
Hartford	187	12	60	19	4	92	70	76	3.69	17	0	5
Norwalk	169	12	56	18	0	83	56	67	3.54	27	0	0
Thames Valley (Norwich)	118	13	39	6	2	58	34	59	3.51	16	0	8
Waterbury	176	11	62	8	0	95	42	44	3.46	12	4	37
Total	650	48	217	51	6	328	202	62	3.48	72	4	50

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School Totals	Total No. of Graduates	Entered Armed Service	Continued Training in Full-Time School	Status Unknown	Other	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13)	Employed In Occupation for Which Trained or in Related Occupation			Unrelated Occupation	Part Time	Unemployed
							Number	Percent	Mean Hourly Wage			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
State and Community Colleges												
Central Conn. State College	35	0	0	0	0	35	35	100	2.47	0	0	0
Greater Hartford Community College	29	0	10	6	0	13	11	85	—	1	1	0
Housatonic Community College	102	0	62	8	0	32	29	91	3.00	2	0	1
Manchester Community College	159	2	31	36	0	90	68	76	3.51	9	1	12
Mattatuck Community College	57	0	15	0	0	42	12	29	—	3	1	26
Middlesex Community College	40	0	6	22	0	12	9	75	3.23	0	1	2
Northwestern Community College	32	1	14	4	0	13	10	77	—	2	0	1
Norwalk Community College	133	1	51	5	0	76	68	87	4.26	4	0	4
Ratcliffe-Hicks Sch. of Ag. (UCONN)	31	1	7	6	0	17	17	100	—	0	0	0
South Central Community College	6	0	6	0	0	0	0	—	—	0	0	0
Total	624	5	202	87	0	330	259	78	3.54	21	4	46
GRAND TOTAL	15281	611	4302	1119	472	8777	6350	72	2.35	1479	240	708

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VT 020 493
LESKE, GARY
PILOT PROGRAMS IN OFF-FARM AGRICULTURAL OCCUPATIONS.

DEPARTMENT OF THE NAVY, WASHINGTON, D.C.
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IDENTIFIERS - *SOUTH DAKOTA

ABSTRACT - THIS STUDY IS PART OF A LARGER STUDY DESIGNED TO ASCERTAIN REASONS FOR THE SLOW EMERGENCE OF OFF-FARM VOCATIONAL AGRICULTURE PROGRAMS IN SOUTH DAKOTA. THE STUDY WAS CONDUCTED TO IDENTIFY CURRENT EFFORTS BEING MADE IN OFF-FARM AGRICULTURAL OCCUPATIONS AND TO DETERMINE PROGRAM NEEDS AND RESOURCES. QUESTIONNAIRE RESPONSES RECEIVED FROM 54 INSTRUCTORS SUPPLIED THE DATA. FINDINGS REVEALED THAT: (1) A TOTAL OF 22 OF THE INSTRUCTORS HAD PLACED STUDENTS IN OFF-FARM EXPERIENCE PROGRAMS, (2) OBSTACLES IDENTIFIED AS CAUSES FOR SLOW PROGRESS IN THIS AREA WERE OTHER TIME COMMITMENTS, SCHOOL MASTER SCHEDULES, AND DEVELOPING PROGRAM SUPPORT, (3) JUNIORS AND SENIORS IN 34 OF THE 64 PARTICIPATING SCHOOLS WERE INTERESTED IN OFF-FARM OCCUPATIONS TRAINING, (4) LESS THAN HALF OF THE SAMPLED INSTRUCTORS HAD HAD CONTACTS WITH AGRIBUSINESS MEN, AND (5) THE MAJORITY OF THE PARTICIPATING INSTRUCTORS DESIRED MORE PROGRAM INFORMATION. (SN)

VT 020 493

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Pilot Programs in Off-Farm Agricultural Occupations

VT020493

Agricultural Experiment Station
South Dakota State University
Brookings

3347

PILOT PROGRAMS IN

OFF-FARM AGRICULTURAL OCCUPATIONS

Objective I

> Emphasis should be placed upon development of educational programs to prepare and upgrade persons for off-farm agricultural occupations in South Dakota. Formal preparation is imperative and should be made available in a state where most of the income is derived from agriculture. — Gadda, H. W., and James Pollmann. "South Dakota Agricultural Off-Farm Occupational Opportunities and Training Needs," Bulletin 553, South Dakota Agricultural Experiment Station (Agricultural Education, Education Department), 1969.

The above study reported an anticipated need for 2,485 new workers with competencies in agriculture in South Dakota by 1972. Of the new job titles for new workers, 97.4% were above the unskilled level. While nearly 90% of the firms desire workers who had at least a high school education, they also wanted young workers. Sixty percent of the employers preferred new agricultural workers 19 to 34 years of age.

Assuming South Dakota State University will continue to prepare the major share of professional off-farm agricultural workers needed in South Dakota, the developing area vocational-technical schools and the 65 public school programs of vocational agriculture will need to prepare the remaining workers. Since the area vocational-technical schools are currently expanding programs to meet the needs of technician level occupations, vocational agriculture programs at the secondary level must assume their increasing responsibility in preparing off-farm agricultural workers with less than technical level skills.

The Vocational Education Act of 1963 expanded the role of vocational education in agriculture to include preparation for entry into off-farm agricultural occupations., Yet the cooperative occupational experience programs have continued to be operated largely in production agricultural areas. This is the result of a number of legitimate influences including traditional program success and the importance of production agriculture to South Dakota's economy. With increasing technology, there has been and will continue to be an expansion in the off-farm agricultural support industries and services. The accompanying occupational roles requiring agricultural competencies have demanded and will continue to demand an expansion of secondary cooperative occupational experience programs to include more off-farm occupational training.

The purpose of cooperative occupational experience programs is to provide a realistic learning environment in which the students can develop competencies in their chosen occupation.

To make a program cooperative and educational, it is expected that:

The school will provide related and relevant classroom instruction and on-the-job supervision,

The agricultural business will provide supervision in occupational activities which will develop competencies necessary for entry into and progression in the student's chosen occupation, and

The student will strive to fill the role of the business employee and student-learner.

Instruction dealing with the cooperative occupational experience program in off-farm occupations has been presented to most vocational agriculture instructors in South Dakota. The delayed emergence of programs with emphasis upon off-farm occupations demands inquiry. It suggests that South Dakota vocational agriculture instructors have need for additional information concerning organizational and administrative models, curriculum materials, and demonstration pilot programs.

The central problem of this total research effort is the slow emergence of emphasis on diversified cooperative off-farm agricultural occupations training in high school vocational agriculture programs. The primary goal is to increase the number of programs which adequately meet the needs of students who are preparing for off-farm agricultural occupations. The first project objective is reported here. Objective I was to identify the present efforts in agricultural off-farm occupations training in South Dakota including the identification of program needs and resources.

PROCEDURE

A questionnaire was designed to determine:

(1) the number of departments placing students in off-farm agricultural cooperative occupational experience programs including the number of students involved, type of occupational placement, how they were enrolled in the related classroom instruction;

(2) the school and community resources including the instructor's time, adequacy of the vocational agriculture room, and identified or estimated number of training stations;

(3) vocational agriculture instructors' attitude toward off-farm programs including the instructor's opinion of the sufficiency of numbers for the program, their contacts with local agri-businessmen concerning training stations, their explanation of program to superintendent, principal, board, and businessmen, their use of local advisory groups, and their plans to start work in the off-farm agricultural occupations area;

(4) teacher's evaluation of expressed student interest in off-farm agriculture occupations;

(5) the reaction of administrators and local school boards to teacher explanations of off-farm supervised occupational experience programs, and

(6) questions asked by or of the instructors.

The questionnaire was mailed to the 64 South Dakota schools offering vocational agriculture in 1970-71. Fifty-seven questionnaires were returned. Since in many cases the information was sought through simple questions or imperative statements, the author chose to categorize similar responses into logical, though subjective, categories.

RESULTS

Current Enrollments.

Instructors were asked to report the total number of students in their schools by grade, 9 through 12. Only 23 instructors reported this information as requested. Eight instructors misinterpreted the question to mean only boys. A frequency distribution of class enrollments was prepared (see Table 1). The majority of the instructors reported enrollments of less than 60 students in each of the respective class levels. Since five schools had class enrollments of 91 or more, the mean was not judged to be an appropriate measure of central tendency or predictor of average class size in South Dakota.

Table 1. Frequency Distribution of Total Class Enrollments Reported by 23 Responding Instructors.

Class Year	Number Enrolled			
	30 or less	31 to 60	61 to 90	91 or More
9	6	8	4	5
10	8	8	2	5
11	7	9	2	5
12	9	7	2	5

Data for the five large schools were removed to allow calculation of adjusted means for total class enrollments and for vocational agriculture class enrollments. The adjusted means were more representative of the schools in South Dakota with vocational agriculture programs (see Table 2).

Table 2. Adjusted Means for Total Class Enrollments and Vocational Agriculture Class Enrollments for 18 Reporting Schools (23 less 5 Large South Dakota Schools).

Mean	Grade Level			
	9	10	11	12
Total Enrollment	42.8	39.2	38.1	36.6
Vocational Agriculture Enrollment	14.2	11.3	10.9	10.3

The number of vocational agriculture students placed in off-farm occupational experience programs was reported by grades: grade nine, 13; grade ten, 20; grade eleven, 31; and grade twelve, 70. Three instructors reported indistinguishable information, and, of the 54 reporting, 32 reported zero vocational agriculture students placed, four reported one, six reported two to five, nine reported six to ten, and three reported 11 or more.

Instructors who reported students placed in off-farm occupational experience programs listed the number of students by type of occupational placement (see Table 3). Some of the instructor responses have been classified into generally recognized business categories or job titles. The great diversity in the placement area suggested that it would not be appropriate to limit the specificity of the placement categories. An inconsistency is

apparent from this information. Six students were placed for production agriculture experience on farms, not off-farm. Agricultural mechanics, elevator operations, and landscaping and groundskeeping were the three major cluster areas of placement.

Table 3. Number of Students Placed in Off-farm Occupational Experience Programs by Type of Occupational Placement

Type of Occupational Placement	Number Reported
Landscaping and groundskeeping	10
Farm building construction	7
Mechanics (including auto)	12
Other	1
Implement business	8
ASCS	1
Farm service store	1
Meat processing	6
Grain - Feed - Fertilizer	2
Elevator	5
Seed cleaner	1
Morrells	1
Service station	7
Custom cornsheller	1
Farm work	6
Grocery store	2
Sheep shearing	1
Electrician	3
Plumbing	2
Trucking	2
Dairy processing	2
Welding	4
Lumberyard	3
Bakery	1
Veterinary aid	3
Potato processing	1
Custom combining	1
Farm insurance	1
Hardware	2
Newspaper	1
Feedmill	4
Cheese factory	2

The instructors also were asked, "How do you handle the related class instruction phase of the off-farm occupations program?" Thirty-five of the 57 responding instructors indicated they did not offer an off-farm occupations program and consequently related class instruction was not an operational aspect of their program. In this sense the question was not appropriate for 61.4% of the responding instructors.

Four instructors indicated their students placed in off-farm occupational programs received no related classroom instruction. In other words, 18.2% of the 22 instructors who provided off-farm occupational programs felt they made a special effort to provide class instruction related to the specific off-farm agriculture occupation placement of the students enrolled. Regular vocational agriculture III and/or IV (class year) enrollment was

reported as the method of enrollment for related class instruction by 15 of the 22 instructors reporting (68.2%). Four instructors indicated they enrolled students in an off-farm agricultural occupation class designed to serve all areas of off-farm agriculture. Two of these individuals also indicated this was their regular agriculture III or IV offering. The latter two programs appear to be meeting the criteria for what is described as a diversified agricultural occupations program (production and off-farm agricultural competence development objectives within a single class). One instructor indicated he enrolled students in a class designed to serve a specific area of off-farm agriculture, mechanized agriculture.

It appeared that only 22.7% of the instructors reporting offerings in off-farm occupational programs provided related class instruction to specifically support the off-farm occupational placement experience.

School and Community Resources

The instructors were asked to report their daily schedule. There were only limited variations of the traditional 50- to 60-minute class module and classes were equated on this basis. The preparation period was ignored since it was not reported in many cases. The number of "class periods" which were specifically assigned were counted and categorized into three classifications: vocational agriculture related, vocational agricultural supervision, and other. A percent of time assigned to vocational agriculture was calculated for each reporting instructor. Sixty-eight of the class periods were specified in the category "other," 14 in the vocational agriculture supervision category, and 203 as vocational agriculture related. Three instructors reported being assigned to four class periods, 31 to five, 15 to six, and three to seven class periods.

The average instructor reporting spent 75% of his time in assigned class periods related to vocational agriculture exclusive of assigned preparation time. Ten instructors reported 100% of their time was assigned to vocational agriculture. Sixteen instructors reported that 60% or less of their class time was assigned to vocational agriculture. Two instructors who also served as principal were not assigned a percent of time figure since they did not indicate time for the principalship.

The teachers were asked "What obstacles would you need to overcome to allow you to free 1 hour per day for additional work in off-farm agriculture including supervision of occupational experience?" Their responses were categorized into 18 topical areas (see Table 4). Developing program support was an obstacle identified by 13 of the instructors. The need for changed school schedules was an obstacle for eight instructors. Release from classes other than vocational agriculture or other time commitments were reported obstacles 28 times.

Table 4. Frequency of Reported Obstacles To Be Overcome to Allow Reporting Vocational Agriculture Instructors to Free One Hour per Day for Additional Work in Off-Farm Agriculture Including Supervision of Occupational Experience

Obstacle	Times Reported
Current school schedule	8
Release from classes other than vocational agriculture (general shop, science, auto mechanics)	7
Release from study hall assignment	6
Scheduling of time for supervision	5
Time for principalship duties	2
Other release related responses	8
Need for additional Vo-Ag instructor	4
Need for additional instructor (not Vo-Ag)	7
Program support (administration, board, businessmen)	13
Need for more training stations	7
Adjustment of Vo-Ag offerings	3
Enrollment to justify program	3
Training for instructor	2
Teaching materials	3
Better facilities	2
Transportation to training station	2
Financial support	1
Absence of State Department definition of a full time Vo-Ag position	1

Instructors evaluated the adequacy of their vo-ag classroom by responding to the question, "Is your Vo-Ag room large enough to allow you to handle an independent study approach to various occupational roles?" The replies were placed into three categories: yes, undecided, and no. This was a subjective procedure; however, in most cases the responses were a yes or a no with qualifying comments. Twenty-three instructors indicated they had an adequate vo-ag classroom for an off-farm agricultural occupational instruction program, six appeared undecided and 26 indicated an inadequate facility.

To determine the potential number of training stations instructors were asked to respond to one of two questions: "...how many training stations have you identified in your school service area?" or "...how many training stations would you estimate are available in your service area?" (see Table 5). The modal number of training stations identified was five and the modal number estimated was two.

Table 5. Number of Training Stations Identified or Estimated As Available Within Reporting Instructor's School's Service Area.

Instructors Who	Number Reported					
	Not Sure	0	1-5	6-10	11 or more	Range
Identified	3	0	10	11	3	1 to 42
Estimated	3	1	17	6	2	0 to 15

Attitude Toward Off-Farm Programs

In response to the question, "Do you have sufficient number of juniors and seniors to offer a program of instruction (on-the-job and classroom) in off-farm agriculture occupations?", 38 instructors replied yes and 18 instructors replied no.

Twenty-seven instructors indicated they had "contacted local businesses concerning the possibility of their cooperation in serving as training stations for student learners..." Twenty-nine indicated they had not contacted anyone.

Instructors were asked if they had explained the off-farm agriculture phase of vocational agriculture to their administrators and/or local school board. The responses were: superintendent, 34 yes and 16 no; principal, 36 yes and 16 no; and board, 8 yes and 40 no.

There were 25 yes and 30 no responses to the question, "Have you explained the off-farm agricultural phase of vocational agriculture, particularly the supervised occupational experience placement, to the men in agriculture business?"

One instructor reported using a local advisory group in planning the off-farm agriculture occupations phase of his program. This particular group constituted for the purpose of specifically providing advisory input into this phase of the program. Forty-eight instructors indicated they had not used a local advisory group in planning the off-farm program.

The instructors were asked if they had plans to start work in the off-farm agricultural occupations area. Nineteen responded yes and 25 responded no. Those responding yes were also asked to indicate "Estimated Starting Date" and "Anticipated Occupational Content Areas of Instruction." Thirteen instructors estimated they would be starting work in the off-farm agricultural occupations in the 1971-72 school year, two estimated their starting date as 1972-73, and one estimated his starting date as 1974-75. Limited response occurred to the "Anticipated Occupational Content Areas of Instruction" statement. Four instructors indicated a diversified approach was anticipated and two indicated a specialized approach was anticipated.

Evaluation of Student Interest

In response to the question, "How many juniors and seniors enrolled in your school have expressed an interest in off-farm agricultural occupations training?", 10 instructors reported zero, 17 reported one to five, 13 reported 6 to 10, four reported 11 or more, and 10 did not respond (see Table 6).

The instructors responded to the qualifying question, "Would the number you indicated above be typical for a normal year in your school?" (see Table 6). Yes responses were given by 36 of the 44 instructors who responded to the original question. Five of the 10 instructors reporting zero interested students indicated this was a typical number as did 15 of the 17 instructors reporting one to five interested students, 12 of the 13 instructors reporting 6 to 10, and four of the four instructors reporting 11 or more.

Table 6. Expressed and Estimated Student Interest in Off-Farm Agriculture Occupations Training and Reporting Teachers' Evaluations of Typicalness of the Expressed Interest.

Instructor Response	Number of Students Interested			
	0	1 to 5	6 to 10	11 or more
Expressed Interest	10	17	13	4
Yes--Typical Number	5	15	12	4
Estimated Number for No (Not typical interest)		8	4	1

Fourteen instructors responded no, indicating they did not feel the number reported as having an interest in off-farm agriculture occupations training was typical of a normal year in their school. They were asked "...what would be your estimate for the number interested, for a normal year in your school?" Twelve of the 14 instructors estimated a higher number would be interested in a normal year. One did not make an estimate.

Reaction to Teacher Explanations

Instructors were asked to indicate if they had explained the off-farm agriculture phase of vocational agriculture to their superintendent, principal, or board. Persons who responded yes were asked to indicate the response of the superintendent, principal, or board.

Their evaluation of their superintendents' responses were classified by the author into five subjective categories: 12 were favorable, 12 were favorable with qualification, five were asking for more information, three were concerned with endangering existing programs, and three were not interested. Appendix A contains the abstracted responses.

Instructor evaluations of their principals' responses were classified by the author into seven subjective-judgmental categories: 15 were favorable or positive, six were favorable with qualifications, one was "neutral," four were negative generally stating "...teaching schedule and budget do not allow...," five were negative generally stating "...let other programs handle or do not affect other programs...," three questioned need or were uninterested and two were "I am the principal." Appendix B contains the condensed responses.

Instructor evaluations of their school boards' responses were classified by the author into three subjective-judgmental categories: four evaluations were "favorable or positive," three were "favorable with qualifications, and one was "questionable in reaction." Appendix C contains the condensed responses.

Questions Asked

The instructors who indicated they had explained the off-farm agricultural supervised occupational experience placement to agriculture businessmen were asked to indicate the most frequently asked questions. The questions reported were categorized for summary purposes into 10 areas (see Table 7).

Those instructors who indicated they had visited with businessmen about the off-farm agriculture phase were also asked to respond to the question,

"What procedure did you use in explaining the program?" The responses indicated that informal visits and conversation was the procedure employed by 16 of the instructors. In addition, three instructors spoke at local business organization meetings. Two instructors prepared handouts for the businessmen visited. Two instructors used a publication as an introduction to the subject. Three instructors reported using a survey procedure to develop interest and gather information.

If the instructors checked "No" in response to the question, "Have you explained the off-farm agriculture phase of vocational agriculture to your administrator and local board?", they were asked to indicate "...what type of information would you like to have to assist you in preparing to explain the off-farm agriculture phase of vocational agriculture?" The instructors' comments were classified into six categories which were judged to encompass the general intent of their responses. While some instructors made no comment others asked for more than one category of information. The requests were: program organization information, 10; information on existing programs, six; curriculum materials, four; data on needs for and values of off-farm occupational experience, five; how to talk board into new courses and/or additional help, two; and film explaining program, one. Appendix D contains the categorized responses.

Table 7. Frequency of Questions Asked Instructors Who Explained the Off-Farm Agricultural Phase of Vocational Agriculture to Local Businessmen.

Generalized State of Question	Frequency
What type of wage must be paid?	12
How many and/or what hours would the students work?	11
What are the objectives and organizational-administrative procedures?	6
Who selects students for placement--are they competent--can I release them?	5
What will the additional cost and disadvantages be?	4
What will I gain by cooperating?	3
What are the legal aspects?	2
Will students be placed seasonally?	1
How many students are involved?	1
Will students be expected to perform as a full-time employee in 4 to 6 months?	1

IMPLICATIONS

Total Enrollments

The limited enrollment data reported may have suggested that the instructors felt this information was available elsewhere. The total class enrollments reported do support the rather widely recognized fact that most schools in South Dakota have limited enrollments. While the problems of small schools are many and frequently discussed, two problems are relevant to this study. First, the size of instructional staff will necessarily be limited if the per pupil cost of instruction is to be kept within the "low cost category" or within the same range as relatively large schools within the same geographic area. Second, the number of "subjects" offered will be limited.

The adjusted means for vocational agriculture class enrollments (23 schools reporting less 5 large schools) were not typical of vocational class enrollments. The adjusted class means for the junior and senior classes were 10.9 and 10.3 respectively. It would appear that the organization of a separate cooperative off-farm agriculture class for juniors and seniors would be hard to justify in many South Dakota schools because the potential enrollment is quite limited. This is particularly true if the enrollment now served is near the total of potential vocational agriculture students. It would also appear that a number of the relatively large South Dakota schools should be able to justify the organization of a separate cooperative off-farm agriculture class for seniors and juniors.

With a total of 128 students reportedly placed in off-farm occupational experience programs in 22 of the 54 reporting schools, it is rather obvious that a majority of the vocational agriculture programs have not adequately utilized the community agribusiness resources nor encouraged the use of off-farm supervised occupational experience programs. It would appear that the vocational agriculture instructors need more information on the career objectives of their students or need to utilize the available information more effectively. The probability that nearly half of the vocational agriculture programs in South Dakota do not have students with career objectives other than production agriculture is remote.

The diversity of off-farm placement areas suggested that the occupational interests of students are indeed varied and the variety of agribusinesses is similar in most communities. An independent study approach would appear as an efficient approach for presenting the occupational specific information and competencies. It would also appear logical to use a considerable portion of the students' classroom time for development of competencies with common abilities to most agribusinesses.

The fact that 15 of the 22 instructors reporting placement of students simply provide the regular vocational Agriculture III and/or IV (class year) enrollment can be interpreted in different ways. It may be that they are only providing what is defined as a work experience in off-farm agriculture. There is no specific training plan, supervision is limited, and related classroom instruction is not specific to the placement occupation. While this effort is far better than no placement in off-farm agriculture, it is not adequate in a truly vocational program.

Since only five instructors reported offering classes that provide instruction specifically related to off-farm occupational placement, it may simply be the logical approach to enroll students who desire supervised occupational experience in the vocational Agriculrure III and/or IV and adjust the curriculum to include the essential related classroom instruction.

School and Community Resources

Since the average instructor reporting spent 75% of his time in assigned class periods related to vocational agriculture exclusive of preparation time, it would appear possible to schedule the vocational agriculture instructor for an off-farm occupational experience program--particularly on-the-job supervision. This might demand the addition of staff to handle the non-agricultural classes the vocational agriculture instructor formerly taught. What may be needed is the evidence to show that the instructor's total contribution to the school systems productivity would be greater if he were assigned to the off-farm occupational experience program.

The instructors need to develop local administration and school board support for off-farm occupational experience programs. This is a rather obvious need if one plans to introduce any new programs or procedure. It also may suggest that sales skills and material must be developed relative to the off-farm phase of vocational agriculture. The limited flexibility of school schedules in limited size districts is a problem to be contended with in introducing off-farm agriculture. A cooperative administration and faculty will be essential if a schedule change is to be made.

The most common perceptible obstacle facing South Dakota vocational agriculture instructors who would hope to have free time for additional work in off-farm agriculture is the need to be released from classes other than vocational agriculture. The fact that 49 out of 52 reporting instructors were assigned to five or more class periods not including preparation time would suggest that administrators have not allowed adequate time for instructor supervision of occupational experiences in production agriculture, to say nothing of off-farm agriculture. This is supported by the fact that only 12 of 52 instructors were assigned time for supervision of vocational agriculture students. It would appear that the instructors must first convince their administrators of the importance of adequate supervision of occupational experience programs within the production agriculture area if they would hope to provide vocational education in agriculture, even production agriculture. The development of a more realistic conception of vocational education in agriculture will be necessary if support is to be forthcoming for off-farm agriculture programs.

If independent study is to be incorporated in the classroom related instruction for off-farm occupations a majority of the vo-ag classroom facilities will apparently need to be improved. This improvement would seem desirable for the already existing programs.

The average South Dakota community might be expected to have 5 training stations. This suggests the need to develop a procedure for systematically identifying potential training stations. It is also worth noting that estimated numbers were considerably lower than the identified number. Attitude may be an important factor in finding training stations. It may also be realistic to recognize that training stations may be a limiting factor in determining class offerings in off-farm agriculture. The separate class meeting state required as a cooperative vocational education program (300 hours of occupational experience) may be an unrealistic goal in many communities if all students who are qualified are to be given an opportunity for off-farm agriculture occupational experience.

Attitude Toward Off-Farm Programs

Approximately two-thirds of the instructors indicated they had sufficient numbers of juniors and seniors to offer a program of instruction in off-farm agriculture occupations. However, less than 43% of the instructors planned to start work in this area. Either instructor attitude or school organization obstacles will apparently need to be changed before a majority of the vocational agriculture programs in South Dakota incorporate instruction in off-farm agriculture into present programs. It would also appear that current vocational agriculture offerings should be objectively evaluated in terms of the occupational placement of program graduates.

Since less than half of the reporting instructors had contacted local agribusinessmen concerning work stations or even explained the off-farm

phase of vocational agriculture to local agribusinessmen, it is obvious that change will need to begin with the vocational agriculture instructors. Instructors may need to incorporate the off-farm agriculture phase of instruction into their regular program and demonstrate the benefits of the off-farm program at the local level.

While approximately two-thirds of the instructors had explained the off-farm agriculture phase of vocational agriculture to their administrators, it is disheartening to see less than a 100% effort. However, it would appear that in-service education must provide cognitive information for the instructors in the hope that they will be able to explain a complete program of vocational agriculture.

With only one instructor reporting the use of an advisory group in planning the off-farm agricultural occupations phase of his program, a potential resource of considerable worth is apparently untapped.

The 25 negative replies to the question of starting work in the off-farm agricultural occupations implies that there are indeed obstacles to be overcome in expansion of this program.

Evaluation of Student Interest

While the data are very subjective, two implications may be revealed. A lack of information on operating programs may lead students to give responses which are not indicative of true interests in off-farm agriculture occupations training or a relatively high proportion of South Dakota vocational agriculture students may be production oriented or have other legitimate reasons for not expressing off-farm interest. The fact that 12 instructors believe there would be more interest in a typical year suggests the need for more information and exposure to the programs and career planning information in general.

Reaction to Teacher Explanations

While no clear edict was observed the positive evaluation of superintendents, principals, and board members responses were at least an indication that school personnel were receptive to the programs as explained.

Questions Asked

Questions asked by agriculture businessmen were basically information oriented. Wages and working hours were a major area of concern as one might expect. Obviously, instructors and administrators must understand the program to develop it at the local level. While individual contact was the most common method used in explaining the program, group meetings apparently can effective answer the questions frequently asked.

Instructors apparently feel a need for more program organization information, curriculum materials, and program support data. This material should be made available to all departments on a routine or request basis. The problem may be one of having access to information when it is most needed.

RECOMMENDATIONS

In view of the presented implications, the following recommendations are made:

1. Vocational agriculture curricula should be objectively evaluated

2. Instructors should incorporate instruction in off-farm agriculture into the present programs to demonstrate the benefits of the off-farm phase at the local level.

3. Emphasis should be placed on the development of diversified cooperative off-farm agricultural occupations programs in schools enrolling less than 80 students per graduating class. Separate cooperative off-farm agricultural occupations programs should be part of the curriculum of the larger schools.

4. Independent study procedures should be facilitated to efficiently present job specific information and competencies while competencies with common application are developed by group procedures.

5. Instructor time for supervision of occupational experiences must be made available and used efficiently.

6. The Agriculture Division of the South Dakota Division of Vocational and Technical Education should gather evaluative data demonstrative of the productivity of instructors working with off-farm occupational experience programs.

7. Advisory groups should be developed and used for the local vocational agriculture programs.

8. School districts should develop stronger guidance programs and instructors should utilize career planning information in curriculum development and instruction.

9. Vocational agriculture instructors need to provide prospective students and enrollees with local program information and agriculture career planning informations.

10. Explanatory skills and materials must be developed for the off-farm phase of vocational agriculture.

11. A guide for establishing off-farm agriculture occupations programs should be developed and made available to instructors and other concerned persons.

12. The vocational agriculture classroom facilities should be improved to meet recommended standards.

SUMMARY

Slow emergence of off-farm agricultural programs in vocational agriculture in South Dakota was the problem studied. The first objective was to identify what efforts were being made in off-farm agricultural occupations including the identification of program needs and resources. A questionnaire was mailed to 64 schools offering vocational agriculture in 1970-71.

Thirty-two of the 54 reporting instructors reported no students placed off-farm. Only 143 students were reported as placed in off-farm occupational experience programs with agricultural mechanics, elevator operations, and landscaping-groundskeeping placements most common. Four instructors enrolled students in an off-farm agricultural occupations class.

Release from classes other than vocational agriculture or other time commitments, school master schedules, and developing program support were identified obstacles to additional work in off-farm agriculture.

Sufficient number of juniors and seniors to offer an off-farm program were reported by 38 instructors. Twenty-seven instructors had contacted businesses about serving in the off-farm area, but 25 did not. Juniors and seniors had expressed interest in off-farm agricultural occupations training in 34 of the reporting schools.

Instructors evaluated the majority of the responses of persons to whom they explained the off-farm phase of vocational agriculture as favorable. Wages, hours of student placement on the job, objectives and procedures, selecting students, cost advantages, and legal aspects were common concerns of agribusiness men contacted. Instructors wanted program information on existing programs, curriculum materials, justification data, and persuasion information.

Implications of the data were considered and 12 recommendations were made.

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Appendix A. Instructors' evaluation of their superintendent's response to their explanation of the off-farm agricultural phase of vocational agriculture.

		Frequency
Favorable	Subtotal	12
Most interested, will support		1
Good idea		1
Favorable		2
OK		2
No objections		1
Favorable, wants it here		1
Receptive		1
Believe he would like it here		1
Completely in favor of a program, will help get		1
Favorable, with qualifications	Subtotal	12
Reasonably favorable		1
OK, but take it in addition to your present load		1
Go ahead if it will not hurt the present program		1
OK, but work it out with principal		1
Favorable, if done only 2 days a week in Ag III or IV		1
Favorable, if training stations could be made available		1
100% for idea if aid to support (good for disadvantage)		1
Sounds good, do it after school		1
Interested if get a 2-man department		1
OK, but find the time		1
Favorable but is there a strong need		1
Good idea but no help to implement		1
Wanting more information	Subtotal	5
Do we need it?		1
Study students' interest, business interest and cost		1
Reservations--small number in school and Vo-Ag, availability of work stations		1
Interested		1
Questionable		1
Might hurt other programs	Subtotal	3
Have a T&I ed. program		1
Likes, but starting D.E. first		1
Let Vo-Tech school get underway first		1
Not interested	Subtotal	2
Would have value, but I am retiring		1
Not enthused - lack of training stations		1

Appendix B. Instructors' evaluation of their principals' responses to their explanation of the off-farm agriculture phase of vocational agriculture.

		Frequency
Favorable or positive	Subtotal	15
Very favorable		2
Favorable		6
Interested		2
OK		1
Agrees		1
Very good		1
Positive		1
I believe, they would like it here		1
Favorable with qualifications	Subtotal	6
OK, need more help - board doesn't want extra courses		1
Sounds practical		1
Favorable if training stations are available		1
OK, find the time		1
Yes, as soon as possible		1
Good idea - if no help or more time for ag		1
Teaching schedule and budget do not allow	Subtotal	4
If had more time for Vo-Ag man, something could be done		1
Did not feel my load allowed it		1
OK, but cannot schedule		1
Operates within schedule and budget -- limits participation		1
Let other programs handle or do not affect other programs	Subtotal	5
T&I program for this (confused!)		1
Cooperative program should fulfill this need		1
Work with D.E. to prevent overlapping		1
Let Industrial Arts take care of that (confused)		1
Let D.E. get started first		1
Neutral	Subtotal	1
Questions need or uninterested	Subtotal	3
Is there a need?		1
Reservations -- numbers, training stations		1
Little interest		1
I am Principal	Subtotal	2

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Appendix C. Instructors' evaluation of their school boards' responses to their explanation of the off-farm agriculture phase of vocational agriculture.

		Frequency
Favorable and positive	Subtotal	4
Very favorable		1
Favorable		2
Positive		1
Favorable with qualifications	Subtotal	3
OK, find the time		1
Go ahead but do not hurt present program		1
Interested but waiting for administration's recommendations		1
Questionable	Subtotal	1

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Appendix D. Instructors' responses to the question, "What type of information would you like to have to assist you in preparing to explain the off-farm agriculture phase of vocational agriculture?"

		Frequency
Program organization information	Subtotal	10
Organizational details		1
Concept		1
Student wages, hours, funding, and available help		1
Equipment, time differences		1
I need more background and knowledge		1
Planning, starting, and follow-up or evaluation procedures		1
A basic guide or an organizational plan to help get across the important parts		1
Objectives		1
Complete information		1
Brochure explaining cooperative program		1
Information on existing programs	Subtotal	6
List of what other instructors are doing		1
More information about existing programs		2
Success in other schools		1
Ideas being used		1
What has been done		1
Curriculum materials	Subtotal	4
Program of study for particular businesses		1
Sample off-farm program		1
What to do to prepare students for off-farm occupations experience programs		1
A proposal for a good off-farm program for S.D. including time required		1
Data on needs and values of	Subtotal	5
Benefits shown		1
Data on needs in area for board		1
Information on uniqueness of program in Ag and benefits in S.D.		1
Trends in off-farm employment		1
Number of off-farm jobs, importance of training and possible incomes		1
Film or filmstrip explaining program	Subtotal	1
How to talk board into new courses and additional help	Subtotal	2
How.. - an Industrial Arts department		1
How.. - new courses and additional instructors		1

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VT 020 502
WINEGARD, RAYMOND
COMPREHENSIVE VOCATIONAL GUIDANCE PROGRAM FOR MODEL CITIES. VOLUME 1. INTERIM REPORT FOR THE PERIOD MARCH 15, 1972 TO MARCH 14, 1973.

INDIANAPOLIS PUBLIC SCHOOLS, IND.
BUREAU OF ADULT, VOCATIONAL, AND TECHNICAL EDUCATION (DHEW/OE), WASHINGTON, D.C.
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DESCRIPTORS - *PILOT PROJECTS; *GUIDANCE PROGRAMS; *OCCUPATIONAL GUIDANCE; GUIDANCE COUNSELING; ELEMENTARY GRADES; INTERMEDIATE GRADES; SECONDARY GRADES; *PROGRAM EVALUATION; *CAREER EDUCATION; MODELS
IDENTIFIERS - *INDIANA; CAREER AWARENESS

ABSTRACT - THE MAIN OBJECTIVE OF THIS EXEMPLARY PROJECT WAS TO DEVELOP A COMPREHENSIVE PROGRAM WHICH WOULD PROVIDE ALL PUBLIC SCHOOL STUDENTS WITH A BETTER UNDERSTANDING OF THE WORLD OF WORK, A MORE POSITIVE SELF-IMAGE, AND THE OPPORTUNITY TO LEARN EMPLOYABLE SKILLS PRIOR TO THE TERMINATION OF THEIR EDUCATION. THE BASIC ELEMENTS OF THE PROGRAM WERE INSERVICE WORKSHOPS FOR GUIDANCE COUNSELORS, THE DEVELOPMENT OF A SYLLABUS FOR CAREER EXPLORATION CURRICULUM, A SUMMER VOCATIONAL EXPLORATORY PROGRAM FOR SEVENTH GRADERS, AND A WORK-STUDY PROGRAM FOR POTENTIAL HIGH SCHOOL DROPOUTS. EVALUATION OF THE TOTAL GUIDANCE PROGRAM INDICATES THE FOLLOWING RESULTS: (1) STUDENTS ARE MORE AWARE OF VOCATIONAL AND EDUCATIONAL OPPORTUNITIES, (2) GUIDANCE COUNSELORS HAVE BECOME AN INTEGRAL PART OF THE EDUCATIONAL PROGRAM, AND (3) THE WORK-STUDY PROGRAM HAS GIVEN MANY STUDENTS THEIR FIRST SUCCESS EXPERIENCE. (KH)

VT 020 502

INTERIM REPORT

Project No. 1-361-0165
Grant No. OEG-0-71-0683 [361]

Comprehensive Vocational Guidance Program for Model Cities

EXEMPLARY PROJECT IN VOCATIONAL EDUCATION
CONDUCTED UNDER
PART D OF PUBLIC LAW 90-576

Raymond Winegard
Indianapolis Public Schools
901 N. Carrollton Avenue
Indianapolis, Indiana 46202

MARCH 14, 1973

VOLUME 1 OF 2 VOLUMES

VT020502

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Interim Report

Project No. 1-361-0165
Grant No. OEG-0-71-0683(361)

Comprehensive Vocational Guidance Program for Model Cities

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 92-576

The project reported herein was performed pursuant to a Contract No. OEC-0-71-0683(361) with the Bureau of Adult, Vocational and Technical Education, Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

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March 14, 1973

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5. Summary of the Report:

(a) Time period covered by the report: March 15, 1972 to March 14, 1973.

(b) Goals and objectives of the project

To develop a comprehensive vocational guidance program for pupils enrolled in the public schools. Strong emphasis is placed on general understanding of the world of work by pupils prior to high school enrollment.

To provide practical exposure to a wide range of vocational experiences.

To instill in high school counselors a better understanding of the total spectrum of jobs in the world of work to better equip them to counsel pupils concerning employment.

To provide continuous vocational guidance for all pupils including identified education students.

To up-grade the self-image of disadvantaged students in an attempt to have each individual make a worthwhile adjustment to adult society and the world of work.

To increase the vocational awareness of pupils, educators, and community members which will raise the enrollment in vocational areas.

To provide employable skills for all pupils prior to the termination of their education.

(c) Procedures followed

An in-service workshop and meeting is scheduled every two weeks during the school year for all elementary and junior high guidance counselors in order to make them aware of new ideas and procedures in career education.

Prior to the opening of the school year, a two-day in-service workshop was held for teachers, counselors, and administrators in order to bring them closer together and give them a better understanding of what career education is all about. This also helped teachers and administrators understand the roll of the counselor so that better cooperation could be given to the counselor in implementing the program of career education K-8 in each of the schools to which the counselor had been assigned.

The Indiana Career Resource Center from South Bend, Indiana was used for the two-day workshop as well as the Comprehensive Vocational Guidance Program for Model Cities.

During the first and second week of the regular school year, elementary and junior high counselors have held in-service training sessions with the administration, faculty, and parents in schools to which they have been assigned.

A series of films on vocational occupations has been assigned for the 7th and 8th grades through the Curriculum Division. They are to be shown during the guidance period every other week throughout the school year.

The S.R.A. Job Facts Handbook was used by the counselors to develop occupational clusters for each junior high subject area. The clusters have been given to every junior high teacher to be incorporated in his or her class at the appropriate time, again with backing from the Curriculum Division. A syllabus for elementary guidance has been developed by the elementary counselors and has been made available for every elementary teacher K-6 so that career awareness can be started at that age level.

Also, junior high counselors have developed a junior high syllabus for the exploratory program in the 7th and 8th grades, and each teacher who has been assigned a guidance class has received a copy.

The summer phase of the Comprehensive Vocational Guidance Program for Model Cities consisted of two separate parts, one, the seventh grade vocational exploratory program, and two, the high school counselors visiting local business and industry.

The seventh grade vocational exploratory program was for only seventh grade students who would enter the eighth grade the following fall. It would help to expose them to a variety of vocational activities which would acquaint them with the various vocational opportunities available in high school. This summer experience should have helped them make wiser high school course selections when they enrolled for high school during their eighth grade school year. The summer program utilized nine vocational guidance consultants and sixteen vocational teachers. Each consultant was responsible for 60-62 pupils who were comprised of two separate classes of 30-31 pupils each for a total pupil enrollment of approximately 600 pupils (200 students more than the previous summer).

Each class of pupils was presented introductory lessons each day by the consultants/teachers in formal classroom activities. The lessons were designed to provide vocational information to the pupils. Information included the various levels of a particular vocation (e.g., machinist, draftsman, tool and die maker, engineer, etc.). The benefits, advantages, and disadvantages of that vocation were also pointed out. In addition, guest speakers and visual aides were utilized to provide information to the students. The classroom lessons were held for 30-40 minutes each day.

After the classroom session, the class was taken to a vocationally oriented classroom where they were given practical experience and information in a particular vocation.

A field trip to a local business or industry employing persons possessing the skills to which the pupils were exposed was planned each week.

Eleven high school counselors, one from each of the high schools, visited business and industry for a six-week period during the summer.

Most high school counselors are not presently familiar with vocational opportunities and employment practices, and exert most of their efforts toward counseling pupils for further education. This program helped to train the high school counselor in vocational practices so that they are better able to counsel students in the world of work and opportunities in our local business and industry.

The Occupational Preparation Program at Arsenal Technical High School is held in conjunction with the Comprehensive Vocational Guidance Program for Model Cities.

There is one director, one counselor, two vocational teachers, and two teachers from the regular budget which helps to staff the Occupational Preparation Program.

The program is organized along the lines of a corporation, composed of production industries, service industries, the business and accounting areas, and a retail outlet.

After a student is accepted into the program, he fills out an application form similar to the one he might find in employment offices. An attempt is made to place him in the corporation according to information obtained from this application. Instructions for the most part are given individually. The teacher-student ratio does not exceed one to fifteen. Students can be transferred from one area to another, if there are vacancies and if approved by the counselor.

The student is in this program for a half day. For approximately half of that time, he is at his assigned work station; one-fourth is in related technical or demonstration work; and one-fourth is in-service training. The other half day is spent in regular school subjects. Regular school subjects to be taken are selected with the cooperation of the occupational preparation counselor.

Students can be transferred into the program at any time during the semester, and they can return to the regular classes at any time they see a need to continue with their academic studies.

For those who return to regular classes, it is advisable that a cooperative work study program be planned with local industry. Three credits can be earned in the Occupational Preparation Program and they can be applied toward graduation. An additional award is the sharing of the profits of the store.

The prime objective of the total program is to identify the potential drop-out, boy or girl, at the eighth, ninth, and tenth grade level. This is done by the junior high counselor and high school counselor. They, in turn, work with the occupational preparation counselor to interest the student in continuing an education that will better prepare him for the world of work. The program is built around a typical corporate structure, including several production and service industries, and a managerial and sales organization. An in-service training program will help them with communications, math, and social problems which might arise.

(d) Results, accomplishments

1. Administrators, teachers, students, and parents are relying more and more on the counselor and have come to accept counseling as a part of the regular educational program.

2. Teachers are applying the world of work to the subject areas they are teaching and are making the subject areas more meaningful to students.

3. Counselors are working their second year in elementary and junior high schools which never had the services of a counseling program before.

4. Students are able to see first hand vocational opportunities in our community and to observe people actually working at jobs that they themselves are interested in doing some day.

5. Students have found that they can talk over their problems with the counselor and they also learn more about the world of work and opportunities in our community.

6. Students are better informed of what is available in the high schools in the way of vocational classes.

7. Parents are more ready to accept vocational education along with academic education, as being just as important.

8. Students are more aware of the need for at least a high school education.

9. Students are able to make a wiser decision in high school course selection in the eighth grade.

10. Students in the Occupational Preparation Program are continuing to have success for the first time in their lives in making passing grades.

11. Vocational classes in the Occupational Preparation Program are continuing to help some of the students see a purpose and need for going to school.

(e) A third party evaluation team consisting of a three-man board, has been contracted to evaluate the project.

The evaluation for the second year proves a distinct impact upon raising the level of morale, improving attitude, and intensifying the motivational level of those students who were included within the project.

(f) Conclusions and Recommendations

The elementary and junior high counselors are doing an outstanding job with students and with teachers who have been assigned to guidance classes. They seem to be getting a lot done considering the tremendous overload they carry, particularly at the junior high level.

The summer vocational exploratory program for seventh graders was very successful once again. However, with the limitation of students who could take part in the program and the number who wanted to be included shows still a need for expanding the program next year.

The Occupational Preparation Program at Arsenal Technical High School seems to be doing the job for a large percent of those enrolled. However, with the addition of a small engine repair program in the project, there is a need to find more space for the operation if at all possible.

6. Body of the report: Problem area

(a) The problem area toward which the project was directed, was to develop a Comprehensive Vocational Guidance Program for Model Cities area youth. The program is attempting to develop vocational experiences for both youths presently enrolled in school and for those who are no longer enrolled in school. The following aspects of the program are included:

1. A basic elementary (grades K-6) career awareness program is being expanded to expose pupils to experiences which are designed to build a strong self-image. In addition, the value of education and vocational experiences is being introduced.

2. A junior high school (grades 7-8) exploratory program is being expanded to expose pupils to occupational orientation

experiences. The program is utilizing visual aides, guest speakers, and field trips to industry and to high schools having vocational training facilities. In addition, pupils are being provided an opportunity to enroll in summer school where they may make practical application in vocational areas. Pupils enrolled in special education classes are also included.

3. The coordination of a pupil's transition between junior and senior high school is being accomplished by the utilization of a trained counselor who has training in vocational education.

4. Each pupil enrolled in high school is to have available the services of a trained vocational counselor in addition to the existing counseling services. This counselor will be able to provide educational and vocational information pertaining to all levels of employment.

5. The program proposes an Occupational Preparation Program designed to provide skills to the potential drop-out. This phase of the project is to include a cooperative program with local business and industry. The program is flexible to adjust to the needs of the pupils enrolled and is structured to provide for full time employment or for the pupil to return to the regular school program.

6. The unemployed out-of-school youth will be provided educational and vocational experiences utilizing the present evening division of the public schools. The Model Cities recruiters will be used in the identification and placement process. In utilizing the existing educational program as a foundation, this program attempts to incorporate additional educational processes which will better meet the educational and vocational aspirations of youth who reside within the Model Cities and fringe areas. The program will reach all youths throughout their school career terminating only when youths have received an educational or vocational background which will provide them with employable potentialities.

The Indianapolis Public Schools are presently equipped to train both youths and adults in many vocational areas (Appendix A). The school district maintains vocational facilities at three high schools (out of 11 high schools). However, pupils do not presently display a high degree of enthusiasm or interest in vocational areas. It is generally believed that the primary reason for low enrollment in vocational areas is the lack of exposure to vocational opportunities prior to a pupil's enrollment in high school. This program proposes to provide pupils with vocational exposure by providing a vocational guidance experience while the pupil is enrolled in the public schools. Such exposure should better prepare pupils to make wiser selection of high school subjects when they enroll in high school.

In addition, this program will provide short-term courses of instruction in employable skills for those pupils who decide to terminate their formal education prior to high school graduation. Those youths and adults who have already left school will be encouraged to return to school to obtain employable skills through utilization of the opportunities already in existence through the evening division.

(b) The Indianapolis Public Schools already have an up-to-date file of vocational opportunities and job requirements in the Indianapolis area. This file was produced by vocational counselors who visited over eighty local business and industrial firms over a period of three years. Each high school has an available file and contact is maintained with the personnel director of the various firms.

This program will utilize previously trained vocational consultants who have visited local firms and who are already known to personnel directors and other members of the management team. In addition, these consultants are in close contact with the United States Employment Service, the Flanner House Vocational Agency, the Indiana Department of Vocational Rehabilitation, and Indiana Office of Apprenticeship Information Center. The previous experience of the vocational consultants with these agencies should prove to be useful in employment placement. These consultants will also be utilized by the In-Service Training Division of the schools to provide information and training concerning employment to counselors and other selected staff members in the schools.

(c) It should be noted that the population under consideration represents the youth with the greatest academic and social handicaps. Because of this, the program will utilize accepted guidance activities to not only orient pupils to vocational opportunities but to also aid each individual in upgrading his self-image to the point where he believes he has the personal attributes to attain success in society. Activities of this nature are already in existence in the elementary schools, but attempts will be made to strengthen existing programs at the seventh and eighth grade levels through the use of vocational consultants.

The vocational information presented to the pupils will not be restricted to low level jobs but will provide information concerning semi-skilled, skilled, technical, and professional opportunities. It is anticipated that by raising the aspirations of youth at an early point in the educational process, many of the youth who now drop out of school will not only remain in school but will attend technical schools and/or universities to obtain special training in the professions. This program thus attempts to not only provide skills for the drop-out but also provide experiences which will meet the needs of all youth regardless of the goals which they aspire to attain. (See original proposal (p. 3-6)

6. Body of the report: Related literature

There appears to be a dearth of basic research focusing upon vocational preparation. Because of this lack of empirical research, it is impossible to say exactly how vocational choices are made. Norris (1) suggests that authorities seem to agree on the following points:

1. The selection of a vocation is not a single choice, instead it is a process that usually takes place over a number of years.

2. As the child advances from early childhood to adolescence, his vocational choices tend to become more realistic. The youngster evaluates his strengths and interests in terms of the educational and vocational opportunities open to him.

3. Vocational selection is a part of one's life adjustment from early childhood to adulthood. In line with these points, vocational guidance in the public schools should be presented to all levels of instruction. Naturally, the material presented would be adapted to the needs of each age group.

There are, however, many vocational guidance programs being conducted at the elementary, junior high, and high school level. Most of these seem to be successful for the particular group of pupils being served but evaluations are subjective instead of objective in nature.

Bank (2) describes an elementary school program in Detroit utilizing vocational role models. The program utilizes drawings, paragraph writing, visual aide presentations, field trips, and guest speakers at various grade levels. The implications of the program are: vocational role models can serve as a stimulus whereby elementary school students can learn about different types of job families which correspond to developmental curriculum areas; a means of involving students, teachers, parents, and community in helping to vitalize career information and for students to broaden their perception in meaningful, realistic, and personalized fashion. Occupational orientation programs which begin early in life and continue through school afford an individual opportunity to appraise himself, to recognize the many career choices available, and to understand the process and end result of occupational decision-making. This statement reinforces the above described program and is endorsed by others. (3), (4), (5), (6), (7), (8).

Sloan (9) in summarizing current literature pertaining to orientation approaches to increased student awareness of occupational options, suggested a need for the following:

1. Students need a wide range of activities which offer ways of testing the self and achieving identity. Then, the student can begin to relate his self-concept to various occupational role expectations.

2. Students need to understand career development as a process over which the individual has control. In contrast, students often see outside influences as controlling their life patterns.

3. Effective career explorations is action-oriented. It emerges from questions important to the student, relates to his goals and values, and involves him in personal interaction. It may offer opportunities to see what a job feels like; to place one's self in particular occupational tasks.

4. There is a need to consider the aspects which influence career choice. Research indicates four sectors which most people consider:

    a. intrinsic features of the work task
    b. extrinsic rewards of the occupation
    c. extra-role considerations
    d. the perceived feasibility of occupational goals

5. Valuable vocational experiences are inherent in most classroom activities. For example, skill in inter-personal relations and decision-making ability can be emphasized as important vocational learnings.

6. Early orientation should stress wide ranging exploration with emphasis on the many jobs for which each person is suited.

7. Parents play a major role in vocational development and are often the primary source of occupational information to a child. This suggests the importance of including parents in occupational orientation programs.

In one program for school alienated youth, 96 percent of the enrollees were working to the complete satisfaction of their employers. In a Michigan follow-up study of cooperative education trainees, one percent were unemployed, 40 percent were continuing their education, and over 50 percent were still employed in the cooperative firm where they received training. The students were generally above average. Cooperative education in distributive education increased student test scores on sales comprehension over a class taught by the project method but failed to show any increased contribution in economic understanding. (10)

The Boston public schools (11) have operated a vocational program since 1962 which is designed to prepare high school youths for employment. Potential drop-outs are removed from their regular school program and placed in vocational experiences which permits 80% of the school day to be spent in shop activities and 20% devoted to basic core education. Absences and tardiness are practically unknown and employers have high praise for the work habits of the graduates of this program.

Forbes and Olsen (12) conducted a study to investigate the level of occupational aspirations in eighth graders in an effort to determine if they are ready to choose a high school curriculum which will contribute toward their adult occupational goals. A comparison of the level of occupational aspirations of eighth grade pupils and the level of occupational aspirations of eleventh and twelfth grade pupils was made utilizing the occupational aspiration scale developed by Haller. (13)

(b) Goals and objectives of the project

1. To assist the pupils in broadening their understanding of and their natural curiosity about the world of work and specific occupational areas.

   a. Elementary (K-6) guidance counselors and teachers are helping students broaden their understanding of the world of work by having guest speakers, showing films and filmstrips, going on field trips, and obtaining literature at their level of understanding, to make them more aware of the world of work.

   b. Elementary (K-6) guidance counselors have developed an elementary syllabus (Appendix B) on career awareness in order to help the classroom teachers incorporate the world of work in their everyday classes for students.

   c. The 7th and 8th grade counselors and teachers are helping students become aware of the world of work by having guest speakers from business and industry, taking field trips to business and industry in the community, showing films and filmstrips, using the S.R.A. Kits on jobs, using current literature about the world of work, and having individual and group discussions on the world of work.

   d. The junior high school counselors have also developed a syllabus for junior high guidance (Appendix C) to help the classroom teachers who have been assigned guidance classes, to better present the world of work to students.

2. To encourage pupils to make realistic self-appraisals by examining what they believe to be their interests and abilities in relation to what their past school experiences tell about them, and to assist them to develop aspirational levels that will result in educational and career commitments consistent with such interests and abilities.

   a. Elementary and junior high counselors give each student, at the beginning of the school year, a guidance information sheet and an autobiography sheet (Appendix D) in order to gain information from students about their interests and abilities. With the information sheets and school records, counselors are better able to help students individually make a more realistic career commitment consistent with such interests and abilities.

3. To assist pupils in gaining a greater understanding of high school course sequence, specific courses, cooperative work study programs, and the relationship of these sequences, courses, and work study programs to ultimate occupational choices.

   a. Each junior high counselor takes every eighth grade student on a field trip to the high school which they will attend, in order for the student to become familiar with what is available in high school.

   b. Counselors and teachers in group guidance classes present each subject that is available to them and advise how each subject can lead to a specific job or jobs.

   c. Guidance counselors through individual conferences with each student and parent help students make out their ninth grade program according to their interests, abilities, and school records in order to make a more realistic occupational choice.

   d. Seventh grade students spend six weeks in a summer school vocational exploratory program at Arsenal Technical High School in an on hand vocational experience. Hopefully, this will help them make a more realistic occupational choice when they are ready to make out their high school program in the eighth grade.

   e. High school counselors spend six weeks in various businesses and industry during the summer in order to gain information about the world of work and to determine what business and industry is looking for in hiring new employees. Counselors then pass this information on to students through occupational information classes and individual conferences so students can better prepare themselves in class and vocational selection in order to meet their career choice.

4. To assist pupils in broadening their understanding of personal attributes sought by places of business by taking pupils on field trips into these businesses and factories and talking with workers, personnel officials, etc.

   a. Guidance counselors (K-8) take students on as many field trips to business and industry in our community that time will permit, in order for students to see and talk with workers and personnel officials. This helps to broaden their understanding about the world of work as to find out what business and industry require of new employees and what the outlook is for job opportunities in the future in our community.

   b. Guidance counselors have guest speakers from business and industry come into the classroom to talk to students about what business and industry are looking for in hiring workers, such as attitudes, school records, attendance, grades, interests, abilities, and how much education is needed for each job.

5. To assist pupils in learning about the various post-high school vocational training facilities and their offering in the Indianapolis area.

   a. Junior high and high school counselors either take field trips with students to the various training facilities or have representatives from the various training facilities come to the schools and talk with students about the opportunities at each facility. Pamphlets and literature are gathered by the counselor and distributed to the students about each post-high school vocational training facility in the Indianapolis area.

6. Junior high 7th and 8th grade counselors and teachers give students on hand experience in order for students to learn the dignity of working with one's hands and developing a wholesome attitude toward all jobs by the following means:

   a. Every seventh and eighth grade boy and girl will take two years of industrial arts and home economics.

   b. Seventh graders have an opportunity to attend the summer school vocational exploratory program.

   c. Counselors and teachers conduct group guidance classes to discuss all types of jobs and their importance.

   d. Counselors have individual conferences with students to talk about specific jobs they are interested in and how important it is to work with one's hands.

e. Counselors show films and filmstrips on all types of jobs to show how each job is as important as the next one.

f. Counselors take students on field trips to business and industry where students can actually see people working at various jobs using their hands.

7. To encourage pupils to develop good habits of attendance, punctuality, neatness in work, etc. as training for future employment experiences and for becoming productive members of society and good citizens in the community.

a. The elementary (K-6) counselors and teachers help students develop good habits of attendance, punctuality, neatness, and to become good citizens in the community by the following means:

(1) Counselors have developed a syllabus to give to teachers who have been assigned guidance classes on personal habits, attendance, punctuality, etc. which are traits desired by business and industry when hiring employees.

(2) By showing students how important it is to form good habits now, and how it will help them get the kind of job they want later.

(3) By having teachers discuss in class the reason for being in classes and school on time everyday.

(4) Counselors have individual conferences with students who have poor attendance records in order to show them why they should change.

(5) Counselors and teachers show films and filmstrips on why students need to have good attendance, good personal habits, and punctuality.

(6) Guest speakers from business and industry talk to students as to why they look for workers with good attendance, punctuality, and good personal habits.

b. Junior high counselors and teachers build in more depth on what the students have had (K-6) in the following ways:

(1) Teachers and counselors spend at least three class periods going over students' records and explain why they are so important in connection with getting a job.

(2) Counselors have developed a syllabus to give to teachers who have been assigned guidance classes on films, applications, personal habits, attendance, where to look for a job, etc. which traits are desired by business and industry when hiring employees.

(3) Individual conferences are held with students who have poor attendance records, poor punctuality, or poor personal habits.

(4) Career clusters (Appendix E) have been developed and added to the curriculum in each appropriate subject area, so that counselors and teachers can show how each subject relates to a specific job and why it is necessary that they should continue with their education.

(5) Guest speakers are brought in to show what business and industry expect out of employees in order to do their job, or what they look for in hiring new employees.

8. To work in close cooperation with all school personnel, community social agencies, and local business and industry.

   a. All counselors (K-12) have been involved in in-service workshops to better understand how to work with school personnel, community social agencies, and local business and industry.

   b. All counselors (K-8) have given in-service training to all of the school personnel in the schools to which they have been assigned.

   c. On several occasions counselors have been called upon to give in-service workshops to other school districts and state meetings.

   d. Counselors have visited community social agencies and local business and industrial firms to become better acquainted with the services they have to offer and ascertain how they can help one another more effectively.

9. To instill in each pupil the desire to pursue educational objectives to the ultimate of their ability, with high school graduation a necessity.

   a. Counselors and teachers who have been assigned guidance classes are constantly showing students why they need at least a high school education through the following means:

(1) Using S.R.A. Kit or other literature on job requirements.

(2) Career clusters for each subject area

(3) Want ads in newspapers.

(4) Films and filmstrips on job requirements.

(5) Guest speakers from local business and industry outlining their requirements for hiring new employees.

(6) Field trips to business and industry to talk to personnel managers.

(7) Parents to talk to students about how much harder it is to get a job today without a high school education than when they were in school.

(8) Individual and group conferences with students on job requirements.

(9) To show students the more education the better jobs available with more pay.

10. To familiarize the pupils with the role of the counselor in their future vocational and educational development.

    a. Counselors (K-8) have visited every classroom in the schools to which they have been assigned at the beginning of the year to let students know who they are and how they can help them.

    b. Counselors also let students know that they are not disciplinarians. Information given to them is confidential and will not be released without the consent of the student.

    c. Counselors tell students about field trips and guest speakers they will be having during the year. They also advise the students as to how they can assist them in finding jobs through the connections they have had with business and industry.

    d. Counselors help the child become a "whole child" mentally, physically, emotionally, and socially to learn more about the world of work.

11. To provide all pupils with employable skills prior to their leaving school.

a. Elementary counselors (K-6) have given students an opportunity to become aware of the world of work.

b. Junior high (7-8) counselors have given each student an opportunity to explore the world of work through on hand experience in the summer program or through the industrial arts program.

c. Junior high counselors have helped students make out their high school program and make sure students are placed in areas best suited for them so they will be prepared to get a job after leaving school.

d. High school counselors follow the students through courses they have chosen, or help the student change in another direction so they can become employable after leaving school.

e. High school counselors help students find part time work or help them get into cooperative work study programs to better prepare them for a job when leaving school.

f. Junior high and high school counselors work very closely together in placing students in the right program so they will be prepared for work. If a student should want to quit before finishing high school, then the junior high and high school counselor work closely together to see that the student is placed in the Occupational Preparation Program at Arsenal Technical High School so the student will have a skill to be employed.

(c) Description of the general project design and the procedures followed, including information on the student population, instructional staff, and on the methods, materials, instruments and techniques used.

The Comprehensive Vocational Guidance Program for Model Cities has just completed its second full year of operation and administrators, teachers, parents, and students have accepted the program much more than the first year, which will be described later in the Interim Report.

The program started on February 1, 1971 with the hiring of seven vocational guidance consultants, one director of the Occupational Preparation Program, one counselor, and two teachers for the Occupational Preparation Program at Arsenal Technical High School. Included in the program are ten Title I elementary guidance counselors and twelve junior high counselors from the regular budget.

The seven vocational guidance consultants, prior to the start of the Comprehensive Vocational Guidance Program for Model Cities, were Title I elementary guidance counselors. They were assigned to one elementary school K-6 or K-8 in the inner-city, with the background of teaching occupational information and working in industry during the summer. They were transferred into the Comprehensive Vocational Guidance Program for Model Cities.

The twelve junior high counselors had previously been assigned to one of the eleven high schools programming eighth grade students who would feed into that particular high school. The administration felt that it would be better if the junior high counselors were not associated with one particular high school, but would represent all of the high schools. Consequently, each counselor was assigned four different junior high schools which covered the entire school district.

In February 1971, the twelve junior high counselors were made a part of the Comprehensive Vocational Guidance Program so that now there are ten Title I elementary counselors and nineteen junior high counselors covering the entire school district in the seventh and eighth grades.

Elementary Guidance. The ten Title I elementary counselors have been assigned to one individual school K-6 or K-8 in the Model Cities are and inner-city full time. The total enrollment for the ten elementary schools which the counselors have been assigned to is 4,809 students with a ratio of one counselor per 480.9 students.

The elementary counselors turn in a monthly report of their activities (Appendix D). The following is a brief summary of the elementary counselors' activities for the second year:

1. Number of individual conferences - 5,910
2. Number of teacher conferences - 1,098
3. Number of social worker conferences - 335
4. Number of parent conferences - 284
5. Other conferences - 451
6. Number of teacher referrals - 1,691
7. Number of self-referrals - 1,884
8. Other referrals - 701
9. Number of class presentations - 1,189
10. Number of group meetings - 564
11. Number of guest speakers - 46
12. Number of field trips - 147
13. Number of P.T.A. presentations - 19
14. In-service training with teachers - 34
15. Number of filmstrips or films shown - 261

Prior to the beginning of the school year, a two-day in-service workshop was given by the Indiana Career Resource Center from South Bend, Indiana for the elementary counselors

to go over new ideas and plans for implementing career awareness K-6. Each counselor was given a packet of materials to be used in helping teachers who had been assigned guidance classes, or to work in their regular subject area.

At the beginning of each semester, elementary counselors have met with the administration, faculty, and students of the schools to which they have been assigned. They hold an in-service workshop to explain their role in the school, to present their ideas, and to receive ideas from the faculty on how to help the students K-6 with career awareness.

The following are things the elementary counselors are doing for students K-6 to become aware of vocational opportunities:

Counselors have arranged for guest speakers from business and industry (Appendix F) to come into classes and talk to students about their occupation. For example, if they are studying about fire prevention in their health and safety class, a local fireman comes in as guest speaker, along with the tools and equipment he uses. The students have an opportunity to put on the fireman's hat, the boots, and rain coat, and pretend they are firemen; also, they have an opportunity to handle the various tools a fireman uses as he tells them what each is used for. He also explains why firemen are needed and what kind of education they should have to become a fireman.

Guest speakers are generally invited to talk to students about the subject that is being taught, so that subject matter and job will have more meaning. As many guest speakers as possible are used during the year in order to give children K-6 as many opportunities as possible to become aware of a wide variety of occupations.

Counselors arrange field trips for students (Appendix G) and also accompany them on field trips. Again, this is to make children aware of more occupations, to actually see people working, to see different machinery and tools, and also to talk to people working at the various jobs. Field trips are arranged to follow a guest speaker in order to broaden the students' understanding of the world of work, or to fit into the lesson they are studying.

Counselors have made an elementary career awareness syllabus (Appendix B) so that each teacher K-6 can use it as a guide for teaching career awareness in each of the subject areas, or have the counselor come into the class to teach a specific occupation. Counselors will give class presentations upon the request of a teacher, administrator or student. The topics discussed can vary depending upon the need of the students at that time. For example:

1. Attendance and tardiness
2. Rules and regulations of the school
3. Personal health habits in relation to a job
4. Safety in school and in relation to a job
5. Making good grades in regard to getting a job
6. Children request knowledge about certain jobs
7. Attitudes, interests, and hobbies
8. Getting along with other people
9. Educational films and filmstrips (Appendix H) are shown
10. Other materials (Appendix I)are presented

Counselors have individual and group conferences with students through referrals from teachers, administrators, social workers. or self-referrals from students. Through individual and group conferences, counselors try to attain the following goals:

1. Develop a realistic self-image, including an awareness and acceptance of his or her capabilities and limitations, and the self-confidence that will permit him to achieve maximum self-realization in terms of his or her potential.

2. Develop an awareness of and respect and concern for other groups and individuals.

3. Develop the abilities required to identify desirable and realistic goals and set priorities.

4. Learn to control his own actions in line with his goals and to join with others in establishing amd maintaining guidelines for behavior of the group.

5. Learn to accept disappointments and frustrations and to work toward their resolution or solution.

6. Encourage and accept the honest expression of ideas and feelings.

7. Be capable of drawing his own conclusions, deferring decisions until the best evidence is available and allowing others the same privilege.

8. Incorporate into his life pattern the elements of Freedom's Code.

Elementary counselors meet regularly with the junior high counselors to go over ideas and exchange ideas tieing in the K-6 awareness to the 7-8 exploratory program. The elementary counselors also have the junior high counselor from the feeder school for the elementary school come to their school and talk to all of the sixth graders. They will also take the sixth graders on a field trip to the junior high school to become familiar with that school for the following year.

As stated throughout, the elementary guidance program is structured to make the children K-6 aware of vocational opportunities and build this into the junior high program.

Junior High Guidance. The nineteen junior high school counselors have been assigned approximately four schools each (7-8) which covers the entire Indianapolis school district. The total enrollment for all of the 7-8 grades is 14,984 students with a ratio of one counselor per 788.63 students.

The junior high counselors, like the elementary counselors, turn in a monthly report of their activities (Appendix D). The following is a brief summary of the junior high counselors' activities for the second year:

1. Number of individual conferences - 15,609
2. Number of teacher conferences - 2,408
3. Number of social workers conferences - 603
4. Number of parent conferences - 1,800
5. Other conferences - 1,073
6. Number of teacher referrals - 1,588
7. Number of self-referrals - 3,572
8. Other referrals - 1,278
9. Number of class presentations - 3,104
10. Number of group meetings - 566
11. Number of guest speakers - 144
12. Number of field trips - 162
13. Number of P.T.A. presentations - 44
14. In-service training with teachers - 131
15. Number of filmstrips or films shown - 485

Prior to the beginning of the school year, a two-day in-service workshop was given by the Indiana Career Resource Center from South Bend, Indiana for the junior high and elementary counselors to go over new ideas and plans for implementing career awareness K-6 and career exploratory 7-8. Each junior high counselor was given the occupational clusters (Appendix E) and job facts handbook from S.R.A. to be incorporated in each of the regular subject areas being taught.

At the beginning of each semester junior high counselors meet with the administration and faculty of the schools to which they have been assigned. They hold an in-service workshop to explain their role in the school, to present their ideas, and to receive ideas from the faculty on how to help students 7-8 explore the world of work, and also have on hand experiences.

It probably should be noted here that counselors have more than one in-service workshop with teachers. There is an ongoing in-service training for teachers during the year as the occasion arises. Also, counselors have had more than one two-day workshop during the year. In fact, counselors

meet as a group every other Friday during the year for in-service training involving administrative personnel, high school counselors, colleges, State Department, special agencies, and other schools from outside the Indianapolis school district.

On several occasions, several of the counselors have been asked by the State Department, Purdue University, other school districts, and schools within the Indianapolis school district, to give in-service training workshops for their administration or personnel about our career education program.

The junior high school program contains several innovative features that depart from the present educational structure in Indianapolis.

Each pupil in the seventh and eighth grade is presently assigned a forty minute guidance period each week. However, the shortage of teachers trained in vocational guidance prevents the assignment of teachers to these classes who have guidance knowledge and skills with which they can create constructive guidance activities for the pupils. Therefore, specially trained counselors provide constructive guidance activities for the teachers and pupils in the following manner:

1. Counselors provide the 7-8 grade teachers who have been assigned guidance classes with a junior high syllabus (Appendix C). The teacher does not have to follow the syllabus in the order it is presented but selects the activities that best fit his/her particular class. However, it is recommended that they do present lessons in a systematic manner so students can build on their knowledge of the world of work in a meaningful way.

2. Counselors will periodically make presentations to classes to not only provide a meaningful experience for the pupils, but to also serve as a model which the teachers can observe for his/her own self-improvement in making presentations. For example:

   a. salary, deductions, and fringe benefits (Appendix J)
   b. learning to fill out a personnel application for employment (Appendix J)
   c. reading and discussing material pertinent to the world of work (Appendix J)
   d. showing of filmstrips and films dealing with school and the world of work (Appendix H)
   e. using the local newspaper want ad section for jobs
   f. using the S.R.A. job kit for exploring various jobs
   g. school records and what companies look for:

1. attendance
2. tardiness
3. grades
4. subjects
5. attitude
6. personal habits
7. teacher recommendations

h. Administrators or teachers may ask counselors to talk on a subject pertinent to a school situation at that time

Great emphasis is placed on the dignity of work and the importance of vocational guidance in developing a realistic goal. Counselors try to show the relationship between general education and how necessary it is to help prepare one for a worthwhile career in some vocation.

3. Counselors arrange for guest speakers from business and industry (Appendix F) to come into the guidance classes, or in regular subject classes, to explain or discuss the opportunities for jobs in our community and what students need in order to qualify for a job. Counselors also arrange for high school students to come into eighth grade classes and explain what they plan on doing after graduation; why they are getting a high school education; and what they can expect from the high school they will be attending. The same thing is done in the seventh and eighth grade industrial arts and home economics classes.

4. Counselors arrange a career day for the seventh and eighth grades (Appendix K) where people from business and industry come into the school and talk about their particular company or job and its requirements. Students are allowed to sign up for the job or company that they are interested in hearing about.

5. Counselors give the administration and each student a monthly news letter (Appendix L) about guidance, the world of work, and what has been or is going on in their school.

6. Counselors arrange to take students on field trips to business, industry, and the high school they will be attending.

   This enables the student to actually see people working at various occupations, to talk to people about jobs, and to see many different kinds of jobs and opportunities. On visitation to the high school, it gives a student an opportunity to see what vocations are available to him/her when ready for high school.

7. Junior high counselors also work with students in individual conferences or in group conferences. The student is referred to the counselor by the administrators, teachers, social workers, self-referral, or the counselor will contact students, so that the counselor can better understand the student and give him/her more help. Each student is given a guidance information sheet and an autobiography sheet (Appendix M) to fill out. These forms are kept in the counselor's file cabinet.

   Through personal contact with students, counselors are better able to help the students with their problems, whether social, school, home, or job. At the same time, counselors work very closely with the administration, teachers, parents, social workers, and other agencies in order to help the student with his problems (with the permission of the student).

   It should also be mentioned that some of our elementary and junior high counselors also work very closely with the state correctional institutions. They visit the boys and girls in the institution who are from our community, and help them when they are released to get a good start in school again.

8. In the second semester of the school year, junior high counselors help program all eighth grade students for high school (Appendix N). This aspect of guidance is very important to the counselor for the following reasons:

   a. Counselors can have in-service training with the teachers who are helping program the eighth grade students for high school, and in doing so have a closer working relationship with the teacher.

   b. This is an opportunity for the counselor to have all of the parents in a group meeting to explain the high school programs to them, and why it is important that their child should have a high school education. This also gives the counselor an opportunity to explain the total guidance program to the parents and to pass out a guidance pamphlet (Appendix V) which they can take home and read about the program. It also gives counselors a chance to invite parents to take part in the programming of their children. This also helps the parents feel they are wanted to take part in school functions.

   c. The junior high counselors work very closely with the high school counselors, administrators, and teachers. This also gives the junior high counselor an opportunity to show and explain the total guidance program, to build the junior high program into the high school program, and to have a closer working relationship.

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d. Since the counselor has records of all the students and has talked to them individually, he can better help and encourage the student to take the right courses and explain the need for an education.

The junior high guidance program gives every student an opportunity to explore the world of work, an opportunity to see the need for an education, and the need and place for everyone.

Occupational Preparation Program. The Occupational Preparation Program started in the second semester of 1971 at Arsenal Technical High School, and has just completed the second full year of operation. It is a program designed to interest potential drop-outs at the ninth and tenth grade level. The objective is to encourage these students to continue their formal education or to prepare them to be useful employees if they do decide to quit school.

Personnel in the program consist of one director of the program, one guidance counselor, two vocational teachers, and two teachers from the regular school. Since the start of the program, total enrollment has been 304 students which includes both boys and girls. The criteria used by the counselor for selecting students, including recommendations from the junior high counselors and from the regular high school counselors, was the following:

1. Approximately 80 I.Q. or above
2. Failing 60% or more of classes
3. Attendance problems
4. A professed dislike for all or part of school

The counselor then explains the program to the student and the student is given a tour of the facility. The student, along with the parent, is then allowed to choose whether or nor he or she is interested and would like to participate. Entry into the program can be effected at any time during the first two 6 week grading periods of each semester. The student attends four periods per day for two credits as in other vocational areas. He is also required to go to other regular school classes which usually are those basics required for future graduation, such as English, mathematics, physical education, etc.

Projects in the program are as follows:

Office Education. In the office education program of the OPP project, the main teaching objectives are to expose the student to the various career opportunities in office work and to guide the student in selecting for training that area for which he displays special interest and aptitude. Activities and learning experiences are planned to develop interest,

ability, and self-confidence needed to qualify the student to secure office work and to pursue that work successfully.

Behavioral objectives for the student include:

On the completion of this course, the student should:

1. Have adjusted socially to the degree he/she displays acceptable behavior and attitudes, self-reliance and pride, and regularity of attendance necessary for office work.
2. Have developed salable skill in a specific area of office work according to individual interest and aptitude.
3. Have basic understanding of the flow of authority and responsibility for office work and the ability to perform routine jobs within the office complex.
4. Be able to work independently as evidenced by his ability to plan and organize his work for the successful completion of all assigned responsibilities.
5. Be able to work cooperatively for the smooth flow and performance of work which requires team work.
6. Take initiative and show creativity in the handling of routine and/or unusual office problems which may arise.
7. Be able to take and/or give instructions, and constructive criticism.
8. Be able to use various office machines to produce materials of the quality acceptable for business.

In order to provide the learning experiences necessary to accomplish the above objectives, eleven job stations have been identified and established for the office work of OPP as follows:

1. Office manager
2. Cashier and office sales
3. Bookkeeper
4. Payroll clerk
5. Accounts receivable and billing clerk
6. Order processing and receiving clerk
7. Student I.D.'s
8. Student accounts and records
9. Stenographer
10. File clerk
11. Receptionist

In addition to these job stations, students are also trained to use the engraver, to sell, to arrange displays and bulletin boards, and to make posters and other advertisements.

Related Information. Classes are held for all the students of the OPP. The subject areas covered are those designed to guide the student in examining his own potential for employment by analyzing his personality, grooming, capabilities,

interests, and training. Then the student is given the opportunity to contrast his/her own potential with various job descriptions and requirements in order to help him/her set up goals for the future. Discussions are also held on what an employer looks for in a prospective employee, and how to secure an interview and best present yourself and your qualifications to an employer during an interview.

One of the goals of related information classes is to make the student aware of some of the decisions he will have to make and the problems he will face, etc. as an employee in the world of work; and to make him aware of the various agencies and laws that are available to guide and/or protect him.
Other projects include the manufacturing and selling of a unique flat folding saw horse, engraved plastic signs, and name plates for which two major customers have been identified, rubber stamps, I.D. pictures and cards, preamplifiers, minerature chest of drawers, small appliance and gas engine repair, and also assembly line work.

Entrance into the program has shown an approximate seventy percent increase in school attendance. In many cases, there are still numerous cuts or absences from academic classes but a new pattern of daily attendance is being formed. Some of the students, 22 of 304, were seen less than ten times so the program had no chance to influence them. Other accomplishments of the program are:

1. Ten percent of the students have made honor roll or honorable mention.
2. Fifty percent of the students have returned to the regular school because they see a need for an education.
3. Ten percent of the students have been placed on jobs or joined the service.

The part of the program which seems to affect the students most is much more personal attention. They begin to feel that someone cares about them specifically or personally.

They begin to trust and to associate themselves with the program's teachers and counselor. They begin to talk and explore some of their problems. Next comes some maturity and acceptance of responsibility, then some measure of success.

High School Counselors Visiting Industry

Ten high school counselors representing most of the high schools were working in the summer program visiting fifty-two different businesses and industries in our community for a six week period (Appendix O). This was to help counselors gain knowledge about the world of work in our community, so that they may better counsel with high school students about job opportunities in our community, as well as trends in other parts of the country.

Most high school counselors are not presently familiar with vocational opportunities and employment practices; therefore, exert most of their efforts toward counseling pupils for a college education. This program trained counselors in the high school in vocational practices. The selected counselors were also available to better counsel pupils and to serve the rest of the staff in a consulting capacity.

Each counselor who visited business and industry during the summer for a six-week period was given job description forms (Appendix P) so that they could gather information from each company and each job that the company had available. Counselors then made this information into a packet and distributed to each of the high schools, so that other counselors could use this information as reference materials when counseling students.

All of the companies which participated in the summer program were very pleased to see that this type of program was going on. They felt that this was the kind of program needed to not only help students but felt this would also give them better employees once a student graduates from school. Counselors who participated in the program also felt that it was very worthwhile and rewarding to them. The counselor from Arlington High School stated, "Up to now, my experiences in the money making world have been in such diverse areas as library science, accountant, officer in the United States Army, Christian education director, teacher, and counselor. While all of these were and are in the "real world," they did not introduce me to the "hard world."

"Never did I have the feeling that I was being shown only selected activities. The businesses not only opened their front doors to me but also the side doors and the basement doors. I really was accepted as one of the group wherever I went. The six business and industries which I visited this summer for one week each I found most productive, interesting, and educational, and, in some cases, exciting."

The counselor from Manual High School stated, "It was very rewarding to me as a counselor. First because of the vast amount of information gathered pertaining to job qualifications and job availability in the future. Second for the contacts made with many sincere and dedicated people in the business world."

"The entire program was well organized. Much work has gone into the program, otherwise the rewards would not have been as great. The fine cooperation could not have been better."

"There is nothing like it offered in any college course. I think all counselors who wish to improve themselves should be given an opportunity to participate in this program."

Seventh Grade Summer Vocational Exploratory Program

The junior high counselors talked to every seventh grade class during the spring semester and explained the summer program to them. Parents were also invited to listen and ask questions about the exploratory program. Each child was given a take home letter explaining the program. The child was to return the letter signed to the counselor if he/she wanted to participate in the program (Appendix Q). The response was as great as it was the first year. We had planned for approximately 300 students for the second summer, however, when the applications came back, there were approximately 3,000 boys and girls who wanted to participate in the summer program.

We were able to take 600 boys and girls into the summer program (200 students more than the previous summer) by alloting each counselor 30 to 31 students per school and on a first-come, first-serve basis. The other students then were placed on an alternate list so that if a student could not participate or had to drop out, counselors then would contact those students on the alternate list to take their place.

The summer exploratory program was held at Arsenal Technical High School because they have been made the Career Center for the Indianapolis Public Schools, and have one of the most comprehensive and largest vocational training facilities in Indianapolis and in the State of Indiana.

The exploratory program was broken down into two sessions with approximately 300 students (boys and girls) in each session. The first session was held from 8:00 a.m. to 10:30 a.m. with the first 30-40 minutes devoted to a guidance class and the remaining 2 hours in a vocational class. The second session was held from 10:30 a.m. to 1:00 p.m. with the first 2 hours in a vocational class and the last 30-40 minutes in a guidance class.

There were nine vocational areas: building trades, electrical trades, metal trades, auto trades, drafting, graphic arts, business education, home economics, and commercial arts. Each student who signed up for summer school was given an opportunity to choose a sequence consisting of six areas in which he/she was interested and then spent one week in each of the six areas.

There were nine guidance counselors responsible for two groups of approximately 30-31 boys and girls in each group. The counselors taught the guidance classes, giving students information about the world of work in the areas of vocational classes they had signed up for. The counselor also showed films and filmstrips, arranged for guest speakers, and planned field trips (four field trips per group, total of 64 field trips to business and industry) (Appendix R). Counselors also helped with the vocational classes.

There were sixteen vocational teachers, two to each of the nine vocational areas. This helped to give each student more individual attention, as well as serving as a safety factor with this young a student.

On the first day of summer school, each boy and girl was given one hundred true and false questions on the world of work and areas they would be covering in their vocational classes (Appendix S). The purpose was to learn how much or how little they knew about the world of work or vocational trades. On the last day of summer school, they were given the same test as at the beginning to find out how much they had gained.

A Questionnaire (Appendix T) was given to each of the vocational teachers and counselors. Also a questionnaire was sent to the students and parents to find out how they felt about the program and if it was worthwhile (Appendix U).

The response was tremendous as teachers, counselors, and especially parents and students felt this was something that has been needed for quite some time and hopefully would continue indefinitely. Parents felt that their children have never been more eager to attend school than they were this summer, also, that they learned what vocational trades are and what opportunities are available in the various areas.

There were three students visiting relatives for the summer (Texas, Colorado, and Kansas) who also joined the summer program and never missed a day. The students stated they did not have anything like this in their school program and wished they did, because it was very interesting and informative and felt that it would help them decide what they wanted to take in high school as a career.

(d) Results and accomplishments of the project

As stated before and also pointed out by the outside evaluation team, the following results and accomplishments were attained for the second year of the project:

1. Principals and teachers have accepted the need for a good guidance program and are cooperating more with the counselor.

2. Students were able to make a self-evaluation of their educational aspirations.

3. Approximately 85% of the eighth grade students signed up for one or more vocational subjects in high school.

4. An elementary K-6 career awareness syllabus has been developed by the elementary counselors.

5. The Curriculum Division has added job clusters to every subject area in the seventh and eighth grades.

6. A junior high 7-8 guidance syllabus has been developed by the junior high counselors and distributed to every teacher who has been assigned a guidance class.

7. The project director and counselors have been asked on several occasions by other school districts to give an in-service workshop for their faculties.

8. A guidance pamphlet has been developed to explain the total Comprehensive Vocational Guidance Program, and has been distributed to the administration, parents, students, and other school districts.

9. Other school districts have visited our program or requested information about the program.

10. A closer cooperation and understanding developed between counselors, administration, faculty, students, parents, and other social and community agencies.

11. Students were able to make a wiser decision in high school course selection in the eighth grade.

12. Students are more aware of the need for at least a high school education.

13. Teachers for the first time are applying the world of work to the regular academic subject areas they are teaching.

14. Students are more aware of what is available in the high schools in the way of vocational classes.

15. Students have found someone they can talk over their problems with, and they also learn more about the world of work and opportunities available in their community.

16. Students were able to visit businesses and industries in their community and see the opportunities offered to them if they have the proper education.

17. Vocational classes in the Occupational Preparation Program have helped some of the students see a purpose and need for going to school.

18. Students in the Occupational Preparation Program have been successful for the first time in their lives in making passing grades.

19. Students were able to have on hand experience in several vocational areas, so they could make a wiser choice in their high school program.

20. High school counselors are better able to counsel students in the world of work.

21. The concept of career education is moving much better K-12.

SECTION (e)

Evaluation of the Project

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Section (e) Evaluation of the Project

INTRODUCTION - The independent evaluation team has worked hard to develop a comprehensive evaluation system which will provide realistic information concerning both process and product evaluation. Even though approval of the team was not formal, the first meeting was held in June to develop an operational plan which would fill informational needs on all phases of the total Comprehensive Vocational Guidance Project; the resulting letter of understanding, time-table and proposal follow.

Team Members

Dr. Avery Gray, Chairman
Assoc. Professor, Extension Education
Purdue University
West Lafayette, Indiana

Dr. Edgar Fleenor
Asst. Professor of
Industrial Education
Indiana U. - Purdue U.
1201 East 38th Street
Indianapolis, Indiana

Dr. Barnett B. Morris
Professor of Psychology
Indiana U. - Purdue U.
1201 East 38th Street
Indianapolis, Indiana

October 2, 1972

Mr. Raymond Winegard
Project Director
Comprehensive Vocational Guidance Project
The SKIPS Building
901 North Carrollton Avenue
Indianapolis, Indiana

Dear Pete

Attached you will find the results of considerable deliberation and planning on the part of the evaluation team. You will note our time table is designed to generate information at times when quarterly or final reports are due. In addition we attempted to identify existing or anticipated data which might prove most useful. Should you discover errors in the time table or feasibility of data design procedures, please let me know.

Thanks for your splendid cooperation in this matter.

Sincerely yours,

/s/ Avery H. Gray

P.S. Delay in approval by H.E.W. is slowing evaluation progress.

TIME-TABLE AND DIVISION OF RESPONSIBILITY

Program Component	Data Collection	Progress Report	Completed Report	Evaluation Responsible
Summer Exploratory	July and Sept. 15	Oct. 1	Nov. 1	A. Gray
Summer Counselor Placement	Aug. and Sept.	Oct. 1	Nov. 1	E. Fleenor
Occupational Preparation	Sept.	Nov. 1	Dec. 1	A. Gray
Elementary Counseling	Oct. 1 - Nov. 1	Nov. 15	Dec. 1	Team
Junior High Counseling	Oct. 1 - Nov. 1	Nov. 15	Dec. 1	E. Fleenor B. Morris
Report Compiled and Ready for Duplication			Dec. 1	Team
Report Printed and Bound			Dec. 15 - 20	

EVALUATION CONTRACT
(Second Program Year Evaluation)

Project No. 1-361-0165
Grant No. OEG-0-71-0683(361)

Comprehensive Vocational Guidance Program
for Model Cities

Exemplary Project in Vocational Education
Conducted Under
Part D ob Public Law 90-576

Raymond Winegard
Indianapolis Public Schools
901 N. Carrollton Avenue
Indianapolis, Indiana 46202

January 3, 1973

PURPOSE OF THE STUDY

The primary purpose of this evaluation study is to determine the extent and direction of impact of the Comprehensive Vocational Guidance Program as conceived in the Model Cities Schools during its second year of operation. The main thrust of impact evaluation will be aimed toward counseling of students as they exist in the school and in the community. In addition, successful model constructs, techniques, and procedures will be identified for evaluation, refinement, and extension of the existing model. Implications for generalization of the model concept to other inner-city schools and other urban centers will logically emerge.

SPECIFIC OBJECTIVES

1. To determine the degree of successful achievement of the objectives as set forth in the model design.
2. To determine impact on certain specific facets of student behavior such as: school attendance, attitude, interests, goals and educational achievement to include career knowledge.
3. To evaluate counselor satisfaction with the model experiences.
4. To determine extent and direction of impact of specific model constructs such as: techniques, procedures, project activities, subject content, age, and grade.
5. To provide solid data essential to the evaluation of overall success of the model with implications for refinement, extention, and generalization of the program to other inner-city schools.
6. To provide recommended longitudinal evaluation techniques for the third year program phase.

ANTICIPATED PROCEDURES

Planning for the second year program evaluation procedures and process has already begun with the continuation of the skeletal plan for selecting and collecting relevant data basic to the nature of the community and the students involved which was developed during the first program year. Much useful information exists in raw form, such as: I.Q. test results, educational achievement results, reading test results, attendance and dropout patterns as well as related community data concerning vandalism, juvenile delinquency, property values, unemployment, etc. There remains the more complex procedure of selecting and programming such information into the second year evaluation process. The analysis of this data will result in a statistical report comprising a section of the Second Year Interim Report.

Since this is a "one-of-a-kind" program, there were few directly applicable instruments which could be used in determining the impact of the program on the behavior of students. It was necessary to either construct or modify all paper and pencil type tests, and even those tailored instruments may demonstrate a strong cultural bias, a problem for which we will need to continually try and compensate. Therefore, much of the time, effort, and cost of this second year evaluation study will be spent in constructing and testing new data gathering instruments or in modifying existing tools to facilitate their use with inner-city youths.

In the final analysis, the selection and use of specific evaluative techniques will be based on a cooperative review by personnel representing the local educational agency and the third-party independent evaluation team with advice and counsel of a representative from the Department

of Health, Education and Welfare. Such evaluation will be conservatively recommended and will be administered by the model counselors in such a fashion as to avoid giving the students a "guinea pig complex."

One of the hidden goals of this study is that of releasing the model counselors from evaluative chores in order that they can devote full energy to developing educational experiences. Since the project director is heavily loaded with administrative responsibilities, the need for assistance with preparing an evaluation procedure again this year is apparent.

ATTACHED CONDITIONS

The grantee and the evaluator understand that the attached "Terms and Conditions of the Grant" as well as the provisions of the "Equal Opportunity Clause, HEW-386" shall be an integral part of this contract and strictly adhered to in the work being performed. See attached copies of Grant Terms and Conditions and Equal Employment Opportunity Clause, HEW-386.

CONTRACT AGREEMENT

This statement will form the basis of a contract between the Indianapolis Public Schools, represented by Raymond Winegard and Avery Gray, Evaluation Team Leader for the Comprehensive Vocational Guidance Program.

The responsibilities of the evaluators shall be:

1. To work with the project director and the counselors of the project in the development of specific instruments or procedures for evaluating the impact of the project.
2. To refine and evaluate the instruments and/or procedures and inform the counselors regarding the timetable and procedural techniques for evaluating the program.
3. To process the data and summarize the results.
4. To provide an interim second year report for use by the project director and his staff.
5. To establish an on-going procedure for longitudinal program evaluation.

The local educational agency, Indianapolis Public Schools represented by Mr. Raymond Winegard, Project Director, shall:

1. Provide the team with relevant supplementary data already available to school officials.
2. Assist in the construction and/or development of evaluation techniques or procedures.
3. To provide for the administration of any evaluation instruments.
4. Reimburse the team for expenses and fees connected with the carrying out of team responsibilities as outlined above.

It is further agreed that administrative responsibility for monitoring the performance of this Contract will be retained by the grantee.

This Contract is entered into in support of the basic Grant. No changes may be made in content of the Scope of Work without the approval of the Office of Education Grants Officer.

BUDGET

A. Personal Services $6,462.00

The evaluator estimates expenses as follows:

$5,000.00	for evaluation services
$1,000.00	for testing services
$ 400.00	for statistical processing
$ 62.00	for duplication of materials
$6,462.00	TOTAL

TIME TABLE

The Evaluation Report (Second Program Year Report) will be completed and filed with the project director, Mr. Raymond Winegard, on or prior to January 25, 1973.

Leader, Evaluation Team	Project Director
Signed Avery Gray	Signed Raymond Winegard
Title Evaluator	Title Project Director
Date January 3, 1973	Date January 3, 1973

APPROVED: Otis Roberts 1/24/73
Otis Roberts
Grants Officer
U. S. Office of Education

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION
WASHINGTON, D.C. 20202

GRANT TERMS AND CONDITIONS

REPLACES ALL OTHER GRANT TERMS AND CONDITIONS.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION
WASHINGTON, D.C. 20202

GRANT TERMS AND CONDITIONS

1. DEFINITIONS
2. SCOPE OF THE PROJECT
3. LIMITATIONS ON COSTS
4. ALLOWABLE COSTS
5. ACCOUNTS AND RECORDS
6. PAYMENT PROCEDURES
7. REPORTS
8. PRINTING AND DUPLICATING
9. TERMINATION
10. APPLICABILITY OF STATE AND LOCAL LAWS AND INSTITUTIONAL PROCEDURES
11. COPYRIGHT AND PUBLICATION
12. ACKNOWLEDGMENT AND DISCLAIMER IN PUBLICATION
13. PATENT RIGHTS
14. TRAVEL
15. EQUIPMENT
16. CONTRACTING UNDER GRANTS
17. HEALTH AND SAFETY STANDARDS
18. COMPENSATION
19. LABOR STANDARDS
20. EQUAL EMPLOYMENT OPPORTUNITY
21. USE OF CONSULTANTS
22. CLEARANCE OF FORMS
23. GRANT RELATED INCOME AND INVESTMENT INCOME
24. CHANGE OF KEY PERSONNEL
25. ANIMAL CARE

1. DEFINITIONS

As used in the grant documents relating to this award, the following terms shall have the meaning set forth below:

a. "Commissioner" means the U.S. Commissioner of Education or his duly authorized representative.

b. "Grantee" means the agency, institution, or organization named in the grant as the recipient.

c. "Grants Officer" means the employee of the U.S. Office of Education who is authorized to execute and is responsible for the administration of the grant on behalf of the Government.

d. "Project Officer" means the employee of the U.S. Office of Education who is responsible for the technical monitoring of the project of the Grantee as representative of the Grants Officer.

e. "Project Director" is the person responsible for directing the project of the Grantee.

f. "Project" is the activity or program defined in the proposal approved by the Commissioner for support.

g. "Grant Period" means the period specified in the Notification of Grant Award during which cost may be charged against a Grant.

h. "Budget" means the estimated cost of performance of the project as set forth in the Notification of Grant Award.

SCOPE OF THE PROJECT

he project to be carried out hereunder shall be consistent with e proposal as approved for support by the Commissioner and ferred to in the Notification of Grant Award and shall be perrmed in accordance with this approved project proposal. No bstantive changes in the program of a project shall be made less the Grantee submits *(at least thirty days prior to the fective date of the proposed change)* an appropriate amendnt thereto, along with the justification for the change, and s amendment is approved in writing by the Grants Officer.

LIMITATIONS ON COSTS

a. The total costs to the Government for the performance of the grant shall not exceed the amount set forth in the Notification of Grant Award or any appropriate modification thereof. The Government shall not be obligated to reimburse the grantee for costs incurred in excess of such amounts unless or until the Grants Officer has notified the grantee in writing that such amount has been increased and has specified such increased amount in a revised Notification of Grant Award. Such revised amount shall thereupon constitute the revised total cost of the performance of the grant.

b. The Grantee may transfer funds among the various cost categories in the negotiated budget to the extent necessary to assure the effectiveness of the project, except that, no transfers may be made which alter the approved project.

c. Funds for the production of audio visual materials *(i.e., motion picture films, videotapes, film strips, slide sets, tape recordings, exhibits, or combinations thereof)* for viewing, whether for limited or general public use, are not authorized until prior written approval is received from the Grants Officer.

d. In the case of educational training programs, the limitation on costs stated in paragraph "a" above shall automatically be increased to cover the cost of allowance for additional dependents not specified in the Notification of Grant Award.

4. ALLOWABLE COSTS

a. Expenditures of the Grantee may be charged to this grant only if they: *(1)* are incurred subsequent to the effective date of the project indicated in the Notification of Grant Award, which shall be no earlier than the date upon which the award document is signed by the Grants Officer, and *(2)* conform to the approved project proposal.

b. Subject to paragraph *(a)* allowability of costs incurred under this grant shall be determined in accordance with the principles and procedures set forth in the documents identified below, as amended prior to the date of the award.

(1) Exhibit X-2-65-1 of the Department of Health, Education, and Welfare Grants Administration Manual, if the Grantee is an institution of higher education; or

(2) Exhibit X-2-66-1 of the Department of Health, Education, and Welfare Grants Administration Manual, if the Grantee is a hospital as defined therein; or

(3) Exhibit X-1-76-1 of the Department of Health, Education, and Welfare Grants Administration Manual, if the Grantee is a non-profit institution, or

(4) Chapter 5-60 of the Department of Health, Education, and Welfare Grants Administration Manual, if the Grantee is a State or local Government agency.

c. In accordance with the policy of the Department of Health, Education, and Welfare, if the Grantee has an audited indirect cost rate that has been approved by the Department of Health, Education, and Welfare, Office of Grants Administration Policy, this approved rate may be applied to both the Federal and non-Federal share of allowable direct costs of the project. When an indirect cost rate is applied to either the Federal or non-Federal share of project costs, no item normally included in the Grantee's indirect cost pool *(such as supervision, accounting, budgeting, or maintenance)* shall be listed as a direct cost of the project. Procedures for establishing Indirect Cost Rates are covered in Department of Health, Education, and Welfare brochures: OASC-1, A Guide for Educational Institutions; OASC-3, A Guide for Hospitals; OASC-5, A Guide for Non-Profit Institutions; OASC -6, A Guide for State Government Agencies; OASC-7, Department of Health, Education, and Welfare Provisions for Establishing Indirect Cost Rates under OMB Circular A-88, and OASC-8, A Guide for Local Government Agencies.

d. Indirect costs for educational training programs will be allowed at the lesser of the organizational indirect costs or 8% of total direct costs, including stipends and dependency allowances, except for State and Local Governments.

5. ACCOUNTS AND RECORDS

a. Accounts

The Grantee shall maintain accounts, records and other evidence pertaining to all costs incurred, and revenues or other applicable credits acquired under this grant. The system of accounting employed by the Grantee shall be in accordance with generally accepted accounting principles generally used by State or local agencies or institutions of higher education, or non-profit institutions, as appropriate, and will be applied in a consistent manner so that the project expenditures can be clearly identified.

b. Cost Sharing Records

The Grantee's records shall demonstrate that any contribution made to the project by the Grantee is not less, in proportion to the charges against the grant, than the percentage specified in the grant or any subsequent revision thereof.

c. Examination of Records

The Secretary of Health, Education, and Welfare and the Comptroller General of the U.S., or any of their duly authorized representatives shall have access, for the purpose of audit and examination, to any books, documents, papers, and records of the grantee that are pertinent to the grant, at all reasonable times during the period of retention provided for in paragraph (d) below.

d. Disposition of Records

Except as provided in paragraph *(e)*, all pertinent records and books of accounts related to this grant in the possession of the Grantee shall be preserved by the Grantee for a period of three *(3)* years after the end of the grant period, if audit by or on behalf of the Department has occurred by that time; or if audit by or on behalf of the Department has not occurred by that time, the records must be retained until completion of audit or until five *(5)* years following the end of the grant period, whichever is earlier.

e. Questioned Expenditures

Records relating to any litigation or claim arising out of the performance of this grant, or costs and expenses of this grant to which exception has been taken as a result of inspection or audit shall be retained by the Grantee until such litigation, claim, or exception has been disposed of.

f. Adjustments

The grantee, in maintaining project expenditure accounts, records, and reports shall make any necessary adjustments to reflect refunds, credits, underpayments, or overpayments, as well as any adjustments resulting from administrative reviews and audits by the Federal Government or by the grantee. Such adjustments shall be set forth in the financial reports filed with the Grants Officer.

6. PAYMENT PROCEDURES

To obtain Federal funds, the Grantee shall receive payments in accordance with the payment schedule which is set forth in the Special Terms and Conditions.

7. REPORTS

The Grantee shall submit such fiscal and technical reports as may be required in the grant or by the Grants Officer, and in the quantity and at the time stated in the report schedule which is set forth in the Special Terms and Conditions.

8. PRINTING AND DUPLICATING

All printing and duplicating authorized under this grant is subject to the limitations and restrictions contained in the current issue of the U.S. Government Printing and Binding Regulations if done for the use of the Office of Education within the meaning of those Regulations.

9. TERMINATION

Subject to applicable statutes and regulations, if the Grantee fails to carry out the terms and conditions of the grant, the Government may terminate the grant prior to the expiration of the grant period designated in the grant award document in whole or in part and may suspend the Grantee's right to incur new obligations pending a decision regarding such termination. The grant may also be terminated prior to such period because it is no longer susceptible to productive results and may be suspended pending a decision regarding such termination in accordance with applicable rules and regulations. Allowable costs properly chargeable to the grant for the period prior to such termination or suspension *(whichever is earlier)* will be allowed upon final settlement except that costs that would be allowable only in the case of a termination for convenience of the Government will not be allowed in the event of termination under the first sentence of this paragraph. Nothing in this paragraph shall be deemed to affect the applicability to the grant of other remedies available to the Government under law.

10. APPLICABILITY OF STATE AND LOCAL LAWS AND INSTITUTIONAL PROCEDURES REGARDING EXPENDITURE OF FUNDS

Except to the extent otherwise provided for in this document, or any document incorporated herein by reference, nothing herein or therein shall be construed so as to alter the applicability to the Grantee of any State or local law, rule, regulation, or any institutional procedure which would otherwise pertain to the expenditure of funds.

11. COPYRIGHT AND PUBLICATION

a. The term "materials" as used herein means writings, sound recordings, films, pictorial reproductions, drawings or other graphic representations, computer programs, and works of any similar nature produced under this grant. The term does not include financial reports, cost analyses, and similar information incidental to grant administration.

b. It is the policy of the Office of Education that the results of activities supported by it should be utilized in the manner which would best serve the public interest. To that end, except as provided in paragraph *(c)*, the Grantee shall not assert any rights at common law or in equity or establish any claim to statutory copyright in such materials, and all such materials shall be made freely available to the Government, the education community, and the general public.

c. Notwithstanding the provisions of paragraph *(b)* above, upon request of the Grantee or his authorized designee, arrangements for copyright of the materials for a limited period of time may be authorized by the Commissioner, through the Grants Officer, upon a showing satisfactory to the Office of Education that such protection will result in more effective development or dissemination of the materials and would be in the public interest.

d. With respect to any materials for which the securing of a copyright protection is authorized under paragraph *(c)*, the Grantee hereby grants a royalty-free, nonexclusive and irrevocable license to the Government to publish, translate, reproduce, deliver, perform, use and dispose of all such materials and to make any use of it.

e. To the extent the Grantee has the right and permission to do so, the Grantee hereby grants to the Government a royalty-free, nonexclusive and irrevocable license to use in any manner, copyrighted material not first produced in the performance of this grant but which is incorporated in the materials. The Grantee shall advise the Grants Officer of any such copyrighted material known to it not to be covered by such a license.

12. ACKNOWLEDGMENT AND DISCLAIMER IN PUBLICATION

a. Any publication or presentation resulting from or primarily related to the project being performed hereunder shall contain the following acknowledgment:

> The project presented or reported herein was performed pursuant to a Grant from the U.S. Office of Education, Department of Health, Education, and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the U.S. Office of Education, and no official endorsement by the U.S. Office of Education should be inferred.

b. Materials produced as a result of the grant may be published without prior review by the Commissioner; provided, that 15 copies of such materials shall be furnished to the Grants Officer and no such materials may be published for sale without the prior approval of the Grants Officer. Such approval shall be subject to such requirements as the Commissioner deems appropriate.

13. PATENT RIGHTS

a. **Policy**

In accordance with Department of Health, Education, and Welfare Regulations *(45 CFR Subtitle A, Parts 6 and 8)*, all inventions made in the course of or under any Office of Education grant shall be promptly and fully reported to the Assistant Secretary *(Health and Scientific Affairs)*, Department of Health, Education, and Welfare.

The grantee institution and the principal investigator shall neither have nor make any commitments or obligations which conflict with the requirements of this policy.

b. **Determination**

Determination as to ownership and disposition of invention rights, including whether a patent application shall be filed, and if so, the manner of obtaining, administering, and disposing of rights under any patent application or patent which may be issued shall be either:

(1) by the Assistant Secretary *(Health and Scientific Affairs)* whose decision shall be considered final, or

(2) where the institution has a separate formal institutional agreement with the Office of Education or the Department, by the grantee institution in accordance with such agreement.

Patent applications shall not be filed on inventions under *(1)* above without prior written consent of the Assistant Secretary *(Health and Scientific Affairs)* or his representative. Any patent application filed by the Grantee on an invention made in the course of or under an Office of Education grant shall include the following statement in the first paragraph of the specification:

"The invention described herein was made in the course of, or under, a grant from the U.S. Office of Education, Department of Health, Education, and Welfare."

c. **Reports and Other Requirements**

A complete written disclosure of each invention in the form specified by the Assistant Secretary *(Health and Scientific Affairs)* shall be made by the Grantee promptly after conception or first actual reduction to practice, whichever occurs first under the grant. Upon request, the Grantee shall furnish such duly executed instruments *(prepared by the Government)* and such other papers as are deemed necessary to vest in the Government the rights reserved to it under this policy statement to enable the Government to apply for and prosecute any patent application, in any country, covering each invention where the Government has the right to file each application.

The Grantee shall furnish interim reports *(Annual Invention Statements)* prior to the continuation of any grant listing all inventions made during the budget period whether or not previously reported, or certifying that no inventions were made during the applicable period. Upon completion of the project period, the Grantee shall furnish a final invention report listing all inventions made during performance of work on the supported project or certifying that no inventions were made during that work.

d. **Supplementary Patent Agreements**

The Grantee shall obtain appropriate patent agreements to fulfill the requirements of this provision from all persons who perform any part of the work under the grant, except such clerical and manual labor personnel as will have no access to technical data, and except as otherwise authorized in writing by the Department.

The Grantee shall insert in each subcontract or agreement having experimental, developmental, or research work as one of its purposes, a clause making this provision applicable to the subcontractor and its employees.

e. Definitions

As used in this provision, the stated terms are defined as follows for the purposes hereof:

(1) "Invention" or "invention or discovery" includes any art, machine, manufacture, design, or composition of matter, or any new and useful improvement thereof, or any variety of plant, which is or may be patentable under the Patent Laws of the United States.

(2) "Made" when used in relation to any invention or discovery means the conception or first actual reduction to practice of such invention in the course of the grant.

f. Inventions Resulting from Grants Made in Support of Research by Federal Employees

Inventions resulting from grants made in support of research by Federal employees shall be reported simultaneously to the Assistant Secretary *(Health and Scientific Affairs)* pursuant to terms of the grant and to the employing agency under the terms of Executive Order 10096, as amended.

14. TRAVEL

Travel allowances shall be paid in accordance with applicable State and local laws and regulations and grantee policies. If none of these are applicable, travel shall be done in accordance with Federal Government regulations. No foreign travel is authorized under the grant unless prior approval is received from the Grants Officer. Travel between the United States and Guam, American Samoa, Puerto Rico, the U.S. Virgin Islands, the Canal Zone, and Canada is NOT considered foreign travel.

15. EQUIPMENT

a. Title to, and accountability for, equipment shall be determined in accordance with Chapter 1-410, Management of Equipment and Supplies Acquired Under Project Grants, of the Department of Health, Education, and Welfare Grants Administration Manual and the Property Management/Inventory System Operating Procedures issued by the Contracts and Grants Division, Office of Education.

b. Equipment purchased with grant funds shall be used only to accomplish the purposes of the grant. The grantee assures that any equipment so purchased is not already on hand and that it will safeguard and protect all such equipment in accordance with prudent property management practices.

16. CONTRACTING UNDER GRANTS

The Grantee may enter into contracts or agreements *(to the extent permitted by State and local law)* for the provision of part of the services under this grant by other appropriate public or private agencies or institutions. Such contract or agreement shall incorporate all rules and regulations applicable to the program, shall describe the services to be provided by the agency or institution, and shall contain provisions assuring that the Grantee will retain supervision and administrative control over the provision of services under the contract. Services to be provided by contract pursuant to this section shall be specified in the project proposal or in an amendment thereto, and the proposed contract shall be submitted to the Grants Officer and be approved by him in writing.

17. HEALTH AND SAFETY STANDARDS

Whenever the Grantee, acting under the terms of the grant, shall rent, lease, purchase, or otherwise obtain classroom facilities *(or any other facilities)* which will be used by students and faculty, the Grantee shall comply with all health and safety regulations and laws applicable to similar facilities being used in that locality for such purpose.

18. COMPENSATION

If a staff member is involved simultaneously in two or more projects supported by funds from the Federal Government, he may not be compensated for more than a total of one-hundred percent *(100%)* time from such Government funds for all projects during any given period of time. The grantee shall not use any grant funds or funds from other sources to pay a fee to, or travel expenses of, employees of the Office of Education for lectures, attending program functions, or other activities in connection with the grant.

19. LABOR STANDARDS

To the extent that grant funds will be used for alteration and repair *(including painting and decorating)* of facilities, the Grantee shall furnish the Grants Officer with the following:

a. a description of the alteration or repair work and the estimated cost of the work to be performed at the site;

b. the proposed advertising and bid opening dates for the work;

c. the city, county, and State at which the work will be performed; and

d. the name and address of the person to whom the necessary wage determination and labor standards provisions are to be sent for inclusion in contracts, not later than six *(6)* weeks prior to the advertisement for bids for the alteration or repair work to be performed. The Grantee shall also include or have included in all such alterations or repairs the wage determination and labor standards provisions that are provided and required by the Secretary of Labor under 29 CFR Parts 3 and 5.

20. EQUAL EMPLOYMENT OPPORTUNITY

With respect to repair and minor remodeling, the Grantee shall comply with and provide for Contractor and Subcontractor compliance with the requirements of Executive Order 11246, as amended, as implemented by 41 CFR Part 60. The terms required by Executive Order 11246 will be included in any contract for construction work, or modification thereof, as defined in said Executive Order.

21. USE OF CONSULTANTS

a. The hiring and payments to consultants shall be in accordance with applicable State and local laws and regulations and grantee policies. However, for the use of and payment to consultants whose rate will exceed $100.00 per day, prior written approval for the use of such consultants must be obtained from the Grants Officer.

b. The Grantee must maintain a written report for the files on the results of ALL consultations charged to this grant. This report must include, as a minimum: *(1)* the consultant's name, dates, hours, and amount charged to the grant; *(2)* the names of the grantee staff to whom the services are provided; and *(3)* the results of the subject matter of the consultation.

22. CLEARANCE OF FORMS

To permit monitoring and clearance, the Grantee is to submit to the appropriate Program Officer, prior to use, five *(5)* copies of

all tests, questionnaires, interview schedules or guides, and rating scales which are to be employed in collecting data from 10 or more individuals or organizations. A brief report of RELATED INFORMATION *(such as purposes of the study, relevance of the data-gathering instruments to these purposes, nature of the sample, number of respondents, burden on respondents, etc.)* must accompany the copies of the instruments, in accordance with directions from the Office of Education.

EXCEPTIONS:

a. Copies need not be submitted of conventional instruments which deal solely with *(1)* cognitive functions or technical proficiency *(e.g., scholastic aptitude, school achievement, etc.)*, *(2)* routine demographic information, or *(3)* routine institutional information; but a REPORT of the "related information" *(as specified above)* concerning the particular data-gathering instruments must be supplied to the Program Officer in order to permit appropriate monitoring and clearance.

b. Ordinary classroom tests employed in the development of a new curriculum or as part of the regular instructional routine, constituting part of the project for which funds are granted, need be neither reported nor submitted; but final tests employed in such a project, serving purposes of evaluation, must be reported; and, if significantly unusual in such essential features as content, directions, form of response, etc., must be submitted in five *(5)* copies.

23. GRANT-RELATED INCOME AND INVESTMENT INCOME

a. Interest or other income earned by investment of the grant funds is termed "Investment Income." Any Investment Income earned by the grantee on advance funds received under this grant, is to be paid to the U.S. Office of Education for deposit as Miscellaneous Receipts in the U.S. Treasury, unless the grantee is a State or State agency. If the grantee is a State or State agency, the grantee is not accountable to the U.S. Office of Education for its use of Investment Income monies. Income derived by the grantee from activities supported or funded by this grant, other than Investment Income and Copyright Royalty Income, is termed "Grant-Related Income."

b. Grant-Related Income shall be disposed of, at the discretion of the Commissioner, in either one of the following two ways:

(1) By returning the funds to the Federal Government *(a)* by reducing the level of expenditures from grant funds in an amount equal to the Federal share of the Grant-Related Income, *(b)* by treating the funds as a partial payment to the award of a succeeding *(continuation)* grant, or *(c)* by payment to miscellaneous receipts of the U.S. Treasury; or

(2) By using the funds to further the purposes of the grant program from which the award was made.

c. The Grantee shall obtain from the Grants Officer prior approval of the disposition of any facilities, services, equipment, or other materials described in paragraph *(a)* above, subject to the condition of paragraph *(b)* above.

d. If the grantee receives any grant-related income or investment income in connection with this grant, the grantee shall maintain records of the receipt and disposition of the Federal share of such income.

24. CHANGES IN KEY PERSONNEL

The project Director and other grant personnel specified by name in the proposal are considered to be essential to the work being performed. If for any reason substitution of a specified individual becomes necessary, the Grantee shall provide timely written notification to the Grants Officer. Such written notification shall include the successor's name with a resumé of his qualifications.

25. ANIMAL CARE

Where research animals are used in any project financed wholly or in part with Federal funds, every precaution shall be taken to assure proper care and humane treatment of such animals.

EQUAL EMPLOYMENT OPPORTUNITY

(Section 202, Executive Order 11246, September 24, 1965, 30 FR 11269)

"During the performance of this contract, the contractor agrees as follows:

"(1) The contractor will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

"(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.

"(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

"(4) The contractor will comply with all provisions of Executive Order No. 11246 of Sept. 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

"(5) The contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

"(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of Sept. 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

"(7) The contractor will include the provisions of Paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of Sept. 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, That in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States."

HEW-386
Rev. 5-66

EVALUATION TECHNIQUES AND OBJECTIVES

A dual evaluation approach including both individualistic and team approaches were simultaneously employed. Each evaluator focused special efforts toward one program component within the multi-project. A team review of project correspondence to include all reports, forms, and other attainable records was conducted. Biographical, attitudinal, and motivational instruments, student opinion poll, questionnaires, and two on sight evaluations were utilized by the team in collecting raw data to be analyzed in formulating this evaluation report.

Objectives. The attainment of the following objectives constitute the major focus of efforts within this comprehensive project.

1. To assist the pupils in broadening their understanding of and their natural curiosity about the world of work and specific occupational areas.

2. To encourage pupils to make realistic self-appraisals by examining what they believe to be their interests and abilities in relation to what their past school experiences tell about them, and to assist them to develop aspirational levels that will result in educational and career commitments consistent with such interests and abilities.

3. To assist pupils in gaining a greater understanding of high school course sequence, specific courses, cooperative work study programs, and the relationship of these sequences, courses, and work study programs to ultimate occupational choices.

4. To assist pupils in broadening their understanding of personal attributes sought by places of business by taking pupils on field trips into these businesses and factories and talking with workers, personnel officials, etc.

5. To assist pupils in learning about the various post-high school vocational training facilities and their offering in the Indianapolis area.

6. Junior high (7-8) grade counselors and teachers give students on hand experience in order for students to learn the dignity of working with one's hands and developing a wholesome attitude toward all jobs.

7. To encourage pupils to develop good habits of attendance, punctuality, neatness in work, etc. as training for future employment experiences and for becoming productive members of society and good citizens in the community.

8. To work in close cooperation with all school personnel, community social agencies, and local business and industry.

9. To instill in each pupil the desire to pursue educational objectives to the ultimate of their ability, with high school graduation a necessity.

10. To familiarize the pupils with the role of the counselor in their future vocational and educational development.

SUMMER ON SITE EVALUATION
July 5, 1972

Part I. Basic Exploratory Program for Junior High School Students

Avg. Rank	Low 1	2	3	4	High 5	
4.3	1	2	3	4	5	1. A wide range of exploratory experiences are available.
3.0	1	2	3	4	5	2. Total students involved are reasonable for the design and objectives of the project.
3.6	1	2	3	4	5	3. The length and depth of exploration is sufficient to have impact on student behavior.
4.0	1	2	3	4	5	4. Counseling of individuals is geared to exploratory experiences and is intensive.
3.3	1	2	3	4	5	5. Saleable skills are emphasized for potential drop-outs who may be terminating formal education.
3.0	1	2	3	4	5	6. Students leaving school are provided counseling and assistance in job placement.
3.3	1	2	3	4	5	7. Degree of cooperation among counselors, teachers, and administrators.
4.3	1	2	3	4	5	8. Impact of the program on plans being made by students.
4.0	1	2	3	4	5	9. Impact of the program on behavior of teachers in their orientation to occupational education.
3.3	1	2	3	4	5	10. The procedures used are realistic in view of the total school program.
4.0	1	2	3	4	5	11. Special emphasis is afforded students with special needs or handicaps.

Part II. Organization and Administration of Exploratory Program

						1. Support of Administration
3.3	1	2	3	4	5	a. Central School Administration
3.6	1	2	3	4	5	b. Elementary and Junior High School
3.6	1	2	3	4	5	2. Leadership of the project director in relating to staff, business, and industry.
3.3	1	2	3	4	5	3. Amount of time available to director in relation to complexity of the project.
4.0	1	2	3	4	5	4. Perceived role of the project in relation to K-12 Comprehensive Vocational Guidance Program objectives.
3.0	1	2	3	4	5	5. Clarity of project guidelines from HEW as related to operational project objectives.
3.6	1	2	3	4	5	6. Availability of program in relation to student needs.
4.0	1	2	3	4	5	7. Impact of program on students enrolled.
3.0	1	2	3	4	5	8. Communication of program development, successes, etc. within the school system or to others.
4.0	1	2	3	4	5	9. Cooperation with other agencies and/or schools.

SUMMARY OF ON SITE OBSERVATIONS

This correspondence is intended as a synopsis of observations made during the on site evaluation of the Summer Exploratory Phase of the Comprehensive Vocational Guidance Program as viewed on July 18, 1972.

Comments herein shall be limited to Junior High School Exploratory Phase of the program and are closely related to the on site checklist submitted to you as one means of summarizing impressions of the program.

Initially, let us congratulate you, the counselors, and the instructors for the hugh strides of progress easily discernable in this summer's program as compared to 1971. Not only has the total scope and thrust of the program for Junior High School students been increased, but more importantly the depth of instruction and the empathy of the instructors are indicative of a real boost in quality educational experiences.

As you will recall, we observed students doing silk screening, baking cookies (both males and females), participating in a mechanical drafting exercise, making useful items in the metals shop, doing auto body work, laying brick and concrete block, and learning to do many of the precise tasks embodied in the print shop. I may have left out an area, but may I reiterate, the depth of experience was even more impressive than the wide variety of experiences available.

The pattern of organization which involves a counselor, an instructor (or instructors), as well as college work-study helpers all simultaneously helping as many individuals who needed timely attention or assistance. This team teaching-counseling-helping combination kept every student engrossed. The pre-class preparation by the counselors and post-class discussions of skills learned possible future uses and career goals is a major improvement, especially in the computer science area. With only a minor exception, this teamwork, team-teaching concept was being effectively used to have major impact on student behavior and future plans. Of special mention is the amount of individual assistance available to a poorly coordinated or otherwise disadvantaged student. Even counselors were observed laying brick and making cookies, as well as many other teacher support functions.

The entire program is much more smoothly organized and administered than in the past. The project director is grossly overloaded with administrivia during the program and needs help in supervising certain specific areas of the program. Although it seems ill-advised to single out specific program areas where closer supervision might have enhanced program impact, that risk is worth taking if future improvements could result. There was need for closer administrative control and practical experiences for the youth in printing, metal shop, and perhaps home economics. It is understandably difficult for some instructors to bridge the gap between the shop environment and the ghetto home.

Finally, a slap at administration is in order! Closer monitoring of this program and its impact would surely have led greater commitment and support all the way from HEW to the junior high school principal. There was little evidence of administrative involvement in actual operation. Earlier commitment and support would have permitted twice the enrollment. In addition, industrialists should be brought in to get a glimpse of what can and is being done.

Although some unfavorable comments have been made herein, this is a vastly improved phase of the total project. The entire staff is beginning to get into the swing of meeting the needs of this young audience.

3421

SCHEDULE
FOR
ON SITE EVALUATION TEAM
DECEMBER 15, 1972

Evaluation Team

Dr. Avery Gray
Professor Edgar Fleenor
Dr. Barnett Morris

* *

9:00 a.m. - 9:30 a.m.	SCIPS Building
9:40 a.m. - 10:30 a.m.	Occupational Preparation Program Arsenal Technical High School
10:40 a.m. - 11:30 a.m.	School #29, Madie Goens, Counselor
12:00 noon - 1:00 p.m.	Lunch
1:10 p.m. - 2:00 p.m.	School #4, Betty Crowe, Counselor SCIPS Building, Elementary and Junior High Counselors

* *

Elementary Counselors

Irene Roney, School #32
Carol Woodward, School #33
Ron Volpatti, School #56

Junior High Counselors

Carl Potenza, School #101
Leo Grissom, Schools #41, 42, 75, 87
Eugene Smith, Schools #18, 20, 64, 112

ON SITE

EVALUATION

FORM

December 15, 1972

3423

ON SITE EVALUATION - COMPREHENSIVE VOCATIONAL GUIDANCE PROGRAM

Part I. Elementary Level Program

Avg. Rank	Low 1	2	3	4	High 5		
3.6	1	2	3	4	5	1.	Developing a comprehensive vocational orientation within the framework of the total school program.
4.3	1	2	3	4	5	2.	Provides assistance to teachers which would implement a wide range of occupational awareness.
4.3	1	2	3	4	5	3.	Provides for intensive individual counseling of students to assist them in making realistic choices, decisions and plans.
4.5	1	2	3	4	5	4.	Reaches students not previously provided opportunity to develop occupational awareness.
3.6	1	2	3	4	5	5.	Provides for individual and group conferences with parents.
3.6	1	2	3	4	5	6.	Coordinates pupil referrals from the building unit to other service workers or community agencies.
2.5	1	2	3	4	5	7.	The ratio of counselors to students is reasonable for the project design.
4.0	1	2	3	4	5	8.	Degree of cooperation among counselors, teachers and administrators.
3.6	1	2	3	4	5	9.	Impact of the program on plans being made by students.
4.3	1	2	3	4	5	10.	Impact of the program on behavior of teachers in their orientation to occupational education.
4.5	1	2	3	4	5	11.	The procedures used are realistic in view of the total school program.
5.0	1	2	3	4	5	12.	Special emphasis is afforded students with special needs or handicaps.

Part II. Junior High School Exploratory Program

2.5	1	2	3	4	5	1.	A wide range of exploratory experiences are available.
2.3	1	2	3	4	5	2.	Total students involved are reasonable for the design and objectives of the project.
3.0	1	2	3	4	5	3.	The length and depth of exploration is sufficient to have impact on student behavior.
3.6	1	2	3	4	5	4.	Counseling of individuals is geared to exploratory experiences and is intensive.
1.3	1	2	3	4	5	5.	Work experience is available through cooperative education, job placement or similar programs.
3.0	1	2	3	4	5	6.	Saleable skills are emphasized for potential drop-outs who may be terminating formal education.
3.6	1	2	3	4	5	7.	Students leaving school are provided counseling and assistance in job placement.
4.0	1	2	3	4	5	8.	Degree of cooperation among counselors, teachers and administrators.

Avg. Rank	Low				High		
4.0	1	2	3	4	5	9.	Impact of the program on plans being made by students.
3.6	1	2	3	4	5	10.	Impact of the program on behavior of teachers in their orientation to occupational education.
3.6	1	2	3	4	5	11.	The procedures used are realistic in view of the total school program.

Part III. Placement of Counselors in Industry

4.0	1	2	3	4	5	1.	The impact on counselor enthusiasm concerning occupational education.
4.0	1	2	3	4	5	2.	The identification and increased use of community resources for occupational awareness and exploration.
2.3	1	2	3	4	5	3.	The identification of job entry placement opportunities as well as cooperative work experience sites.
4.3	1	2	3	4	5	4.	Increased emphasis on occupational education as evidenced by counselor behavior.

Part IV. Occupational Preparation Program

4.0	1	2	3	4	5	1.	Number of students involved in relation to potential drop-outs identified.
3.0	1	2	3	4	5	2.	Practicality of occupational education experiences in the Occupational Preparation Program as related to needs of youth enrolled.
2.3	1	2	3	4	5	3.	Adequacy of facilities.
3.0	1	2	3	4	5	4.	Adequacy of equipment and supplies.
3.6	1	2	3	4	5	5.	Program staff understands its clientele, namely the needs of the students in relation to business and industry.
4.3	1	2	3	4	5	6.	The program staff performs smoothly and cooperatively.
2.5	1	2	3	4	5	7.	Cooperation with the main-stream vocational education program and other counselors and regular high school staffs.
2.0	1	2	3	4	5	8.	In-service training, appropriate lead-time planning and evaluation is provided.
4.0	1	2	3	4	5	9.	Extent to which placement, counseling and training result in student success.

Part V. Organization and Administration

1. Support of Administration

3.0	1	2	3	4	5	a. Central School Administration
3.6	1	2	3	4	5	b. Elementary and Junior High School
3.3	1	2	3	4	5	c. High Schools Referring Students

3425

4.0	1 2 3 4 5	2. Leadership of the project director in relating to staff, business, and industry.
4.0	1 2 3 4 5	3. Amount of time available to director in relation to complexity of the project.
3.6	1 2 3 4 5	4. Perceived role of the project in relation to K-12 Comprehensive Vocational Guidance Program objectives.
2.3	1 2 3 4 5	5. Clarity of project guidelines from HEW as related to operational project objectives.
3.0	1 2 3 4 5	6. Availability of program in relation to student needs.
4.3	1 2 3 4 5	7. Impact of program on students enrolled.
3.0	1 2 3 4 5	8. Communication of program development, successes, etc. within the school system or to others.

3426

December 18, 1972

Mr. Raymond Winegard, Project Director
Comprehensive Vocational Guidance Program
Indianapolis Public Schools
901 North Carrollton Avenue
Indianapolis, Indiana 46202

Dear Mr. Winegard:

The function of this letter will be to serve as a narrative description and explanation of both strengths and weaknesses denoted in the on-site evaluation of the total Comprehensive Vocational Guidance Program. For ease of reading, this narrative will be divided into similar categories as seen in the preceding checklist, a guide for increasing evaluator perception of program components.

Part I. Elementary Level Program (K-6)

In general, great strides have been made in the elementary program phase. Several points warrant special mention as major contributors to the general success of the K-6 program. These are: concentrated assistance for students with special needs; marked improvement in attitude of classroom teachers including the occupational relationships existing in most "subject matter" taught; increased use of counselor assistance in developing enrichment exercises (puppet shows, games, sales, simulations, etc.) which introduce career awareness and develop occupational skills; general improvement in career awareness involving parents, principals, teacher aides, community aides, and social workers.

Many weaknesses from last year have been reduced or eliminated; however, one or two areas bear watching and effort for further development. From an overall point of view, the city-wide nature of this program points up that exceptional efforts exist in some schools while development is less than desirable in certain areas, such as: vocational orientation within the total school system (K-1); counselors are grossly overloaded and it might be reasonable to suspect but hard to prove they are reaching a mere 25% of the students in need of career planning help.

In all fairness, referrals are taking place, impact of counseling on student career planning can readily be found, and increased teamwork among instructional, administrative and service personnel is readily in evidence.

Part II. Junior High School Exploratory Program

Since the summer phase of this program has previously been dealt with, this part of the report will concentrate on in-school, winter months, counselor and career guidance efforts. Of the total Comprehensive Vocational Guidance Program, the junior high school phase is the easiest to find fault with. The students are at a crossroads situation where drop-out, higher education, vocational training or other decisions are being made. The need for student assistance is critical; however, the counselor-student ratio is completely out of focus, in general 600 or more students

per counselor is common. In a situation where 80-90% of the inner-city youth need help with career planning, such a counselor shortage is mere tokenism. There is little or no emphasis in most "subject matter" classes on job skills and no opportunity for work experience, except in the summer exploratory program.

On the positive side, huge strides of improvement have been made in teacher-counselor cooperation, field trips to business and industry as well as massive doses of academic class enrichment with career information and the world of work philosophy. The counselors deserve a real plus for modification of teacher-administrator attitudes and behavior toward the career oriented student. Special emphasis is afforded students with special needs, and the academically disenchanted students are receiving more and more assistance.

Part III. Placement of Counselors in Industry

Although the impact of this phase is extremely difficult to statistically prove, major changes in counselor behavior can be observed. The counselors are enthusiastic about the non-academic career, they reflect a more positive accepting attitude toward students whose career goal is immediate employment, and they draw on local business and industry for enrichment experiences, job information and contacts for job hunting students. As a larger percentage of the counselors get involved, statistical measurements may become more realistic reflections of the total impact.

Part IV. Occupational Preparation Program

With the exception of the exterior of the building being used, the special program for potential high school drop-outs is barely recognizable from last year. Visitors are met in a reception area, a sales display of products manufactured is just to one side, the student receptionist knows her job, makes visitors welcome, points out sales items and arranges for a guide to tour the "factory and office."

The greatest strides have been made in the basic communication (business) skills and office management area. A dedicated new instructor rotates the office staff from job to job at their pace and provides positive but firm control. Inventory and sales are handled by students, sales slips and inventory control procedures are built in. In addition, a new program director gives positive, firm leadership but needs sufficient time to seek support (from business and industry) for additional program areas to meet interests and needs of students. The director does conduct regular in-service problem-solving sessions for staff and their behavior is much more positive. Enrollment is up from last year, one new area of enterprise has been added, more are needed desperately. The students seem to be handled with greater empathy than last year and counseling seems to be more systematic and regular.

On the negative side, students still attend this program but cut all other academic courses. Movement back into the mainstream academic courses is not very successful. Job placement records are poor, reflecting the lack of involvement of business and industry. Items manufactures are not real-life products and equipment used isn't either (the office comes

the closest). Getting a real contract (sub-contract) with several Indianapolis industries and creating an advisory council of businessmen would raise the level of training, increase placement, make tasks performed more relevant and allow free flow of students into the mainstream or the world of work.

There is a critical need to expand the number and types of job skills to be learned, keeping those relevant to real jobs and real job opportunity. The greenhouse and the campus should be used as a starter.

Part V. Organization and Administration

On the positive side, administrators in general are much more supportive than a year ago. Principals are encouraging cooperation, in fact, are willing to fight to keep counselors and support the other phases to a greater degree. Mr. Winegard is becoming more adept at using the carrot and pushing with a string.

However, operation of the total program is difficult since changes in personnel in HEW have caused some confusion. The need is still much greater than the program, although major improvements in reaching more students have been made. The overall K-12 concept still needs to be documented visually in order that administrators, businessmen, parents, and students can better understand what giant steps are being taken.

The major improvements made in the second year of operation are merely indicative of what can be done if time permits.

Sincerely yours,

/s/ Avery Gray

3429

February 26, 1973

Mr. Raymond Winegard
Indianapolis Public Schools
SCIPS Building, Room 206
901 N. Carrollton
Indianapolis, Indiana 46202

Dear Mr. Winegard:

On July 5, 1972, I was a member of the on-site inspection team for the Summer Exploratory Program at Technical High School, Indianapolis, under the Model Cities Program. What follows are some comments on my visit.

It was my understanding that Junior High School students volunteered to attend this program and participated in six out of nine vocational areas. The program included one week of experience in each of six selected areas. The nine areas were: Commercial Art, Home Economics, Business Education, Drafting, Electrical Trades, Building Trades, Auto Trades, Metal Trades, and Graphic Arts. I further understand that either mornings or afternoons were devoted to visiting plants and companies where the skills practiced in the Summer Program were the bases for productive employment and where an "open" questioning session concerning pay rates, training, and other concerns took place.

On the whole, the attitudes of both instructors and students that I observed as I moved from area to area were fairly good. Interest in some areas, and the student-teacher interaction, seemed greater in some areas than others. An area of very high interest was drafting where the instructor was describing how counties, lots, and streets had been divided up in Indiana. Another high interest area was commercial art where the students were silk-screening emblems on sweatshirts.

I wish in particular to report my interviews with a few men students who were baking cookies in the home economics area. I asked if they did not see baking as "women's work" and was simply informed that it "was good to know how to cook and bake." One of the fellows told me about trying to earn a Boy Scout badge for cooking.

Similarly I interviewed two young ladies in the brick and mortar area who were attempting to lay a straight course of bricks. Again, I was told that while they doubted that this would be the way they would earn a livelihood, it was simply a "good thing to know about."

On the other hand, I was not favorably impressed with the aloof approach of the instructor nor the "sitting around and waiting" in two areas. In graphic arts the instructor seemed to be demonstrating things (printing) while the students looked on. In this area some additional "hands-on" projects need to be devised. Similarly in the metal trades area, where bowls were being hammered out on an automatic hammer, the students had to sit for quite awhile to await their turn at the machine. In this case I would suggest either a different or an augmented project which would involve some hand work which could be performed while waiting to use the machine.

On the whole, I cannot help but feel that this Summer Project is a giant step in the right direction. Some 600 students from all over the city voluntarily participated. Attendance during the six-week session was above average. The success of the program, it seems to me, depends on better projects and stimulating instructors. Commendations are due to those responsible for planning this program and to its present instructors. I cannot help but feel that this program can produce vocational orientation attitudes which in turn can produce skilled gainfully employed technicians whose roots in most instances are in the inner city.

Sincerely,

/s/ B. B. Morris, Ph.D.
Professor
Psychology Department

BBM:ad

2431

February 26, 1973

Mr. Raymond Winegard
Indianapolis Public Schools
SCIPS Building, Room 206
901 N. Carrollton
Indianapolis, Indiana 46202

Dear Mr. Winegard:

On December 15, 1972, I was a member of the on-site inspection team for the Comprehensive Vocational Guidance Program for Model Cities. The following comments present my impressions of the program.

We began by visiting the Occupational Preparation Program at Arsenal Technical High School. About 140 students a year spend half days acquiring occupational skills in wood or metal shop, or in engraving or blueprinting, or in office work such as processing identification badges and accounting.

My impression is that this program is somewhere in the middle of its development. Its public relations aspect, the display and sales of products is a giant step in the right direction. Occupational films and booklets are available and used. Space needs to be provided for the small motors repair shop.

We have the feeling that students who would "drop-out" are being taught salable skills. Attendance and interest appeared to be at a high level and continuous throughout the semester. Personal counseling for those students who request it, is a must. This aspect of the program appears to be well handled.

A major index of success in these programs would involve knowing how many of these students find jobs and become gainfully employed members of society. There is a great need at this time for cooperative programs with business, industry, and government to aid in this final step.

School #29, kindergarten through the sixth grade, would appear to be a model school for an enlightened vocational program for the inner city. The finest degree of support from principal on down through the counselor and social worker, to the teachers and the parents is in evidence. In a high area of "broken homes," and where fighting is a way of life, personal and vocational counseling intermix. The cooperative relationship between the counselor and the social worker is excellent and probably provides both these ladies with support at very frustrating moments.

The program here is aimed at "founding" early useful occupational interests and attitudes. This is accomplished, in addition to films and classroom presentations, through visits to industrial plants where the children see what various jobs are and ask questions concerning pay rates and training. For the personal problems side, teachers have been "sensitized" to become aware of student problems and to refer them to the counselor or social worker. In addition, community involvement is present and an evening adult program has been operating at the school at the request of parents.

All concerned with School #29 are to be highly commended and exhorted to carry-on. There is little time between public school and the age when these students become job seekers.

On the other hand, School #4, elementary through junior high school in the inner city remains a school where there is lip service only in regard to occupational training. Support for a vocational program is at a minimum and this minimum attitude rubs off on the teachers. Of approximately 733 students, 128 see a counselor at the rate of 6 to 8 students a week. The counselor is scheduled to be at this school a shameful one day a week. Students' problems here are vocational mixed with personal adolescent problems. A major goal of an enlightened program should aim at keeping these students in school until they develop marketable skills. Other than the one day a week counselor visit, some vocationally oriented "guest speakers" occasionally address classes.

The situation here is so bad that the part-time counselor does not even have an office where conferences can take place and vocational materials stored. Changes at this school are long overdue since the lip service attitude is frustrating and crippling a highly competent counselor and many junior high level teachers who understand the situation and are trying to help the problem student.

What then can be said for the Comprehensive Vocational Guidance Program as a whole? The exploratory nature of the first year program has been widely expanded in the second year although somewhat unevenly. The program did not remain at the administrative level but was translated to reach the students in the grades involved. Top administration has created a core of dedicated counselors, social workers, and "aware" teachers. We have the distinct feeling that major giant steps have been taken to break the inner city poverty cycle. Continuation of this program making continued improvements possible is a necessity. I can only urge that the highest priorities be assigned to nurturing and supporting this program in the years ahead.

Sincerely,

B. B. Morris, Ph.D.
Professor
Psychology Department

BBM:ad

February 23, 1973

Mr. Raymond Winegard, Project Director
Comprehensive Vocational Guidance Program
Indianapolis Public Schools
SKIPS Bldg., Room 206
901 N. Carrollton Ave.
Indianapolis, Indiana 46202

Dear Mr. Winegard:

This correspondence regards my observations as a third-party independent evaluation team member who participated in the on-site inspection of the Summer Program of Vocational Exposure on July 5, 1972.

This program appears to be unique in several respects. The selection of its subject area offerings, the availability just prior to entry into high school, its voluntary participation, and the intensified exposure combines to serve as the means for noticeable increases in the numbers of students electing to take vocational courses in high school. A follow-up of those who attended the first year summer program after they had entered their freshman year of high school showed that approximately 80% had taken at least one or more vocational courses.

The "hands on approach" fostered by the program to 7th graders subjected them to exposure in six out of nine potential vocational areas, any one of which could soon become their chosen high school major.

The Commercial Arts offering, supervised by Mr. Brown and two able assistants (two education majors - one from Purdue University and one from Indiana State University), were silkscreening white T-shirts with appealing designs. The program participants, when asked to explain the silk-screening process, quickly responded with a correct and detailed account of the process. Upon being asked how they liked the summer program, the responses were very favorable.

Mrs. Smedley and Mrs. Hill in Home Economics were supervising a class of young men baking cookies. One boy, when asked if he felt out of place, responded, "No, I am considering commercial foods as a possible career." All appeared to be deeply engrossed in the baking process and some had already completed a pan of tasty cookies.

Ms. V. A. Johnson and Ms. Rosemary Murphy were conducting a session in Business Education. Less enthusiasm was displayed by students in this area than in the former two noted. Perhaps a variation of instructional method would improve this offering.

John Williams had his drafting class involved in township sectioning, county specifications, and how land was surveyed. Active participation by students was maximized. This offering could have served more students. Less than ten were involved. Mr. Gary Tomey, instructor in drafting, had a small group also.

Other offerings included Electrical Trades, Building Trades, Auto Trades, Metal Trades and Graphic Arts. Exposure to these areas appeared to be adequate. The exact program impact in these areas will be measured by enrollments in the vocational curriculum during the 1972-73 school year.

The effectiveness of the summer exposure program should increase each year as the participants move into high school. Two characteristics have been noted regarding this second year offering. Younger brothers and sisters of first year participants elected to take the program. A few of the 1st year participants enrolled again the second year and took the areas of instruction missed the first year.

I would like to close by commending you on a most unique and valuable program offering. Continual emphasis should be placed upon career guidance, exploration, and assistance in helping youth elect a meaningful and rewarding high school curriculum - the means leading to a wholesome career.

Program improvement efforts should center around staff upgrading, updating instructional materials, and program expansion to include more instructional areas as well as serve greater numbers of students.

Sincerely,

/s/ Edgar Fleenor
Associate Professor of
Industrial Education and
Teacher Educator

EF/lc

February 27, 1973

Mr. Raymond Winegard, Project Director
Comprehensive Vocational Guidance Program
Indianapolis Public Schools
SKIPS Bldg., Room 206
901 N. Carrollton
Indianapolis, In 46202

Dear Mr. Winegard:

I would like to use this means to present my observations and thoughts regarding the third-party independent evaluation team on-site inspection of December 15, 1972.

We could not help but notice the zest and personal enthusiasm demonstrated by first year program personnel being continued throughout this second year of operation. The additional counselor prepared curriculum materials, plus the added commercial materials are contributing vitally to a noted program improvement. The administrative support to increase the student involvement through allocating more time and additional school personnel at the Junior High School level enhances career preparation awareness to all students prior to their choosing a high school curriculum. This "ounce of prevention" is vital; strategically placed; and should be a common element in all Junior High School programs operated as a part of every public school system.

The Business Education offering in the Occupational Preparation Program is much improved over last year's offering. Mrs. Oldham is commendably organized. She maintains a very pleasant atmosphere; the bulletin boards convey pertinent career opportunity information; the students are all functioning in an office like manner; and the useful project of processing Identification Cards for all students at Arsenal Technical High School conveys an acceptance of responsibility by program participants who rejected responsibility while in the regular school program. It should also be noted that the new electric and manual office equipment provides a very enriching appearance to the program. The use of tape recorders, films and multiple reference materials adapted to the program participants level improves the 2nd year curricular content.

The Counseling services for the second year Occupational Preparation Program appeared to be much improved over the first year. This area was attractively decorated for the holiday season and did provide a wholesome environment for appropriate counseling to be provided. Mr. Kocher was well organized and should be encouraged to expand services as career and personal needs demand.

The woodworking, metalworking, and drafting areas appear to be functioning adequately under the supervision of Mr. Stewart and Mr. McCarty. The projects showed craftsmanship beginning to be formed by program participants. Safety regulations were being practiced and proper utilization of materials were observed. Students were able to explain the processes

required in completing such projects as spice racks, jewelry boxes, desk bookshelves, and Trammel markers. More space is needed for these three areas.

The small engine repair offering needs more laboratory space, additional teaching aids, and hand tools. Although this program shows promise, little is expected to be accomplished until more space is provided.

The elementary school program at School 29 appeared to be functioning as usual when the team arrived. This inner-city school is located in an area where neighborhood turnover is very high. This causes a constant change in student body. A team approach, consisting of Mrs. Goens, the counselor; Mrs. Edelen, social worker, teachers and the principal all appeared to be unified toward approaching the needs of students. They took the "whole student" and coordinated their efforts toward working out multiple types of problems simultaneously. Emphasis was centered around self-awareness and character education. Field trips, films, conferences, and guest speakers included some of their approaches in conveying a realistic view of what students should begin to expect and focus their attention toward. Adequate facilities were shared by the counselor and the social worker. Adult evening courses were also provided for neighborhood personnel. Emphases were focused upon meeting the needs of the neighborhood children and I believe the school had set and was achieving their realistic objectives.

The elementary program at School Number Four needs to provide the counselor with administrative support, an adequate desk and essential facilities to establish and maintain needed rapport between the counseling services, the teachers and the students. Although the counselor appeared to be very competent, she cannot maintain a quality service offering without adequate facilities and administrative support far beyond that now provided.

Although the second year or program operation in general showed many positive rewards, there are suggested improvements which I feel compelled to share with you.

1. The Occupational Preparation Program instructors could profit by participating in the summer counselor program.
2. An addition of in-service education programs for counselors and for teachers beyond that now provided should be implemented. This could serve a dual purpose, namely, public relations with the city and professional improvement for the staff.
3. The facility for the Occupational Preparation Program needs to be expanded in all areas. The present allocation of space is inadequate and limits program quality and expansion. The implementation of facility expansion should occur according to the following listed program priority: (1) Small Engine Repair, (2) Metal Working, (3) Electrical, (4) Drafting, (5) Counseling Services, and (6) Business and Office Practice.
4. Permanent facilities and equipment needs to be made available for counseling services at School Number 4. Consideration of combining counseling and social service facilities should be encouraged. The administration needs to provide genuine support to this program.

For the short period of time this program has been in operation, remarkable progress has been made. It holds the potential of more adequately meeting the needs of inner city youth than any of the other projects currently operating within any of the several states. I commend those involved in the program and sincerely trust it will be refunded for a third year of operation.

Sincerely,

/s/ Edgar Fleenor
Associate Professor of
Industrial Education and
Teacher Educator

EF/lc

3438

Summer Counselor Placement in Industry

The Summer Counselor Placement in Industry Program provides each counselor with first-hand experiences which he can positively relate back to his counselees. He is now more adequately equipped to realistically convey the true needs of industry and he can better match the educational needs of each student to his/her most suited career pattern. Lip service by counselors fails to establish positive rapport and confidence attainment within the counselees.

This acquisition of first-hand vocational experiences strengthens ones counseling effectiveness and association to counselees in helping them meet their social, economic, and vocational needs. The industrial experience has made a profound impact upon how the counselors relate and function in performing their counseling duties. No one should underestimate the values contained within this program offering.

3439

Summer Vocational Exploratory Program for 7th and 8th Grade Students

The Summer Vocational Exploratory Program serves as the vital link coupling the junior high school to the secondary school. The program was located at Arsenal Technical High School, since most program participants would soon be enrolling there in one of the many programs. The nine exploratory areas included the building trades, commercial arts, electrical trades, metal trades, auto trades, drafting, graphic arts, business education, and home economics. Each participant chose six areas to explore. Each of these areas provided the students with additional guidance dimensions essential to helping them plan the most meaningful high school program.

Each summer school program participant was assigned to a counselor who would rotate with the student throughout the six vocational subject areas. Each counselor had approximately twenty students assigned to him. Close communication was maintained between the participant, the instructor, and the counselor.

Biographical data on subjects who both participated in the 1971-72 Comprehensive Vocational Guidance Program for Model Cities and those students who did not were collected by the evaluation team and data noted in the first year or operation report. These subjects (N=50) were divided into two equal groups representing both those who participated in the program and those who did not participate. There were no significant differences found between these groups at the .05 level.

Sample data was collected on the 1972 summer school group (N=224) to compare with data collected on the 1971 non program participants (now the control group). Data gathered was grouped according to the subjects personal characteristics, home and community life, occupational and career outlook, academic and extra curricular progress in school, work and economic remuneration, fathers education and work, and mothers education and work.

Table A conveys this comparative data. Three personal characteristics should be noted regarding this year's participants: (a) they were younger; (b) they represented approximately 60% men and 40% women; and (c) they were members of families larger than those reported in the control group.

3440

Table A
Biographical Information - Instrument A

Item	Criteria	N=25 Control Group	N=224 1972 Summer Participants	Sig. Diff. at .05 or .01 level Analysis
1. Sex	Male	60%	56%	No sig. diff.
2. Age	12	0%	28%	No sig. diff.
	13	0%	62%	
	14	64%	09%	
	15	36%	01%	
3. Course of study you plan to follow	Academic	56%	34%	No sig. diff.
	Vocational	0%	26%	
	General	40%	28%	
	Other	04%	06%	
	No Response	0%	06%	
4. Length of time lived in this community	Less than 7 mo.	0%	04%	No sig. diff.
	More than 7 mo. but less than 2 years	0%	06%	
	More than 2 yrs. but less than 5 years	24%	19%	
	More than 5 years	76%	70%	
	No response	0%	01%	
5. Live with	Natural Parents	68%	54%	No sig. diff.
	Father only	04%	04%	
	Mother only	28%	24%	
	Mother & Stepfather	0%	10%	
	Father & Stepmother	0%	01%	
	Grandparents	0%	03%	
	Relatives	0%	02%	
	Foster Parents	0%	02%	
6. Marital status of natural parents	Presently married	68%	57%	No sig. diff.
	Presently divorced or separated	24%	25%	
	Deceased	0%	07%	
	Unknown	08%	05%	
	No response	0%	06%	

Item	Criteria	N=25 Control Group	N=224 1972 Summer Participants	Sig. Diff. at .05 or .01 level Analysis
7. Plans one year after school	Attend a 4 year college	80%	52%	
	Attend a 2 year college	12%	12%	No sig. diff.
	Attend a vocational school	0%	08%	
	Work full-time	08%	15%	
	Armed Services	0%	07%	
	Married and not employed outside the home	0%	02%	
	Other	0%	04%	
8. Number of brothers and sisters	None	08%	03%	
	One	12%	13%	
	Two	32%	19%	
	Three	04%	18%	Sig. at .05
	Four	20%	17%	
	Five	16%	11%	
	Six	04%	05%	
	Seven	0%	04%	
	Eight or more	04%	0%	
9. Number of times repeating a grade	None	96%	86%	
	Once	04%	12%	No sig. diff.
	Twice	0%	01%	
	No Response	0%	01%	
10. Home type and ownership	Townhouse	0%	05%	
	Apartment	12%	11%	
	Multiple Family	12%	07%	No sig. diff.
	Single Family Rented	12%	09%	
	Single Family Owned	60%	65%	
	Unknown	0%	0%	
	No Response	04%	03%	
11. Your number of school sponsored clubs and organization affiliation	None	44%	33%	
	One	32%	24%	
	Two	20%	16%	Sig. .05
	Three or more	04%	24%	
	No Response	0%	03%	
12. Number of leadership positions	None	64%	50%	
	One	20%	23%	Sig. .05
	Two	16%	10%	
	Three or more	0%	13%	
	No Response	0%	04%	

Item	Criteria	N=25 Control Group	N=224 1972 Summer Participants	Sig. Diff. at .05 or .01 level Analysis
13. Hours per week worked outside the home	None	80%	50%	Sig. at .05
	One to four	04%	09%	
	Five to Eight	08%	27%	
	Thirteen to sixteen	0%	07%	
	Seventeen to twenty	04%	01%	
	Over twenty	0%	01%	
	No Response	0%	02%	
14. Tasks at home	Yes	100%	90%	No sig. diff.
	No	0%	07%	
	No Response	0%	03%	
15. Number of hours task required at home	Not Required	0%	08%	No sig. diff.
	1 to 2 hours	0%	41%	
	3 to 4 hours	24%	23%	
	5 to 6 hours	24%	11%	
	7 to 8 hours	24%	07%	
	9 to 10 hours	12%	03%	
	More than 10 hours	0%	04%	
	No response	0%	03%	
16. Pay for tasks performed at home	Yes	60%	50%	No sig. diff.
	No	40%	38%	
	No Response	0%	12%	
17. Allowance from parent or guardian	Yes	56%	70%	No sig. diff.
	No	44%	23%	
	No Response	0%	07%	
18. Father's type of work	I don't know	12%	22%	Sig. at .05
	Office	24%	13%	
	Farm	0%	01%	
	Factory	40%	19%	
	Store	0%	04%	
	Construction	08%	08%	
	Sales	0%	02%	
	Other	0%	31%	

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Item	Criteria	N=25 Control Group	N=224 1972 Summer Participants	Sig. Diff. at .05 or .01 level Analysis
19. Father's education	Do not know	12%	47%	
	Completed Adv. degree	20%	05%	Sig. at .01
	Completed 4 yr. college	04%	12%	
	Attended 1 to 3 yrs. of college or business school	04%	07%	
	Completed high school	28%	21%	
	Attended 10 to 11 yrs. of school	16%	05%	Sig. at .05
	Attended 7 to 9 yrs. of school	04%	02%	
	Attended 6 or less yrs. of school	0%	01%	
20. Mother's work outside home	Yes	72%	59%	
	No	28%	36%	No sig. diff.
	No Response	0%	05%	
21. Mother's type of work	Do not know	40%	15%	Sig. at .05
	Office	20%	18%	
	Factory	16%	06%	
	Store	0%	04%	
	Other	24%	57%	
22. Mother's Education	Do not know	04%	37%	Sig. .01
	Completed adv. degree	08%	04%	
	Completed 4 yr. college	08%	10%	
	Attended 1 to 3 yrs. of college or business school	04%	08%	
	Completed high school	48%	29%	
	Attended 10 to 11 yrs. of school	16%	05%	Sig. .05
	Attended 7 to 9 yrs. of school	08%	36%	
	Attended 6 or less yrs.	0%	01%	

Items number 2, 3, and 9 indicates that balance of personal characteristics were maintained between the control group and the second year summer program participants. This year's participants were younger and came from larger families than students in the control group. Over 70% of the participants have lived in Indianapolis more than five years according to statement 5. Approximately 60% of them live with their natural parents in a single family dwelling owned by their parents (statements 6, 7, and 11).

When students were asked what curriculum they planned to pursue in high school, a 26% increase in this year's program participants over the control group said they were going to elect a vocational program (item 4). A percentage decrease was noted in the academic, general and other curriculums. Item 8 conveyed an increase in the number who plan to attend a vocational school. Approximately 30% less plan to attend a four year college when compared to the control group.

Approximately 90% indicated that they had never had to repeat a grade in school. The summer school participants were more socially invlined than the control group. They also participated in more school sponsored activities. This may be a result from school pressure directed toward more social development for this grade level (items 10, 12, and 13).

A 20% increase in the number of hours worked outside the home were noted when the participants were compared to the control group. A significant increase to the category of 5 to 8 hours is noted in item 14. These participants also were required to do less work at home than the control group. Approximately 50% to 60% do receive pay for work performed at home (items 16 and 17). An increase from 56% to 70% of the participants receive an allowance for work done at home (item 18).

Fewer fathers of the summer program participants have completed advanced degrees when compared to the fathers of the control group, however, more of the group have completed 4 years of college or business school (item 21). This apparently accounts for the summer participants fathers being more diverse in occupations. Approximately half as many (percentage wise) of these men work in factories and offices as fathers of control group participants (item 20).

Fewer of the summer school participants mothers completed high school than the mothers of the control group. They show an increase in the others category and those working in factories. Evidence points to a tighter work force, thus more part-time and odd jobs (items 25 and 26).

An attitude scale on occupational and career counseling was also administered to the summer school participants. The results appear in Table B. This analysis is evidence for the value and impact this program has maintained.

In terms of chance alone, we would expect 50% of the group to answer a question yes and the remaining to answer no. The greater the split away from 50-50; say, for example 70-30, the more confidence we can have that the group really felt the way they indicated on this instrument.

Table B
7th-8th Grade Vocational Exploratory Program
Summer School

N = 200

	Yes	No	No Response	Sig. Diff. at .05 or .10 level Analysis
1. Were shop areas interesting?	85%	13%	2%	Sig. .01

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	Yes	No	No Response	Sig. Diff. at .05 or .10 level Analysis
2. Did you find the areas you were in helpful?	91%	08%	1%	Sig. .01
3. Did you enjoy the summer program?	96%	03%	1%	Sig. .01
4. With what you know now, if you had it to do over, would you sign up for summer school?	80%	19%	1%	Sig. .01
5. Would you recommend this program for 7th graders next year?	93%	06%	1%	Sig. .01
6. When you make your high school program out next year, will you take some vocational classes?	78%	19%	3%	Sig. .01
7. Were the guidance classes helpful and interesting?	79%	20%	1%	Sig. .01
8. Did you enjoy the field trips?	86%	10%	4%	Sig. .01
9. Were the field trips interesting and helpful?	78%	12%	10%	Sig. .01
10. Were the guidance classes too long?	48%	48%	4%	No sig. diff.
11. Were the guidance classes too short?	14%	84%	2%	Sig. .01
12. Were the vocational classes too long?	18%	80%	2%	Sig. .01
13. Were the vocational classes too short?	41%	57%	2%	Sig. .05
14. Did you enjoy working on the various projects?	94%	05%	1%	Sig. .01

Other than the biographical questionnaire, three additional attitude scales were filled out by samples of respondents. These three instruments are entitled: (1) a Motivation Scale, 24 items, (2) an Attitude Scale on Occupational and Career Counseling, 10 items, and (3) A Student Opinion Poll of some 49 items.

As with most attitude scales, a great deal of sensitivity to the prevailing "climate of ideas and opinions" exists. Had we compared the previously gathered forms with those gathered for this study, our results would reflect changes in the general political and social atmosphere and present a very complicated picture to attempt to interpret. Instead we present here the present responses of a group of students who have been counseled for the first year in the expanded program. We compare their responses with the present responses of a group of students who have been counseled for two years. That is to say that they were in our study as members of the counseled group (but not the whole group) as presented in our last report.

While this design procedure controls for atmosphere political and social attitude changes over the time between filling out the instruments, it makes it more difficult to obtain many of what are termed "statistically significant results." The statistical technique for establishing the degree of non-chance repeatability of these results was chi-square. Actually we are requiring a great deal of sensitivity in this study in that we are asking: what significant changes have occurred in attitude between a one year counseled group and a two year counseled group? We will be interpreting many trends in the data.

TABLE 1
MOTIVATIONAL SCALE - INSTRUMENT B

Item	Modified Statement	Counseled One Year Yes	Counseled One Year No	Counseled Two Years Yes	Counseled Two Years No	Sig. Diff. at .05 or .10 level Analysis
1.	Take action when others are mad.	55%	45%	64%	36%	Not sig.
2.	Success is hard work, not luck.	82%	18%	91%	09%	Not sig.
3.	We have little choice in picking new friends.	18%	82%	09%	91%	Not sig.
4.	Good things happen by luck.	09%	91%	00%	100%	Not sig.
5.	Can't do much when friend is mad.	45%	55%	18%	82%	Not sig.
6.	Trouble in explaining ideas.	27%	73%	36%	64%	Not sig.

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Item	Modified Statement	Counseled One Year Yes	Counseled One Year No	Counseled Two Years Yes	Counseled Two Years No	Sig. Diff. at .05 or .10 level Analysis
7.	Can children have their way sometimes.	55%	45%	91%	09%	.05
8.	It helps you plan for the future.	100%	0%	100%	0%	Not sig.
9.	Others become mean because of you.	64%	36%	73%	27%	Not sig.
10.	Take action for self protection.	100%	0%	100%	0%	Not sig.
11.	Cause friendship with others who don't want it.	73%	27%	91%	09%	Not sig.
12.	Arguments are sometimes your fault.	100%	0%	100%	0%	Not sig.
13.	Other people never do what you want.	45%	55%	45%	55%	Not sig.
14.	Have influence on where you will live.	64%	36%	82%	18%	Not sig.
15.	Able to get other children to like you.	91%	09%	91%	09%	Not sig.
16.	Hard to get others to do things for you.	27%	73%	27%	73%	Not sig.
17.	You have no choice in what your adult life will be.	09%	91%	09%	91%	Not sig.
18.	Nothing I can do about tomorrow.	36%	64%	36%	64%	Not sig.
19.	Your age cannot change world events.	73%	27%	73%	27%	Not sig.
20.	Get others to play your games.	73%	27%	82%	18%	Not Sig.
21.	Don't have a chance to make up own mind.	18%	82%	27%	73%	Not sig.

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Item	Modified Statement	Counseled One Year Yes	Counseled One Year No	Counseled Two Years Yes	Counseled Two Years No	Sig. Diff. at .05 or .10 level Analysis
22.	Do others dominate you?	09%	91%	09%	91%	Not sig.
23.	Can you stop others doing things you don't like.	55%	45%	55%	45%	Not sig.
24.	Influence others with your ideas.	91%	09%	91%	09%	Not sig.

Instrument B is the 24 item Motivational Scale. Its items and the Yes, No percentage endorsement for the 1 and 2 year counseled groups is presented in Table 2. We shall focus on certain groupings of these items to interpret change in motivational attitude if any.

Questions #2 and #4 concern "luck" versus work. The questions are: "When nice things happen to you, is it only good luck?" While there is no significant difference between the two groups, some 95% of both groups say "no" to this question. To question #2, "Do you feel that success is a matter of hard work rather than luck?" again 85% of both groups said "yes" - hard work rather than luck. Essentially these students have not given up.

Items #6, #7, #21 and #24 generally concern feelings about one's ideas. Item #6, "Does it seem like the other kids never understand your ideas and that the ideas are impossible to explain to them?" is rejected by about 70% of both groups. To item #7, "Can a child your age ever have his own way?", the 2 year counseled group say "yes" by an increase of 36% over the 1 year counseled group. In the earlier report only about 60% of both groups said "yes." Perhaps increased "mastery" comes with growth and maturity.

In line with this growth is the high endorsement of item #24, "Can you get others to use your ideas?" Some 91% of both groups said "yes." In the previous year, this percentage was lower (77%). Item #21, sort of summarizes the area of ideas by asking, "Do you feel that you don't have a chance to make up your own mind?" Almost 80% of both groups reject this statement. In general there appears to be a positive view of one's ideas and being able to get them across.

Items #1, #5, #9, #10 and #12 deal with anger and arguments. Item #1 asks, "Can you usually do something when someone gets mad at you?" Both groups split about 50-50 (yes, no) in their response. Item #5 uphrases the question as: "Do you usually feel that there is not much you can do about it when your friend gets mad at you?" The 2 year counseled group

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endorses this item more than the 1 year counseled group. This suggests a somewhat more realistic acceptance of mature life patterns.

On the other hand, all respondents feel that they can do something if another child were going to him them (item #10). Furthermore, all are willing to assume some "fault" for getting into arguments. Item #9 asks: "When people are mean to you, could it be because you did something to make them mean?" About 70% in both groups say "yes."

Questions #15, #3 and #11 deal with friends. In response to item #15, "Can you usually get the kids to like you?" 91% of each group said "yes." To item #3, "Do you feel that you have little choice in who will become your friends?" 85% of both groups said "no," they did have some choice. Also, in regard to item #11, "Can you ever try to be friends with others even if they don't want to be freinds?" some 72% of the 1 year counseled group and 90% of the 2 year counseled group replied that they would try. The tendency to be outgoing in seeking friends seems strong.

Six of the questions #20, #16, #13, #23, #22 and #14 deal with the complex reciprocal social control area. Item #20 asks, "Can you usually get others to play the game that you want them to?" Most of the respondents (80%) said "yes." Similarly to item #16, "Even if you ask them, is it hard to get people to do things for you?" some 73% in both groups say "no." So these students can manipulate others some. However, item #13, "Does it seem like other people will never do the things you want them to?" is only endorsed "yes" by some 45% of both groups. So, while others can be manipulated usually, there is only a 50-50 chance on the outcome being as desired. Item #23, "Can you usually make others stop if they're doing something you don't like?" further reflects this 50-50 split outcomes.

What then about our students' feelings of control and influence? To item #22, "Do others usually make you do what they want to do?" 91% of both groups say "no." Despite our students influencing others, they do not themselves feel influenced. To item #14, "Can kids your age ever have anything to say about where they are going to live?" the 2 year counseled group 32% answered "yes" while only 64% of the 1 year group did so.

Over these 6 items, it would appear that these respondents are learning more sophisticated ways of influencing others. Hence they report they have little trouble manipulating others. On the other hand, as a group, they have not learned they too are manipulatable. The sense of self is strong and we suspect that this pattern of answers would also hold for most adults.

The remaining items, #18, #19 and #8 and #17 deal with the individual's future outlook. Question #18 asks, "Do you feel that no matter what happens tomorrow, there's nothing you can do about it?" Some 64% in both groups disagree with this statement and say they can do something about it. Similarly to item #19, "Youth your age can never change things that are happening in the world, can they?" 73% in both groups say "yes" with regard to item #8, 100% in both groups report that it "helps... to think about what you will be when you grow up." Finally, with regard to item #17, "Do you believe a child has no choice about what he's going to be when he grows up?" 91% in both groups indicate some control over their future through choice.

In summary, these junior high school students (12-15 years of age) feel that success depends on work and effort rather than luck. They have little trouble getting their ideas across and accepted. They are willing to accept fault for some arguments and feel there is not much they can do when others get angry at them. They evidently need friends and attempt to make friends. The area of social control and influence contains mixed attitudes There is evidence for the increasing use of more sophisticated ways of influencing others. However, there is also the feeling that the individual himslef is free and not manipulated. In terms of future outlook, these students feel they can modify the world and that they have some control over their individual futures.

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TABLE 2

AN ATTITUDE SCALE ON OCCUPATIONAL AND CAREER COUNSELING - INSTRUMENT C

Item	Modified Statement	Counseled One Year Yes	Counseled One Year No	Counseled Two Years Yes	Counseled Two Years No	Analysis Sig. Diff. at 105 or .10 level Sig.
1.	Occupational information should be provided.	73%	27%	91%	09%	Not sig.
2.	Others have provided me with occupational information.	73%	27%	100%	0%	Not sig.
3.	Plan to pursue a vocational course.	82%	18%	64%	36%	Not sig.
4.	Desire occupational information from school.	73%	27%	100%	0%	Not sig.
5.	Look forward to their career.	73%	27%	91%	09%	Not sig.
6.	Suggest others also be counseled.	73%	27%	100%	0%	Not sig.
7.	Has already selected a future job.	73%	27%	64%	36%	Not sig.
8.	Has received information from counselor.	82%	18%	91%	09%	Not sig.
9.	Occupational information is important.	73%	27%	91%	09%	Not sig.
10.	Desires more occupational information.	73%	27%	100%	0%	Not sig.

This instrument is a short 10 item one. As with the previously presented Motivational Scale - Instrument B, we continue to look for differences between a 1 year and a 2 year counseled group. In this case the focus is specifically directed at the students feelings concerning occupational and career counseling and where he stands in regard to his choice of occupation. The date for both these groups as well as an abbreviated modified version of each question is presented in Table 2. As in the previous presentation, we will group items in an attempt to offer some interpretation of the findings.

Items #1, #4, and #9 deal with the importance of providing occupational information. To the 2 choice question, "Occupational information (should) (should not) be provided by the school counselor" 73% and 91% of the 1 and 2 year counseled group choose "should." Item #4 asks whether occupational information should or should not be provided by a school counselor. This time, 73% of the 1 year counseled group and 100% of the 2 year counseled group

say that it should be provided. Again on this topic, question #9 states, "I think occupational information (is)(is not) very important for students who receive it." The 1 and 2 year counseled groups say it is important (73% and 91%).

Now that occupational counseling is seen as a "need," have the students availed themselves of it? Items #8, #6 and #10 present some insights into this topic. In response to item #8, 82% of the 1 year counseled group and 91% of the 2 year counseled group say that they have received job information from their counselor. Question #6 reads, "I (advise)(do not advise) other students to check with their counselor for occupational information" Of the 1 year counseled group 73% advise this course, while 100% of the 2 year counseled group do. Finally, item #10 asks if they desire further occupational information. For the 1 and 2 year counseled groups, the percentages who desire more information are 73% and 100% respectively.

So far, it should be noted that in every item discussed a higher percentage of the 2 year counseled group endorsed the more constructive alternative than the 1 year counseled group. Now let us consider item #2, "Friends, relatives or other people (have)(have not) talked to me about my occupational career." The "have" talked to me alternative was endorsed by 73% of the 1 year counseled group and 100% of the 2 year counseled group. In addition to having received more information, the 2 year counseled group is closer to the point where decisions regarding courses of study and the choice of an occupation need to be made.

Consider now items #7, #3 and #5. Item #7, I believe (I know)(don't know) what my occupation is going to be" is endorsed "believe I know" by 73% of the 1 year counseled group and 64% of the 2 year counseled group. This same pattern (lower percentage for the 2 year counseled group) is evidenced in response to item #3, "I (want)(don't want) to take a vocational course in high school. Eighty-two percent of the 1 year counseled group and 64% of the 2 year counseled group said they wanted to take a vocational course in high school. On the other hand, in response to item #5, 73% of the 1 year counseled group and 91% of the 2 year counseled group say that they look forward to entering an occupational career.

It is suggested that the decrease in the percentage of the 2 year counseled group to the items pertaining to pursuing a vocational course in high school, and knowing one's occupation are minor and represent a realistic "weighing of alternatives" process as the student gets closer to making his decision. There may be family pressures playing a role at this time. In any event, over half (64%) of the group are pointed toward vocational programs.

In summary, these students want occupational information from school counselors. Evidently, this information makes them aware of their opportunities. On the other hand, as the time of decision for choice grows nearer, a certain amount of anxiety and hesitancy enters. All of our 2 year counseled students have discussed their impending choice of a vocation with friends, and/or relatives, and/or members of their families. At least 64% will be applying for vocational courses in high school.

TABLE 3

STUDENT OPINION POLL - INSTRUMENT D

Item	Modified Statement	1 Year Counseled	2 Year Counseled	Sig. Diff. at .05 or .10 level Analysis
1.	School listens to parents opinions:*			
	a. Did not answer	09%	18%	
	b. Too much	09%	64%	No sig.
	c. Just enough	36%	18%	diff.
	d. Too little	55%	0%	
2.	The number of courses are:			
	a. Too many	0%	0%	No sig.
	b. Just right	91%		diff.
	c. Too few	09%	27%	
3.	Most teachers are:			
	a. Very good	18%	36%	
	b. Good	36%	36%	No sig.
	c. Fair	45%	27%	diff.
	d. Poor	0%	0%	
4.	Principal talks to students:			
	a. Too often	27%	0%	Sig
	b. Just about right	64%	64%	.05
	c. Too little	09%	36%	
5.	Chances to voluntarily respond in class:			
	a. Too little	18%	45%	No sig.
	b. Too much	27%	09%	diff.
	c. About right	55%	45%	
6.	Items I am requested to study are:			
	a. Of great interest	36%	27%	
	b. Of average interest	55%	55%	No sig.
	c. Of little interest	0%	18%	diff.
	d. Of no interest	09%	0%	

Item	Modified Statement	1 Year Counseled	2 Years Counseled	Sig. Diff. at .05 or .10 level Analysis
7.	Getting to know students at this school in relation to other schools is:			
	a. Easier	64%	27%	No sig.
	b. About the same	36%	55%	diff.
	c. More difficult	0%	18%	
8.	In preparation for college this program is:			
	a. Did not know	0%	0%	
	b. Too tough	73%	82%	No sig.
	c. About right	27%	18%	diff.
	d. Too easy	0%	0%	
9.	The class materials from year to year:			
	a. Repeats itself too much	36%	18%	No sig.
	b. Repeats about right	55%	73%	diff.
	c. None carries over	09%	09%	
10.	Teachers interest in kids work:			
	a. To great	09%	0%	No sig.
	b. Just about right	82%	100%	diff.
	c. Not great enough	09%	0%	
11.	When students get bad grades, others:			
	a. Feel sorry for them	09%	18%	No sig.
	b. Admire them more than they should	27%	27%	diff.
	c. Shows the right amount of concern	64%	55%	
12.	Students in this school are:			
	a. Too smart for me	09%	0%	No sig.
	b. Just smart enough	45%	64%	diff.
	c. Not smart enough	45%	36%	

Item	Modified Statement	1 Year Counseled	2 Years Counseled	Sig. Diff. at .05 or .10 level Analysis
13.	Most subjects taught are:			
	a. Very interesting	27%	27%	
	b. Of average interest	36%	55%	No sig.
	c. Below average interest	27%	18%	diff.
	d. Dull and uninteresting	09%	0%	
14.	Teachers view students outside school activities:			
	a. Too great	18%	18%	No sig.
	b. About right			diff.
	c. Too much	27%	09%	
15.	Teacher's view of students displaying humor:			
	a. Overly admired	45%	09%	Sig
	b. Overly punished	10%	18%	.05
	c. Appropriate attention	45%	73%	
16.	Most teachers teach:			
	a. Too slowly	09%	09%	Sig
	b. About right	64%	91%	.05
	c. Too fast	27%	0%	
17.	How athletes are respected by others:			
	a. Overly respected	09%	0%	Sig
	b. Under respected	18%	0%	.05
	c. About as should be	73%	100%	
18.	Competition or cooperation in school:			
	a. Too much competition	18%	09%	No sig.
	b. Too much cooperation	27%	27%	diff.
	c. Is balanced	55%	64%	

Item	Modified Statement	1 Year Counseled	2 Years Counseled	Sig. Diff. at .05 or .10 level Analysis
19.	Things we study here:			
	a. Are about right	45%	36%	No sig.
	b. Need slight changes	36%	64%	diff.
	c. Completely changed	18%	0%	
20.	Teachers know subject matter:			
	a. Very well	55%	64%	
	b. Quite well	18%	27%	No sig.
	c. Fairly well	27%	09%	diff.
	d. Not well	0%	0%	
21.	We work in groups:			
	a. Too often	0%	09%	Sig.
	b. Just enough	18%	55%	.05
	c. Too little	82%	36%	
22.	Students get along together:			
	a. Very well	0%	18%	
	b. About average	100%	73%	Sig.
	c. Not too well	0%	09%	.05
	d. Very badly	0%	0%	
23.	School spirit here is:			
	a. More than enough	09%	27%	No sig.
	b. About right	55%	27%	diff.
	c. Not enough	36%	45%	
24.	Emphasis on things from books:			
	a. Too much	45%	18%	No sig.
	b. About right	36%	73%	diff.
	c. Not enough	18%	09%	
25.	Teachers seem to be:			
	a. Almost always fair	0%	27%	
	b. Generally fair	55%	45%	Sig.
	c. Occasionally fair	36%	27%	.05
	d. Often unfair	09%	0%	

Item	Modified Statement	1 Year Counseled	2 Years Counseled	Analysis Sig. Diff. at .05 or .10 level
26.	Things in class are planned:			
	a. Very badly	18%	0%	No sig.
	b. Very well	64%	64%	diff.
	c. Very rigidly	18%	36%	
27.	Our seats in class:			
	a. Constantly change location	45%	18%	Sig.
	b. Change sometimes	45%	27%	.05
	c. Never change	09%	55%	
28.	Those who get good grades are:			
	a. Overly liked	36%	18%	No sig.
	b. Overly disliked	0%	18%	diff.
	c. Liked about right	64%	64%	
29.	Teachers' interest in student work:			
	a. Just about right	45%	82%	No sig.
	b. Not great enough	36%	18%	diff.
	c. Too great	18%	0%	
30.	Students' interests socially:			
	a. Too great	0%	0%	Sig.
	b. About right	27%	73%	.05
	c. Too little	73%	27%	
31.	In general, our subjects are:			
	a. Too easy	0%	18%	No sig.
	b. About right	100%	82%	diff.
	c. Too difficult	0%	0%	
32.	When students need help, teachers:			
	a. Always assist	0%	36%	
	b. Generally assist	82%	09%	Sig.
	c. Assist if requested to	09%	36%	.01
	d. Assist in extreme cases only	09%	18%	

Item	Modified Statement	1 Year Counseled	2 Years Counseled	Sig. Diff. at .05 or .10 level Analysis
33.	Teachers present new materials:			
	a. Very well	0%	27%	
	b. Good	27%	36%	Sig.
	c. Average	73%	27%	.05
	d. Poor	0%	09%	
34.	Students take studies:			
	a. Too seriously	09%	0%	No sig.
	b. Not serious enough	55%	64%	diff.
	c. Just about right	36%	36%	
35.	Teachers seem to teach:			
	a. Too many unuseful things	18%	27%	
	b. Too many things useful now but not later	09%	36%	No sig. diff.
	c. About the right proportion	73%	36%	
36.	The teacher's grading is:			
	a. Too tough	45%	09%	Sig.
	b. Just tough enough	36%	91%	.01
	c. Not tough enough	18%	0%	
37.	Students who act differently:			
	a. Are disliked by others	18%	45%	No sig.
	b. Others don't care	73%	36%	diff.
	c. Are liked by others	09%	18%	
38.	Students attend to appearances:			
	a. Too much	36%	27%	No sig.
	b. About right	55%	73%	diff.
	c. Too little	09%	0%	

Item	Modified Statement	1 Year Counseled	2 Years Counseled	Sig. Diff. at .05 or .10 level Analysis
39.	Teachers in this school are:			
	a. Very friendly	18%	55%	
	b. Somewhat friendly	64%	36%	No sig.
	c. Somewhat unfriendly	09%	09%	level
	d. Very unfriendly	09%	0%	
40.	The grades I receive are:			
	a. Always deserved	36%	55%	
	b. Generally deserved	27%	36%	No sig.
	c. Sometimes not deserved	27%	09%	diff.
	d. Frequently not deserved	09%	0%	
41.	Teaching aids are:			
	a. Overly used	0%	0%	No sig.
	b. Used appropriately	45%	27%	diff.
	c. Under used	55%	73%	
42.	Memory and fact learning is:			
	a. Stressed too much	18%	27%	No sig.
	b. Used adequately	64%	73%	diff.
	c. Not stressed enough	18%	0%	
43.	Teachers exercise control:			
	a. Too much	09%	18%	Sig.
	b. About right amount	64%	82%	.05
	c. Not enough	27%	0%	
44.	Teacher aides are used:			
	a. More than enough	18%	0%	No sig.
	b. About right amount	73%	91%	diff.
	c. Not enough	09%	09%	
45.	Reactions to a new student are:			
	a. Welcome	73%	73%	No sig.
	b. Ignored	27%	27%	diff.
	c. Disliked	0%	0%	

Item	Modified Statement	1 Year Counseled	2 Years Counseled	Sig. Diff. at .05 or .10 level Analysis
46.	Homework Assignments:			
	a. Help us	55%	91%	Sig.
	b. Not related to class	18%	0%	.05
	c. Busy work	27%	09%	
47.	Teachers attention toward the individual and the group:			
	a. Too much individual	27%	0%	Sig.
	b. Too much group	18%	0%	.01
	c. Balanced	55%	100%	
48.	My feelings toward the school:			
	a. Very favorable	27%	36%	
	b. Somewhat favorable	73%	55%	No sig.
	c. Somewhat unvaborable	0%	09%	diff.
	d. Very unfavorable	0%	0%	
49.	Teacher's interest in students work:			
	a. Not great enough	36%	18%	No sig.
	b. Too great	09%	0%	diff.
	c. Just about right	55%	82%	

*Some of the columns will not total 100% because we did not include the few cases who did not respond to the item.

In addition to the Motivational Scale and the Attitude Scale on Occupational and Career Counseling, Instrument D, the Student Opinion Poll was administered at the junior high school level and the results tabulated. The responses to the 49 items are presented in Table 3.

Surprisingly, some 15 items are answered in significantly different ways when the 1 year counseled and the 2 year counseled groups are compared. Being counseled, plus adolescent growth, plus perhaps faster development due to demands placed on these children by their families and environment is probably responsible for these changes. At any rate changes appear in about four areas.

Item #4, "In some schools the principal sees and talks with the students often, while in other schools he rarely sees them. In this school the principal sees and talks with students--" Sixty-four percent in both groups reply "just about the right amount." However, some 27% of the 1 year counseled group endorse

endorse "too often" while 36% of the 2 year counseled group endorse "too little." To item #17, "Students who are good in sports are respected by classmates -" only 73% of the 1 year counseled group said "neither more or less than they should be" while 100% of the 2 year counseled group did so. Again to item #15, "the student who shows a sense of humor in class is usually-" the 1 year counseled group endorses "admired by the teacher more than he should be" and "given about the right amount of attention." 45% for each of these alternatives. The 2 year counseled group endorses "given about the right amount of attention" 73%. Finally, item #30 says, "In my opinion, student interest in social affairs, such as clubs, scouts, and the "Y" is -" 73% of the 1 year counseled group responded "too little." However, 73% of the 2 year counseled group endorse "about right" for this item. In summary, the 2 year counseled group appears to be more socially developed in that they show more responsibility and acceptance of adult roles.

Item #43 reads, "In some classes the teacher is completely in control and the students have little to say about the way things are run. In other classes the students seem to be boss and the teacher contributes little to the control of the class. In general, teachers in this school seem to take-." Sixty-four percent of the 1 year counseled group and 82% of the 2 year counseled group replied with, "about the right amount of control." Otherwise some of the 1 year counseled group endorsed "too little control" where some of the 2 year counseled group endorsed "too much control," a desire for student control.

Similarly, to #27, the 1 year counseled group divided itself up in endorsing "our seats in class change about the right number of times" and "change too much." The 2 year counseled group, desiring some "freedom" endorsed "our seats in class never change" by 55%. To item #21, "In this school we work in groups-" the 1 year counseled group endorsed "too little" 32%. The 2 year counseled group endorsed "just enough" 55%. In item #22, "Students get along together in this school-" the 1 year counseled group replied 100% "about average." The 2 year counseled group replied with 73% "about average" and 18% "very well." The replies to these items, in addition to showing evidence for acceptance, indicate an adjustment to the junior high school and a desire to make some decisions.

Items #33, #46, #36 and #25 would appear to form another related cluster. In response to item #33 regarding the "ability of the teachers in this school to present new materials" 73% of the 1 year counseled group endorsed "average." Of the 2 year counseled group, only 27% endorsed average, with 36% endorsing "good" and 27% saying "very good." As for homework assignments item #46, 55% and 91% of the 1 year and 2 year counseled groups respectively say "helped us to understand." However, 27% of the 1 year counseled group and only 9% of the 2 year counseled group said that homework was just "busy work." School seems to be becoming more meaningful for the 2 year counseled, slightly older group.

In the same line of thinking, item #36 asked about the "toughness of grading." Of the 1 year counseled group, 45%replied "too tough." Of the 2 year counseled group, 91% replied, "just tough enough." Finally, in terms of overall fairness, Item #25 both groups endorsed "generally fair" 55 and 45% respectively. However, some of the 1 year counseled group tended to answer "occasionally" and "often unfair." On the other hand, 27% of the 2 year counseled group were willing to endorse "almost always fair." This group of 4 items would indicate greater acceptance of and the great meaningfulness of the teacher's classroom practices.

Item #16 asks about the teachers' speed in presenting the material. Sixty-four and 91% of the 2 groups endorse "about right." However, some of the 1 year counseled endorse "too fast" while some of the 2 year counseled group endorse "too slow." With regard to the student's need for special attention, item #32 82% of the 1 year counseled group indicate that the teacher is always ready to give help. The 2 year counseled group endorses "always ready to give help" 36% and "ready to help in giving special notice" 36%, indicating some regard for the teacher's allotment of time. Finally, item #47 states "In general, teachers in this school pay-" attention to individual students and the whole class. Of the 1 year counseled group 55% indicated about the right percent of attention to the individual and the class as a whole, but some 27% of this group endorse "too much attention to the individual and not enough to the class as a whole." For the 2 year counseled group 100% endorse about the right degree of attention to individuals and to the class as a whole.

In summary then, the 2 year counseled group appears to have rounded the corner into maturity. They appear to be more serious, more accepting of authority, better adjusted to junior high school and want to make some academic decisions. They feel further that their teachers are fair and they show some empathy for the teacher's role.

STATISTICAL ANALYSIS RELATING TO OCCUPATIONAL PREPARATION PROGRAM

The stated objectives of this evaluation were to determine the nature of the students in the experimental project, to collect and evaluate selected measures of behavior which are intended to indicate the impact of the program on the behavior of students, and to identify components of the program which are effective in changing behavior.

With these objectives in mind, this section contains two types of information: tables of statistical information, and paragraphs of written information intended to assist the reader in the interpretation of the statistical material. In general, the written portion follows the tables of statistical write-up.

In addition, this section is divided into two major sections, each dealing with a particular type of information. The first section reports the analysis of the biographical information. The second section reports the analysis of measures of behavior which reflect program impact.

COMPARISON AND ANALYSIS OF BIOGRAPHICAL DATA

The biographical data was collected to learn as much as possible about the students. This could be considered baseline information useful for planning innovative experiences and for guiding assumptions regarding program impact.

SELECTION OF PARTICIPANTS

The participants in the Occupational Preparation Program were selected by the school counselors based on their need. All students were classified as "potential drop-outs." The evidences of "potential" were: poor attendance, below grade-level achievement and over age for grade level. At the time of data collection there have been 304 students participating in the program.

The control group used for comparative purposes were students who had been identified by counselors as "potential drop-outs," but who were not participating in the program due to limitations of space, staff, and equipment.

The initial assumption was made that the students were from the same population.

Table 4. A Description of the Experimental and Control Groups Based on Sex

Sex	Experimental	Control
Male	46.3%	51.8%
Female	53.7%	48.2%

$X^2 = .1603$ 1 degree of freedom

Table 5. A Description of the Experimental and Control Groups Based on Age

Age on Last Birthday	Experimental	Control
13	00.0%	00.0%
14	48.4%	51.9%
15	41.8%	40.1%
16	9.2%	8.0%
17	0.6%	0.0%

$X^2 = 2.8016$ 4 degrees of freedom

Table 6. A Description of Experimental and Control Groups Based on Course of Study Planned

Type of Course	Experimental	Control
Academic	0.0%	0.0%
Vocational	22.4%	8.1%
General	18.6%	25.6%
Undecided	51.0%	46.0%

$X^2 = 27/775$ 3 degrees of freedom

Table 7. A Description of the Experimental and Control Groups Based on Length of Time Lived in the Neighborhood

Length of Time	Experimental	Control
Less than seven months	6.8%	2.8%
Seven months to two years	7.4%	15.6%
More than two years, less than five years	26.8%	14.1%
More than five years	53.0%	67.5%

$X^2 = 6.7526$ 3 degrees of freedom

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Table 8. A Description of the Experimental and Control Groups Based on With Whom They Live

With Whom They Live	Experimental	Control
Natural Parents	35.4%	26.4%
Father Only	0.4%	1.0%
Mother Only	12.7%	6.2%
One Parent and One Step-parent	11.3%	8.4%
Grandparents or Relatives	4.3%	6.6%
Foster Parents	2.8%	5.2%

$X^2 = 11.2846$ 8 degrees of freedom

Table 9. A Description of the Experimental and Control Groups Based on the Marital Status of Their Natural Parents

Marital Status of Natural Parents	Experimental	Control
Presently Married to Each Other	65.1%	64.1%
Presently Divorced or Separated	20.3%	17.3%
Deceased (One or Both)	10.1%	8.6%
Unknown	4.5%	10.0%

$X^2 = 4.3381$ 3 degrees of freedom

Table 10. A Description of the Experimental and Control Groups Based on What They Plan to be Doing One Year after Completing School.

Plans One Year After Completing School	Experimental	Control
Attending a Four Year College	2.4%	2.1%
Attending a Two Year College	1.7%	0.1%
Attending a Vocational School	14.8%	13.6%
Working At a Full-Time Job	44.4%	40.2%
In the Armed Services	12.7%	15.6%
Married and Not Employed	10.6%	10.9%
Other	12.5%	17.5%

$X^2 = 2.2811$ 6 degrees of freedom

Table 11. A Description of the Experimental and Control Groups Based on the Number of Brothers and Sisters

Number of Brothers and Sisters	Experimental	Control
None	3.4%	3.1%
One	4.6%	7.4%
Two	15.3%	11.7%
Three	15.1%	12.0%
Four	16.8%	15.6%
Five	10.0%	8.1%
Six or More	34.7%	42.1%

X^2 =6.4958 8 degrees of freedom

Table 12. A Description of the Experimental and Control Groups Based on the Number of Times a Grade Was Repeated

Number of Times a Grade was Repeated	Experimental	Control
None	8.7%	8.1%
One	36.5%	32.3%
Two	31.3%	30.2%
Three	12.8%	12.4%
Four or Five	8.6%	8.3%
Unknown	2.1%	1.7%

X^2 = 6.3211 6 degrees of freedom

Table 13. A Description of the Experimental and Control Groups Based on the Home Type and Ownership

Home Type and Ownership	Experimental	Control
Townhouse	0.0%	0.0%
Apartment	6.5%	8.4%
Multiple-Family House	15.1%	16.2%
Single Family House-Rental	30.7%	26.1%
Single Family House-Owned	57.7%	49.3%

X^2 = 6.4764 4 degrees of freedom

Table 14. A Description of the Experimental and Control Groups Based on Membership in School Sponsored Clubs, Activities, and Organizations

Number of School Clubs, Activities and Organizations	Experimental	Control
None	67.1%	58.6%
One	19.3%	21.4%
Two	10.1%	10.5%
Three	3.4%	1.0%
Four	0.0%	0.0%
Five or More	0.1%	0.0%

X^2 = 11.3463 5 degrees of freedom

Table 15. A Description of the Experimental and Control Groups Based on the School Leadership Positions Held During the Last School Year

Number of Offices and Leadership Positions Held	Experimental	Control
None	68.7%	66.3%
One	10.2%	19.1%
Two	7.0%	13.6%
Three	1.0%	1.0%
Four or More	0.0%	0.0%

X^2 = 4.7691 4 degrees of freedom

Table 16. A Description of the Experimental and Control Groups Based on the Hours of Work Performed Per Week on a Job Outside of School

Hours Per Week Worked Outside of School	Experimental	Control
None	75.1%	74.1%
One-Four	5.6%	4.6%
Five-Eight	10.1%	15.2%
Nine-Twelve	5.6%	4.7%
Thirteen-Sixteen	1.0%	1.0%
Seventeen-Twenty	2.6%	10.0%

X^2 = 9.8707 5 degrees of freedom

Table 17. A Description of the Experimental and Control Groups Based on the Kinds of Tasks Performed at Home

Kinds of Tasks Performed at Home	Experimental	Control
None	5.6%	4.2%
Wash Dishes	44.5%	53.2%
Make Their Own Bed	31.9%	28.6%
Clean the House	47.8%	51.9%
Take Out the Trash	51.0%	47.8%
Clean up the Yard	53.6%	49.3%
Mow the Lawn	66.2%	61.5%
Other	0.0%	0.0%

X^2 =2.9599 1 degree of freedom

Table 18. A Description of the Experimental and Control Groups Based on the Number of Hours per Week Worked at Home

Number of Hours Per Week Worked at Home	Experimental	Control
One-Two	33.6%	33.8%
Three-Four	16.8%	17.6%
Five-Six	13.4%	20.0%
Seven-Eight	12.1%	5.4%
Nine-Ten	13.4%	8.1%
More than Ten Hours	10.1%	12.2%

X^2 = 4.2533 5 degrees of freedom

Table 19. A Description of the Experimental and Control Groups Based on the Pay Received for Tasks Done at Home

Pay Received for Work at Home	Experimental	Control
Yes	51.8%	68.8%
No	48.2%	31.2%

X^2 = 1.4023 1 degree of freedom

Table 20. A Description of the Experimental and Control Groups Based on Allowance Received at Home

Allowance Received At Home	Experimental	Control
Yes	67.9%	65.0%
No	32.1%	35.0%

$X^2 = 2.3352$ 1 degree of freedom

Table 21. A Description of the Experimental and Control Groups Based on the Place of Employment of the Father

Place of Employment of the Father	Experimental	Control
Office	6.5%	2.8%
Farm	.4%	2.7%
Factory	42.3%	46.1%
Store	3.6%	3.3%
Construction	9.3%	10.7%
Door-to-Door Sales or Deliveries	2.7%	2.3%
Other	35.2%	32.1%

$X^2 = 4.6301$ 6 degrees of freedom

Table 22. A Description of the Experimental and Control Groups Based on the Education of the Father

Education of the Father	Experimental	Control
Completed Advanced Degree(s)	0.0%	0.0%
Completed Four Years of College	1.4%	0.0%
Attended 1-3 Years of College	5.6%	9.4%
Completed 4 years of High School	29.5%	15.8%
Attended 10 or 11 Years of School	12.2%	13.9%
Attended 7 to 9 Years of School	35.1%	41.6%
Attended 6 or Less Years of School	16.2%	3.1%

$X^2 = 12.6322$ 6 degrees of freedom

Table 23. A Description of the Experimental and Control Groups Based on the Employment of the Mother Outside the Home

Mother Employed Outside the Home	Experimental	Control
Yes	43.1%	39.4%
No	56.9%	60.6%

$X^2 = 3.6766$ 3 degrees of freedom

Table 24. A Description of the Experimental and Control Groups Based on the Place of Employment of the Mother

Place of Employment of Mother	Experimental	Control
Office	25.3%	19.1%
Factory	39.6%	53.2%
Store	8.7%	7.9%
Other	26.4%	19.8%

$X^2 - 4.7638$ 3 degrees of freedom

Table 25. A Description of the Experimental and Control Group Based on the Education of the Mother

Education of the Mother	Experimental	Control
Completed Advanced Degree(s)	0.0%	0.0%
Completed Four Years of College	2.6%	2.9%
Attended 1-3 Years of College	3.6%	1.5%
Completed 4 Years of High School	27.2%	28.3%
Attended 10 or 11 Years of School	29.5%	21.7%
Attended 7-9 Years of School	26.6%	29.8%
Attended 6 or Less Years of School	10.5%	15.8%

$X^2 = 19.5634$ 5 degrees of freedom

The first significant difference is shown in Table 6, where a statistically significant larger number of students in the experimental group plan academic and vocational courses of study. This could be interpreted as some measure of level of aspiration.

As shown in Table 7, the experimental group has a larger percent of recent arrivals and long-term residents than does the control group. In Table 8, one discovers that a fairly large percentage of both groups live in broken homes of one type or another.

The next table which depicts a difference of any real size is Table 14. While the size of this difference is not large, it is of importance to note that in general, neither group join school clubs in large percentages. As might be anticipated, neither group is strong on demonstrated leadership of organized groups.

Large percentages of both groups report working outside of school. No apparent pattern is obvious in tasks performed at home and most students work less than one hour per day at home.

Table 21 shows that most students' fathers are employed in factory jobs, and Table 22 shows most fathers failed to complete high school, however, the groups were very similar in both respects. Table 23 shows that only about one-third of the mothers work outside the home, and Table 25 shows a slightly higher educational level for mothers.

With only two exceptions, the experimental and control groups were found to be the same as assumed at the start of the study.

Table 26. Comparison of the Experimental and Control Groups Based on the Program Impact Measures

Variable	Experimental Group			Control Group		
	Mean	Std.	Dev.	Mean	Std.	Dev.
Morale*1	30.074	9.035		31.116	14.089	1.261
Attitude*2	8.768	3.617		5.980	3.288	1.650
Motivation*3	6.951	2.881		5.153	2.981	1.980

Significant at the .05 level.

1. The Student Opinion Poll was the instrument used.
2. The Remmers Purdue Master Attitude Scale was the instrument used.
3. The LOC Scale was the instrument used.

IMPACT OF PROGRAM VARIABLES
OCCUPATIONAL PREPARATION PROGRAM

In order to evaluate the impact of the model program, a change in behavior was established as the criterion. Several areas of behavior were established as being crucial to the impact of the model experiences. Attitude toward school was investigated for indications of change. The area deemed crucial in the literature cited in the bibliography of this study, that of motivational level, was given equal attention.

It is important to remember that it was assumed that these measures of behavioral changes were essential to determination of impact of the experimental model program.

The mean scores and their comparisons, as shown in Table 26, represent the impact of the program. The results of all tests are expressed as mean scores.

All of the three measures yielded mean scores which indicated significant differences between the two groups. The attitude, morale, and motivation were all significantly different at the .05 or higher level of significance. Hence, we would be led to conclude that the behavior of the students in the Occupational Preparation Program is being changed as measured by a change in attitude, a higher morale, and an increase in level of motivation.

PROJECT RECOMMENDATIONS

Occupational Preparation Program

1. The number of career areas being offered in the special project on the Tech campus should be expanded. Areas to consider might include: health, landscaping and ground maintenance, appliance repair, beauty culture, tailoring, service station attendants, and the building trades.

2. Conduct field trips to potential employers for students interested in seeking employment in that type of career.

3. Increase the percentage of students successfully placed in job entry employment or into the regular school academic or vocational program.

4. Increase the liaison between regular school administrators and counselors with the special project staff and their support personnel.

5. Provide clerical support for the special project staff.

6. Increase the follow-up of students who leave the program regardless of their reason.

7. Develop an advisory committee of businessmen, industrialists, retailers, etc. to advise and support program development.

8. Develop a sales and promotion division

9. Seek legal advice concerning feasibility of allowing profit-sharing by the students.

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(f) Conclusions, implications, and recommendations for the future.

The evaluation team made the following recommendations and conclusions:

a. Elementary Counseling

1. Continue to increase the articulation and communication between elementary counselors, teachers, and the junior high school counselors.

b. Junior High School Exploratory Program

1. In insolated schools, the administration should support the counselor and program more.

2. Counselors should be given more time to spend in some schools.

3. Counselors should have an office or room in each school for their use only, where they can leave materials, files, and have individual or group conferences privately.

4. The pupil to counselor ratio should be reduced to an operational proportion of 300 students to one counselor as a maximum.

5. Field trips need to be related more to students' specific interests.

c. Placement of Counselors in Industry

1. Counselor and teachers from Occupational Preparation Program should be included in industry program.

2. The number of counselors involved in industrial activities should continually be expanded.

3. Junior high counselors should be involved in industrial activities.

d. Occupational Preparation Program

1. The number of career areas being offered in the Occupational Preparation Program should be expanded. Areas to consider might include: health, landscaping and ground maintenance, appliance repair, beauty culture, tailoring, service station attendants, and the building trades.

2. Conduct field trips to potential employers for students interested in seeking employment in that type of career.

3. Increase the percentage of students successfully placed in job entry employment or into the regular school academic or vocational program.

4. Increase the liaison between regular school administrators and counselors with the special project staff and their support personnel.

5. Provide clerical support for the special project staff.

6. Increase the follow-up of students who leave the program regardless of their reason.

7. Develop an advisory committee of businessmen, industrialists, retailers, etc. to advise and support program development.

8. Develop a sales and promotion division.

9. Seek legal advice concerning feasibility of allowing profit-sharing by the students.

10. Counselor and teachers should be involved in summer industry program.

e. Organization and Administration

1. Counselors should be enccuraged to continue their training and professional improvement through workshops, in-service training and/or credit courses.

2. The goals, objectives and successes of the project should be communicated to principals and staffs in those isolated schools where they still do not cooperate

3. An advisory committee from industry, administration, and business should be formed to advise and support the operation of the project.

The program has yielded an increased number of areas of success in its second year of operation. The effectiveness of this program is expected to increase more next year as elementary school students progress through their formal education. Another factor warranting consideration is that the staff having amassed a backlog of experience will strengthen program quality. Additional measures of program success are self-evident in the statistical analysis of program data. In light of the above conclusions, it is apparent that the project should continue to be funded.

BIBLIOGRAPHY

1. Norris, Willa, Franklin Zeron, and Raymond Hatch, The Information Service in Guidance, Chicago; Rand McNally & Company, 1964.

2. Bank, Ira M., "Children Explore Careerland Through Vocational Role Models," The Vocational Guidance Quarterly, Vol. 17, No. 4, June 1969. pp 284-289.

3. Bugg, C. A., "Implications of Some Major Theories of Career Choice for Elementary School Guidance Programs," Elementary School Guidance, Vol. 3, No. 3, March 1969, pp 164-173.

4. Jeffries, D., "The Needs of Inner-City Children for Career Guidance," Elementary School Guidance and Counseling, Vol. 2, No. 4, 1968, pp 268-275.

5. O'Hara, R. P., "A Theoretical Foundation for the Use of Occupational Information in Guidance," The Personnel and Guidance Journal, Vol. 46, No. 7, 1968, pp 636-640.

6. Warner, T., Ed. Needed Concepts in Elementary Guidance, Ohio State Department of Education, Columbus, 1969.

7. Whitfield, E. A., "Vocational Guidance in the Elementary School: Integration or Fragmentation," The School Counselor, Vol. 16, No. 2, 1968, pp 90-93.

8. Leonard, Rachel S., "Vocational Guidance in Junior High: One School's Answer," The Vocational Guidance Quarterly, Vol. 17, No. 3, March 1969, pp 221-222.

9. Sloan, Nancy, Orientation Approaches to Increase Student Awareness of Occupational Options, Michigan, The University of Michigan, November 1969, p 2.

10. McCracken, David, Work Experience for Broadening Occupational Offerings: A Selected Bibliography for Use in Program Development, Columbus, The Ohio State University, November 1969, p 2.

11. Research Council of the Great Cities, New Programs in Vocational Education, Chicago, Illinois, 1964, 45 p.

12. Flores, T. R. and Leroy Olsen, "Stability and Realism of Occupational Aspiration in Eighth and Twelfth Grade Males," The Vocational Guidance Quarterly, Vol. 16, No. 2, December 1967, pp 104-112.

13. Haller, A. O., and I. W. Miller, "The Occupational Aspiration Scale: Theory, Structure and Correlates," Technical Bulletin 288, East Lansing, 1963.

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WINEGARD, RAYMOND
COMPREHENSIVE VOCATIONAL GUIDANCE PROGRAM FOR MODEL CITIES. VOLUME 2. INTERIM REPORT FOR THE PERIOD MARCH 15, 1972 TO MARCH 14, 1973.

INDIANAPOLIS PUBLIC SCHOOLS, IND.
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IDENTIFIERS - CAREER AWARENESS; *INDIANAPOLIS PUBLIC SCHOOLS

ABSTRACT - THIS DOCUMENT CONTAINS THE APPENDED MATERIAL FOR A REPORT ON A COMPREHENSIVE VOCATIONAL GUIDANCE PROGRAM IN THE INDIANAPOLIS SCHOOL SYSTEM. INCLUDED ARE SYLLABI FOR ELEMENTARY GRADES AND JUNIOR HIGH, PREPARED BY COUNSELORS FOR USE BY THE TEACHERS IN SPECIAL GUIDANCE CLASSES. EACH SYLLABUS PRESENTS A LISTING OF OCCUPATIONAL CLUSTERS, GRADE-BY-GRADE SAMPLE LESSON PLANS, AND A LARGE REFERENCE SECTION. ALSO INCLUDED IN THIS REPORT ARE STUDENTS' QUESTIONNAIRES, CLASS SCHEDULES, AND OTHER WORKING PAPERS USED IN THE GUIDANCE PROGRAM. (KH)

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Comprehensive Vocational Guidance Program for Model Cities

**EXEMPLARY PROJECT IN VOCATIONAL EDUCATION
CONDUCTED UNDER
PART D OF PUBLIC LAW 90-576**

Raymond Winegard
Indianapolis Public Schools
901 N. Carrollton Avenue
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MARCH 14, 1973

VOLUME 2 OF 2 VOLUMES

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APPENDIX A

INDIANAPOLIS PUBLIC SCHOOLS
DAY HIGH SCHOOL
VOCATIONAL-TECHNICAL
and
PRACTICAL ARTS COURSES

		Arlington High School	Arsenal Technical High School	Broad Ripple High School	Crispus Attucks High School	Emmerich Manual High School	Geo. Washington High School	Harry E. Wood High School	John Marshall High School	Northwest High School	Shortridge High School	Thomas Carr Howe High School	Adult Day High School
	BUSINESS EDUCATION												
1.	Bookkeeping	X	X	X	X	X	X	X	X	X	X	X	X
2.	Business Law	X	X	X	X	X			X	X	X	X	X
3.	Computer		X										X
4.	Filing	X	X		X	X	X	X			X	X	
5.	Intro. to Data Proc.	X	X		X	X	X	X	X		X	X	
6.	Key Punch		X										X
7.	Merchandising	X		X			X		X		X		
8.	Office Machines	X	X	X	X	X	X	X	X	X	X	X	
9.	Sales (Cashiering*)	X	* X		X	X		X	X	X		X	
10.	Shorthand	X	X	X	X	X	X	X	X	X	X	X	X
11.	Typing	X	X	X	X	X	X	X	X	X	X	X	X
	AUTO TRADES												
12.	Airplane Frame		X										
13.	Auto Body Repair		X		X			X					
14.	Auto Mechanics		X		X	X	X	X	X				
15.	Auto Service Station							X					
16.	Auto Tune-up (Elect.)		X			X	X						
17.	Aviation Mechanics		X										
18.	Engine Rebuilding		X										
19.	Power Mechanics	X							X	X			
	BUILDING TRADES												
20.	Cabinet Making		X			X			X				
21.	Carpentry		X		X		X		X	X			
22.	Masonry		X		X								
23.	Painting & Decorating		X										
24.	Plumbing		X										
25.	Sheet Metal		X						X				
26.	Woodworking	X		X	X	X	X	X	X	X	X	X	
	ELECTRICAL TRADES												
27.	Electrical Maintenance		X										
28.	Electricity	X	X	X	X	X	X	X	X	X	X		
29.	Electronics		X	X	X	X	X	X	X	X	X		
30.	Radio-TV Repair		X										
	METAL TRADES												
31.	Foundry		X										
32.	General Metals	X		X	X	X		X	X	X	X	X	
33.	Machine Shop		X		X	X	X						
34.	Patternmaking		X										
35.	Welding		X										

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(Day -2-)

		AHS	ATHS	BRHS	CAHS	EMHS	GWHS	HEWHS	JMHS	NHS	SHS	TCHHS	AD. DAY HS
	PRINTING TRADES												
36.	Graphic Arts			X		X			X	X			
37.	Layout-Stripping		X				X				X		
38.	Offset-Camera		X			X	X				X		
39.	Offset-Printing	X	X		X	X	X	X		X	X	X	
40.	Printing-Composition		X				X				X		
41.	Printing-Letter Press	X	X		X	X	X	X		X	X	X	
	SERVICE TRADES												
42.	Barbering							X					
43.	Beauty Culture				X			X					
44.	Cleaning & Pressing				X			X					
45.	Commercial Foods		X					X					
46.	Horticulture							X					
47.	Refrigeration		X										
48.	Shoe Repair				X			X					
49.	Tailoring				X								
	COOP. EDUCATION												
50.	Cooperative Office Ed.	X			X			X					
51.	Distributive Education		X	X	X		X	X	X	X			
52.	Industrial Cooperative Tr.		X		X		X	X	X				
	DRAFTING												
53.	Architectural Drafting	X	X	X	X	X	X	X	X	X	X	X	X
54.	Machine Drafting	X	X	X	X	X	X	X	X	X	X	X	X
55.	Mechanical Drawing	X	X	X	X	X	X	X	X	X	X	X	X
	ART												
56.	Commercial Art	X	X			X	X			X	X	X	
57.	Jewelry Making	X	X	X	X	X	X	X	X	X			
58.	Photography		X		X			X		X			
59.	Sign Painting	X	X		X		X			X	X		
60.	Stagecraft		X		X	X		X	X	X	X		

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INDIANAPOLIS PUBLIC SCHOOLS
EVENING
VOCATIONAL-TECHNICAL
and
PRACTICAL ARTS COURSES

		Arsenal Technical High School	Broad Ripple High School	Crispus Attucks High School	Emmerich Manual High School	Geo. Washington High School	Northwest High School	Thomas Carr Howe High School	Mallory Technical Institute
	BUSINESS EDUCATION								
1.	Bookkeeping	X	X	X	X	X	X	X	
2.	Data Processing	X							X
3.	Filing	X							
4.	Intro. to Data Proc.	X							
5.	Key Punch	X							X
6.	Medical Secretary				X	X			
7.	Office Machines	X		X	X	X	X	X	
8.	Shorthand	X	X	X	X	X	X	X	
9.	Typing	X	X	X	X	X	X	X	
	AUTO TRADES								
10.	Airplane Frame	X							
11.	Airplane Mechanics	X							
12.	Auto Body Repair	X		X					
13.	Auto Mechanics	X	X	X	X	X			
14.	Auto Tune-up	X				X			
15.	Automatic Trans. Service								X
16.	Brake - Front End	X							
17.	Engine Rebuilding	X							
18.	Out Board Motor Service								X
19.	Small Gas Engines								X
	BUILDING TRADES								
20.	Cabinet Making	X							
21.	Furniture Refinishing			X	X		X		
22.	House Construction	X		X					
23.	Painting & Decorating								
24.	Plumbing	X							
25.	Sheet Metal	X							
26.	Upholstering		X		X	X	X	X	X
27.	Woodworking	X	X	X	X	X	X	X	
	ELECTRICAL TRADES								
28.	Commercial Radio	X							
29.	Electricity	X			X	X			
30.	Electronics	X			X	X			
31.	Radio Repairing	X		X					
32.	TV Service	X		X					

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		ATHS	BRHS	CAHS	EMHS	GWHS	NHS	TCHHS	Mallory Tech Institute
	METAL TRADES								
33.	General Metals		X						
34.	Heat Treating	X							
35.	Hydraulics	X							
36.	Machine Shop	X			X	X			
37.	Mechanics	X							
38.	Shop Math	X				X			
39.	Strength of Material	X							
40.	Surface Plate Layout	X							
41.	Tech. Report Writing	X							
42.	Tool & Cutter Grinding	X							
43.	Tool & Die Making	X							
44.	Welding	X			X				
	PRINTING TRADES								
45.	Layout-Stripping	X							
46.	Linotype	X							
47.	Offset-Camera	X							
48.	Offset-Printing	X							
49.	Printing-Composition	X							
50.	Printing-Letter Press	X							
	SERVICE TRADES								
51.	Air Conditioning								X
52.	Alterations	X							
53.	Appliance Repair - Large								X
54.	Appliance Repair - Small								X
55.	Cleaning & Pressing			X					
56.	Commercial Foods	X							
57.	Custodial Service								X
58.	Oil Burner Service								X
59.	Refrigeration	X							
60.	Res. Heating & Air Cond.								X
61.	Tailoring	X	X		X		X	X	
	COOP. EDUCATION								
62.	Cooperative Office Ed.								
63.	Distributive Education								
64.	Industrial Cooperative Tr.	X		X		X			
	DRAFTING								
65.	Architectural Drafting	X	X		X	X			
66.	Blue Print Reading	X			X	X			
67.	Machine Drafting	X	X	X		X			
68.	Mechanical Drawing	X			X	X		X	
69.	Tool & Die Design	X							
	ART								
70.	Commercial Art	X							
71.	Photography	X	X	X	X				
72.	Sign Painting				X	X			

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INDIANAPOLIS PUBLIC SCHOOLS
FULL TIME ADULT
VOCATIONAL-TECHNICAL COURSES

		Mallory Technical Institute	School of Practical Nursing	Harry E. Wood High School
1.	Computer Programming	X		
2.	Computer Technology	X		
3.	Dental Assistant			X
4.	Drafting Technology	X		
5.	Electronic Technology	X		
6.	Medical Laboratory Assistant	X		
7.	Operating Room Technician	X		
8.	Practical Nursing		X	
9.	X-Ray Technician	X		

APPRENTICESHIP RELATED COURSES

		Arsenal Technical High School	Mallory Technical Institute
1.	Air Conditioning Servicemen		X
2.	Asbestos Workers	X	
3.	Bricklayers		X
4.	Carpenters		X
5.	Cement Finishers		
6.	Electricians	X	
7.	Iron Workers	X	
8.	Lathers		X
9.	Machine Repairman	X	
10.	Machinists	X	
11.	Mill wrights	X	
12.	Painters & Decoraters		X
13.	Patternmakers	X	
14.	Plasterers		
15.	Plumbers	X	X
16.	Printers	X	
17.	Refrigeration Servicemen	X	
18.	Roofers	X	
19.	Sheet Metal Workers	X	X
20.	Steamfitters	X	X
21.	Tool & Die Workers	X	
22.	Welders	X	

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APPENDIX B

ELEMENTARY GUIDANCE SYLLABUS

INTRODUCTION

This book is designed for counselors and teachers as a basic syllabus for guidance in the elementary schools of Indianapolis. Emphasis is placed upon establishing guidance, career awareness, and personal social awareness as an integral part of every child's classroom experience.

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The Purposes of Elementary Guidance

1. To help each pupil to discover his abilities and interests, and to understand himself.

2. To help each student in developing and strengthening good study habits.

3. To assist the student in developing a decision-making process.

4. To help each pupil develop an appreciation of other people and their concerns.

5. To help each student develop an appreciation for the dignity of work.

6. To help each child develop an awareness of the World of Work.

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Elementary Guidance Kg-Gr. 6.

Concepts to Develop

Individuals differ in their skills, aptitudes and interest.

People earn their living in different ways.

People work for various rewards.

Geographical location influences and determines career opportunities.

A society needs both a producer of services and a producer of goods.

A country's economy, location, government and laws affect career opportunities.

Advances in science and technology change work.

Advances in science have altered occupations that produce goods and produce service.

Duties within job families are related.

People need to speak well in their work.

People need to be able to listen in their work.

People need to be able to write in their work.

The ability to communicate effectively helps a person work well with other people.

Understanding of mathematics helps people in their work.

Money is a chief form of barter in our society.

Natural resources influence the world of work.

Music, art and drama give people pleasure.

Some people have occupations in fine arts to give us enjoyment.

Careers in the fine arts often require special training.

Leisure time activities could often affect career choice.

A healthy body is essential to a productive worker.

There are many jobs associated with physical education.

An understanding of science helps people in their work.

An understanding of others behavior and attitudes often helps people in their work.

To develop in pupils positive attitudes about the personal and social significance of work.

To help children develop an understanding that all work is honorable and contributes to society.

To develop each child's self-awareness.

To develop and expand the occupational awareness and aspirations of the students.

To help children identify with the vocations with which they are familiar.

To improve overall pupil performance by unifying and focusing basic subjects around a career development theme.

To help children's understanding that people work for many reasons.

To help children learn good work attitudes at an early age.

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Occupational Clusters

1. Business and Office Occupations
2. Marketing and Distribution
3. Communications and Media
4. Construction
5. Manufacturing
6. Transportation
7. Agri-Business and Natural Resources
8. Marine Science
9. Environmental Control
10. Public Service
11. Health
12. Hospitality and Recreation
13. Personal Services
14. Fine Arts and Humanities
15. Consumer and Homemaking - Related Occupations

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Career Education Fields and Related Subject Areas

Kindergarten

Language Arts
- Communications and Media
- Public Services

Social Studies
- Public Services
- Personal Services
- Health

Science
- Environmental Control
- Agri-Business and Natural Resources

Music - Fine Arts and Humanities
- Music
- Art

Health
- Health and Safety
- Recreation

Kindergarten - Purpose and Objectives

Purpose:

The purpose of kindergarten is to ready the young child for cooperative venture of the formal education process. Time and effort is spent in the school setting helping the pre-schooler to recognize the importance of self-direction through self-help and self-discipline. Much time and effort is spent in guiding the pre-schooler in activities based upon (1) the sex role he has adopted and explores, (2) his natural curiosity about his environment and fellow man or (3) his enjoyment of physical motion.

Objectives:

I. To help the child develop an awareness of life in his immediate environment.

   A. Himself
   B. Family and other household members
   C. Playmates
   D. Pets
   E. School
   F. Neighborhood
   G. Community helpers

II. To help children become aware that people have different life styles.

   A. Cultural and social heritage
      1. Holidays
      2. Famous people

III. To develop an awareness of self.

   A. My feelings
   B. My similarities to others
   C. My differences to others
   D. My place in society
   E. My strengths
   F. My weaknesses

IV. To develop positive attitudes toward the world of work.

   A. To learn how to get along
   B. To learn to share
   C. To learn the give and take process of life
   D. To learn to take good care of their property
   E. To learn to take care of other people's property
   F. To learn to appreciate all workers

Kindergarten - Sample Lesson Plans

Unit of Study: Growth and Responsibility

General Objective

To help each child realize that children are dependent as well as independent.

Specific Objectives

1. To help children to understand that there are things they now do for themselves.

2. To help children realize that soon they will be able to do other things by themselves.

3. To help children understand that different stages of maturity bring additional responsibilities and privileges.

4. To help children understand that as they mature they become more independent.

Approach

Show pictures of activities of adults or big sister or brother helping a younger child.

I. Understandings

A. Children do not have the physical skills to do all the things older people do.
   1. A child who is learning to do something new will need the help of older family members.
   2. Older family members help a child do things he can't safely do by himself.

B. Rules are made to maintain the safety of family members.
   1. Child learns to govern his behavior according to rules established by his parents.
   2. A child's ability to observe and to understand the purpose of these rules will help him obey other established rules.

C. Children depend on adults for a long period of their young lives.
   1. As a child grows he is able to do more for himself.
   2. He becomes increasingly responsible for his own safety.
   3. He learns when to handle situations alone and when to ask for adult assistance.

D. Adults are basically dependent upon each other for satisfying their needs.

   1. A grocer supplies food.
   2. A bus driver provides transportation service.
   3. A builder provides shelter.
   4. A mailman provides part of our communication.

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II. Activities

A. Classifying Roles
   1. Collect pictures of various activities and have children classify them into three (3) groups.
      a. Things We Can Do Now
      b. Things We Can Do Soon
      c. Things We Will Have to Wait to Do

III. Evaluation

A. Do the children understand that there are things they can do for themselves?

B. Do the children realize that the ability to assume added responsibilities come with maturity?

C. Are the children beginning to understand that added privileges come with maturity?

D. The children understand that as they mature they learn to do more for themselves.

E. Are children able to compare their level of maturity with that of older and younger children?

Kindergarten - Sample Lesson Plans

Unit of Study: Families

General Objective

To help children become aware that family members work together to meet their needs.

Specific Objectives

1. Children will become aware that family members work together to meet basic needs.

2. Children will begin to recognize that family members divide work assignments.

3. Children will recognize that each family member is interdependent.

Approach

Show different pictures of families at work in their homes. New word (work).

I. Understandings

A. Family members usually work together to meet basic needs.
   1. Basic needs
      a. Physical needs for food, shelter, clothing and health care

B. Members of a family usually divide and share work.
   1. Family members usually have regular tasks in household operations.
      a. mother - cooks meals, cleans house
      b. father - repair things, paint house
      c. sister - wash dishes, sweeps floor
      d. brother - cut grass, wash windows
      e. baby and other household members

C. Members of the family have different jobs depending on age, sex, abilities and other factors.

D. The family assumes roles according to size, membership and economic conditions.

E. Members of the family group are dependent on each other.
   1. Teamwork is essential
   2. Each member must be responsible for his assigned job (others depend on him doing his part)

F. Families around the world are alike in many ways.
   1. All families have similar basic needs
   2. Needs are met by the working group
   3. Organizations of family groups may vary from culture to culture

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II. Play Activities

A. Give each child a piece of a puzzle (a simple picture). Ask the children what they think the picture is. Have them put puzzle together. (Division of Labor)

B. Have pupils put on puppet show about a family who makes one member do all the work. (Division of Labor)

III. Evaluation

A. Are children aware that family members work together to meet their needs?

B. Do the children recognize that family members divide work assignments to help ease the work load?

C. Do the children recognize that the family is interdependent?

Career Education Fields and Related Subject Areas

Grade 1

Language Arts
- Agri-Business and Natural Resources
- Communications and Media

Social Studies
- Transportation
- Hospitality and Recreation
- Construction
- Public Service

Science
- Environmental Control
- Agri-Business and Natural Resources

Mathematics
- Consumer and Homemaking Occupations

Art and Music
- Fine Arts and Humanities

Health and Physical Education
- Hospitality and Recreation

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Grade 1 - Purpose and Objectives

Purpose:

Building on the foundation developed in kindergarten, the students continue to learn about life and work in their habitat: their homes, their school, and their community. Career awareness is also expanded to include a few other countries.

Objectives:

I. To expand the children's awareness of occupations and the world of work in their immediate environment.

   A. Workers at school
      1. What work I can do
      2. What work others do

   B. Workers at home
      1. What I can do
      2. What work others do
         a. Father
         b. Mother
         c. Children (brothers and sisters)
         d. Family helpers

   C. Workers in our neighborhood
      1. Milkman
      2. Grocer
      3. Postman
      4. Babysitter
      5. Garbageman

II. To develop an awareness of self-worth and the worth of others.

   A. Respect for the rights of others
   B. Courage
   C. My place in society
   D. School - children
   E. Home - children
   F. Great men of our nation
   G. Holidays
   H. Other workers

III. To develop positive attitudes toward the world of work.

   A. Workers at home
   B. Care of pets
   C. Neighborhood workers
   D. Holidays
   E. Other workers - our country
   F. Workers in other lands

1. In Japan
2. In India
3. In Switzerland
4. In Africa

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Grade 1 - Sample Lesson Plans

Unit of Study: Workers at School

General Objective

To expand the children's awareness of the world of work.

Specific Objective

The children can name at least five (5) school workers and tell briefly in their own words, what duties they perform.

Approach

List school workers the children know
- aides
- all teachers
- clerk (service occupations)
- counselor
- custodial staff
- lunchroom workers
- nurse
- principal
- psychologist
- social workers
- special teachers (music, art, speech, gym)
- tutors

I. Understandings

A. School workers are here to help children.

B. Each worker has specific duties.

II. Activities

A. Take a tour of the building to observe workers "on the job." Add any additional workers to the list.

B. Make a book of the workers, each child illustrating one or two at work.

C. Invite each worker (or classification of worker) to come to the room for a brief visit as a guest speaker. Make an experience chart about each guest.

D. Make a mural of the workers at school.

E. Discuss what tools are needed by each worker.

F. Role play each worker and let the other children guess which one it is.

III. Evaluation

A. Do the children understand how school workers help them?

B. Do the children understand that each school worke has specific duties?

C. Can the children name at least five (5) school workers and tell briefly in their own words, what duties they perform?

Correlation With Other Subject Matter

Arithmetic

1. Counting the number of school workers.
2. Numbering the pages of worker book.

Language Arts

1. Writing and reading experience charts.
2. Improving listening skills.
3. Developing oral expression.
4. Encouraging language development through dramatic play.

Social Studies

1. Developing an understanding for the concept of division of labor.

Art

1. Making a mural
2. Drawing pictures to illustrate book.

Grade 1 - Sample Lesson Plans

Unit of Study: Workers in our Neighborhood

General Objective

To expand the children's awareness of the world of work.

Specific Objective

The children should be able to identify the postman as a community worker.

Approach

Show filmstrip or film on the work of a postman.

I. Understandings

A. Reading is an essential skill in the job of a postman.

B. Knowledge of numbers is essential in the job of a postman.

II. Activities

A. Observe the postman
1. in the school
2. as a guest speaker
3. on a trip to the post office

B. Discuss the requirements needed in his work.
1. reading skills
2. classifying skills
3. knowledge of numbers
4. good health
5. a high school education

C. Build a model community.
1. Assign names to streets in the room
2. Number the desks.
3. Make mailboxes out of shoeboxes or construction paper.
4. Make a drop box.
5. Each day a new mailman will deliver the "mail" - the teachers checked papers (stapled, closed and addressed).
6. Letters may be written.
7. Correspondence with another class could take place.
8. Make a post office out of an orange crate and use milk cartons for the sorting boxes.

D. Make a mural of "the travels of a letter."

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III. Evaluation

A. Do the children understand that reading is an essential skill in the work of a postman?

B. Do the children understand that knowledge of numbers is essential in the work of a postman?

C. Can the children identify the postman as a community worker?

Correlation With Other Subject Matter

Arithmetic

1. Estimating and measuring for construction activities.
2. Developing number recognition.

Language Arts

1. Reading addresses and correspondence.
2. Writing letters.
3. Oral skills may improve through discussions.

Science

1. Classifying similar objects (letters).
2. Note and discuss weather conditions under which the postman works. Does it affect his work? How?

Social Studies

1. Learning about a community worker.
2. Learning about our postal system and how it works.

Art

1. Making a mural.
2. Constructing the post office and mailboxes.

Career Education Fields and Related Subject Activities

Grade 2

Language Arts

Public Service
Communication and media

Social Studies

Marketing and Distribution
Construction
Manufacturing
Public Service
Hospitality and Recreation
Consumer and Homemaking Occupations

Science

Marine Science
Environmental Control

Mathematics

Business and Office Occupations
Marketing and Distribution

Music and Art

Fine Arts and Humanities

Health and Physical Education

Hospitality and Recreation

Grade 2 - Purpose and Objectives

Purpose:

In the second grade, the child's understanding of community workers is expanded. He is ready to extend his knowledge of the world of work beyond his family and school to stores and businesses in his neighborhood and community. Cooperation and the inter-dependency of workers is stressed.

The child also learns about similar occupations in other parts of the United States and other countries as his interest is guided from the local neighborhood to the community and to the world.

Objectives:

I. To enlarge the child's understanding of his community and the world of work.

   A. Develop the child's awareness that individuals need special training for most careers.

   B. Develop an understanding that jobs in the community can be classified into workers who feed us, who protect us, who keep us healthy, who provide shelter, who provide products and who provide services.

   C. Develop the pupil's awareness of job families.

   D. Develop an appreciation for the dignity of honest work.

   E. Develop an understanding of the kinds of work done by the people in Hawaii, Alaska and Puerto Rico.

   F. Develop an awareness of workers in the British Isles, Norway and Mexico.

II. To provide general observations about the world of work.

   A. School is a necessary part of the preparation for a career.

   B. Additional training helps workers to get better jobs.

   C. Workers perform in all phases of a product.
      1. Some make the plans.
      2. Some make the product.
      3. Some sell it.
      4. Some repair it.

   D. Each job has certain responsibilities which accompany it.

III. To help the child to realize that his future job will be important and that, as a worker, he will provide a definite service to the community.

IV. To develop positive attitudes toward work and all workers.

V. To provide every child with the opportunity for independence of judgment and decision making.

VI. To provide children with the knowledge, understandings, skills, habits, and attitudes that will enable them to live and work vigorously and happily.

VII. To teach pupils to meet obligations and to willingly do their fair share of the work.

VIII. To develop an understanding of one's self.

A. Moods and emotions

B. Work habits

C. Citizenship

D. Awareness of one's own needs as well as those of others.

E. Responsibility to self and others.

Grade 2 - Sample Lesson Plan

Unit of Study: Community Workers

General Objectives

To enlarge the child's understanding of his community and of the people who work there.

To develop the child's awareness of job families.

Specific Objectives

The pupils learn how to share ideas and information by:

1. Planning and working together.
2. Sharing and taking turns.
3. Developing a questioning attitude.
4. Making contributions toward the unit (books, pictures, stories, information).
5. Writing and reading experience charts.
6. Learning new words.

Approach

A. Take a walk through the neighborhood, taking note of the workers seen.

B. Read a story about a community helper, either from a book or a current newspaper article.

C. Consider and discuss the work done by parents. Make a chart of work each does and how each job contributes to the community.

D. Interview various neighborhood workers.

I. Understandings

A. Many families living together in a neighborhood make a community.

B. Most of the people who live in your community work to make a living.

C. Often, they work right in the community.

D. There are many different workers in the community.

E. Someday you will become a worker in your community.

F. You will still need the services of the various other community workers.

G. Workers earn money for the work they do.

II. Activities

A. List the workers to be studied.
   1. Workers Who Feed Us
      a. Farmer
      b. Grocer
      c. Milkman
      d. Baker
      e. Restaurant workers
   2. Workers Who Protect Us
      a. Fireman
      b. Policeman
   3. Workers Who Keep Us Healthy
      a. Nurse
      b. Doctor
      c. Dentist
      d. Hospital workers
   4. Workers Who Provide Shelter
      a. Architect
      b. Contractor
      c. Construction worker
      d. Plumber
      e. Electrician
   5. Workers Who Provide Services
      a. Bank employees
      b. Utility employees
      c. Sanitation workers
      d. Teacher
      e. Minister
      f. Factory workers
      g. Bus drivers
      h. Airport workers
      i. Taxi drivers

B. Gather information and ideas from books, filmstrips, films, guest speakers, and individual reports.

C. Arrange committees to work on some of the questions the group wants answered.
   1. Committees may be formed with a small number of pupils in each committee. Each committee is a team which studies and does research (limited and with teacher help) on a different community worker. Within each committee, the assignments may be divided among the individual members of that committee.

D. Make a picture map of the district surrounding the school. List the workers necessary within that area as compared with those necessary for the entire community.

E. Write stories about the various workers, especially noting their training, responsibilities, and type of dress necessary for their duties.

F. Make a mural of the workers in the community showing how they serve the families who live there and their far-reaching affect toward other communities.

H. Create original songs, poems, and plays about various workers.

I. Construct the neighborhood using shoe boxes or other suitable boxes for the various buildings. Include, where possible, constructed figures of the people at work in their own setting.

1. Shoe Box Buildings

   Materials needed - shoe boxes, tape, tempera paint, soap powder, water, plastic bag pieces, scissors.

   Procedure - Use construction paper for streets and lawns. Trucks, buses, and cars can be furnished by the children.

   (a) Inspect the shoe boxes for torn places which should be mended with tape.
   (b) Mix soap powder with water and tempera to make a "stucco" paste.
   (c) Draw doors and windows on the box with pencil, then cut.
   (d) Cut windows from the plastic bags and glue to the inside of the building.
   (e) Spread the "stucco" mixture onto the box.
   (f) Paint the brick or other desired finishes onto the boxes.

2. Paper Roll Figures

   Materials needed - newspapers, tape, paste, string, pipe cleaners, construction paper, paint.

   Procedure - Roll sheets of newspaper into long cylinders and tape. Make fat, long cylinders for bodies and thin, shorter ones for legs and arms. Tie cylinders tightly above and below the arms. Tape newspapers as padding on places you want to thicken, then add clothing of construction paper and pipe cleaners for extra detail. Paint the finished figure.

J. Make a dictionary of new words.

III. Evaluation

A. Did the children learn how to utilize resource materials to get needed information?

B. Did the unit help improve their reading, writing and spelling skills?

C. Was there a cooperative sharing of ideas and interests as well as materials?

D. Did the pupils learn of the contributions of the many community helpers?

E. Are they now able to classify the helpers according to the services each renders?

F. Do pupils realize and appreciate the interdependence of each worker?

G. Are pupils beginning to make vocational choices?

Correlation With Other Subject Matter

Arithmetic

1. Learn to count money and to make change.
2. Estimating and measuring for construction activities.
3. Deeper understanding of any mathematical terms encountered.

Language Arts

1. Writing and reading experience charts.
2. Reading for information
3. Creative writing experiences
4. Oral expression

Music

1. Learning and singing songs about workers
2. Listening to records
3. Singing games

Science

1. Note and discuss weather conditions under which each helper works. Does it affect his work and how?

Art

1. Making a mural
2. Constructing buildings and figures
3. Pictures painted or drawn to accompany stories
4. Making of slides

Grade 2 - Sample Lesson Plan

Unit of Study: Career Planning - What Will I Be?

General Objectives

To help children understand that career planning is a phase of life planning.

To provide children with the knowledge of and an opportunity for choice from the wide range of job opportunities available.

To start pupils toward a program of objective self evaluation.

Specific Objectives

1. To help children gain the knowledge of how and where to get needed information.
   a. through the use of books
   b. through use of visual aids
   c. through the personal interview
2. To help children learn how to share ideas and take turns.
3. To help children learn how to use materials cooperatively.
4. To help children grow in initiative and creative ability.
5. To help children learn to follow directions and practice self control in group situations.

Approach

A. As an outgrowth of the preceeding unit on Introduction to the World of Work, this unit can be approached by letting each child write an original story on "When I Grow Up, I Want to Be."

B. Arouse student interest through field trips, films, and class discussions.

I. Understandings

A. Each person has a responsibility for the welfare of the community.

B. The personal characteristics and standards we are expected to develop during our school years are some of the same ones we will be expected to have when we enter into the world of work.

C. Certain jobs require specific training.

D. Our interests, abilities, and hobbies often enter into our choice of work.

E. Good health and careful grooming are important assets now as well as in later years.

II. Activities

A. Make an "I Want To Be" bulletin board.
   1. Cut paper heads from construction paper. Features made from scraps of paper or yarn can be added. Each child will make a hat that shows his occupational goal and glue it to the head. He will then write an original story to accompany his head.

B. Children can write riddles describing their occupational choice.

C. Pupils will discuss and list on a chart the personal qualities an employer expects of his employee.
   1. An employee should be:

Polite	Clean and Healthy
Kind	Friendly
Cooperative	Honest
Respectful	Truthful
Helpful	Trustworthy
Punctual	Reliable
Industrious	Dependable

D. Each child will make a paper bag puppet of a person in his occupational goal.
   1. Materials needed - paper bags, yarn, ribbons, scraps of material, construction paper
   2. Procedure - Make features such as eyes, mouth and ears of construction paper. Hair, eyelashes, hats, and other interesting features can be added with yarn, ribbons, scraps of material, and construction paper.

E. Each child will make a jigsaw puzzle of people at work in his chosen field.

F. Children will make a "television show" to illustrate what it is that each wants to be, what he will have to do in order to work in that field, and what work he would be doing in his particular field.

G. Keep a vocabulary dictionary.

H. Each child can make a list of rules and standards for workers in his field.

I. Guest speakers, reports, and an original play could be used to provide a modified Career Day which could be shared with other classes.

J. At the beginning of the unit, the teacher could encourage each child to develop a hobby. As a culminating activity, each child can share the satisfaction he has derived from his hobby with the others and tell why he will or will not continue his hobby.

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1. There are many kinds of hobbies from which to choose -
   a. Making things
   b. Doing things
   c. Studying things
   d. Collecting things

K. The teacher can assist each child in collecting information about his interests, aptitudes, and personal traits.
   1. Self appraisal at this grade level can be done only on a minimal basis, but it is a start toward future self evaluation that is so important for career planning.

III. <u>Evaluation</u>

A. Are children aware that different skills and training are required for different kinds of work?

B. Has each child developed an understanding of the need for a hobby?

C. Has each child made a vocational choice?

D. Have children become more objective in assessing their own personal habits and characteristics?

E. Have pupils gained in courtesy and respect for the rights of others?

F. Can pupils disc[illegible] the skill and training required for the particular job in which he [illegible] interested?

Correlation With Other Subject Matter

Arithmetic

1. Learning to tell time in order to keep reports brief enough so that everyone gets a chance to participate.
2. Counting the number of chairs needed for parents and pupils who come to the culminating exercise.
3. Estimating and measuring for construction activities.

Language Arts

1. Reading chart stories, stories, booklets, and poems.
2. Viewing and discussing films and filmstrips.
3. Writing individual and group stories improves written language.
4. Discussion and interviews with workers improves spoken language.
5. Learning and defining new words to be added to vocabularies.
6. Dramatic play encourages creative language development.

Music

1. Development comes through singing and listening to songs and records.

Arts

1. The unit will live through the creativity inspired by those lessons which use various medias for free expression.

Career Education Fields and Related Subject Area

Grade 3

Language Arts
- Communication and Media Occupations
- Public Services
- Personal Services
- Transportation

Social Studies
- Construction
- Public Services

Science
- Environmental Control

Health and Physical Education
- Hospitality and Recreation

Music and Art
- Fine Arts and Humanities

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Grade 1 - Purpose and Objectives

Purpose:

Third grade children are developing their concepts of time and space. Basic skills are extended and refined while the world of work is presented to capitalize upon the child's perceptual developments and his natural curosity. Career awareness is related to Indianapolis, past and present and other cities of the world.

Objectives:

I. To help children develop a positive attitude toward the world of work.

   A. Work has dignity
      1. People work for many reasons.
         a. People earn money for the work they do.
         b. There are many satisfactions in work.
         c. The responsibility of a job helps to develop a sense of value.

   B. All jobs are important.

II. To provide general experiences and information about the world of work.

   A. Children gain information through learning excursions.

   B. Workers are dependent upon one another.

   C. Different jobs require different skills.

   D. Basic skills learned in school help to prepare children for the world of work.

III. To make pupils aware that people earn their livings in many different ways.

   A. In Indianapolis
      1. Past occupations
      2. Present occupations
      3. Future occupations

   B. In America
      1. Washington, D.C.
      2. Boston
      3. Philadelphia
      4. Williamsburg
      5. San Francisco

   C. In other countries
      1. Bangkok
      2. Quebec
      3. Rome
      4. Moscow
      5. Montreal

Grade 3 - Sample Lesson Plans

Unit of Study: The World of Work

Introduction lesson for career awareness.

Objective

To create an awareness of expectations in the world of work.

I. Personal Characteristics

A. Learning to get along with others at an early age is a good preparation for all jobs.

B. Reference
1. Reliability
2. Trustworthy
3. Careful
4. Ability
a. academic
b. mechanical
c. social

II. Qualities

A. Certain qualities are important to your school success now and they will be important to your employer.
1. You can be pleasant
2. You can be helpful
3. You can be honest
4. You can dress neatly
5. You can be willing to take instructions
6. You can be at work (at school) on time

III. Choosing the right job.

A. Every boy and girl is different.
1. Your interest
2. Your abilities
3. Your schedule
4. Your family

IV. Activities

A. Discuss good work habits expected by their teachers, then compare them to the expectations of employers.

B. Discuss the meaning of "seeing a job through."

C. Find out the many types of jobs held in one's family; community.

D. Make a list of the different occupations discussed.

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1. Discuss the likes and dislikes of each.
2. List the abilities and training required.

E. How to learn about various types of jobs.
1. Field trips
2. Library
3. Discussion with others
4. Magazines, books and pamphlets

III. Evaluation

A. Are early formed habits often carried over into adulthood?

B. Are jobs available to meet individual differences?

C. Are good records and character recommendations important?

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Grade 3 - Sample Lesson Plans

Unit of Study: Communication

General Objective

To create an awareness of different types of communication and its effect on our daily living.

Specific Objective

Children will be aware of communication and its uses.

Approach

Make a list of ways to communicate with people in other cities.

I. Understandings

A. All parts of a city are linked by various means of communications.

B. Many workers are needed to promote communication.

C. Each means of sending messages has certain advantages and disadvantages.

II. Activities

A. People need to know what is going on in their community. Discuss modern types of communication and media occupations.

1. Telephone
   a. Operators
   b. Linemen
   c. Drivers
2. Television
   a. Cameramen
   b. News commentators
   c. Directors
   d. Musicians
3. Newspapers, Books, Magazines
   a. Reporters
   b. Printers
   c. Photographers
4. Radio
   a. Disc jockeys
   b. Sound men
   c. News commentators
5. Letters, Telegrams
   a. Carriers
   b. Dispatchers
   c. Drivers
   d. Operators

B. Discuss communication in the past and its disadvantages.
   1. Indians used smoke to send messages.
      a. Communication was halted during rainfalls and at night.
   2. Messages were carried by runners and horseback.
      a. Communication was often slow because of bad weather and tiredness of the messenger.
   3. Messages were sent by light reflections.
      a. They were limited to daylight.
      b. Cloudy days made it impossible to send messages by reflection.
      c. Messages could be sent to only the people who knew the code.

C. Discuss ways which stores and factories are dependent on communication.

D. Field trips

III. Evaluation

A. Do the children understand that all parts of a city are linked by communication?

B. Have the children learned that many workers are needed to promote communication?

C. Do the children understand the advantages and disadvantages of various types of communication?

Grade 3 - Sample Lesson Plans

Unit of Study: Self Concept (Parts I, II)

General Objective

To develop self-assurance. An individual with a good wholesome feeling of himself will feel good toward others.

Specific Objective

To help students develop positive attitudes toward themselves and the world of work.

Approach

Have students write a paragraph on "What I Think of Myself." What an individual thinks of himself is often expressed through relationships with others.

I. Understandings

A. Everyone has some kind of personality.
   1. Personality includes the whole person; manners, expression, character, ideas, habits and beliefs.
   2. A positive self-concept is a basic attribute to a better personality.

B. The ability to relate to others is an important factor in choosing a career.
   1. A person with a positive self-concept is able to relate to many different types of people.
   2. Personalities change and develop according to encountered experiences.

C. Everyone needs to respect his own intelligence, skills and character qualities.

II. Activities

A. Discuss the paragraphs written on "What I Think of Myself."

B. Discuss how various experiences, characteristics and attitudes of oneself help to build personality.
   1. Environmental influences
      a. Family
      b. Friends
      c. Jobs
      d. Schools
      e. Recreational Activities
   2. A good personality is one which satisfies the person himself and is pleasing to others.
      a. A feeling of worth and development in interesting ways.

b. The ability to get along with others.
c. Well-rounded
   (1) Different interests to keep one happy and stimulated.
   (2) A development of possibilities.
d. Self-confidence grows out of success. An individual who knows his abilities and limitations feels secure and is likely to succeed.

C. Discuss basics for a good personality.
1. Interest in a variety of people and what they do - hobbies, sports, etc.
2. Enthusiasm
   a. Listen to the opinions of others.
   b. Have interest and respect for people of other races, religions.
3. The ability to make others feel at ease.
4. Repeat only pleasant things about others.
5. Courtesy reflects kindness and consideration.
6. People with charm are friendly and sincere.

D. Discuss individual differences. Every person is high on some measures and low on others.
1. Abilities
   a. Mental
      (1) Good reasoning and understanding
      (2) Expressive thoughts
      (3) Creativity
      (4) Abstract organization
      (5) Possible careers
         (a) Teachers
         (b) Lawyers
         (c) Writers
         (d) Scientists
         (e) Clerical
   b. Physical
      (1) Skill and strength
      (2) Possible careers
         (a) Manual laborers
         (b) Athletes
         (c) Performers
2. Interests
   a. Everyone has special interest and talents that can be developed.
      (1) School subjects and activities help to develop interests.
      (2) Sharing common interests help to meet new people.
      (3) A variety of interests and experiences help a person to find his best abilities.
3. Experiences
   a. All experiences affect a person's personality.
   b. Every person thinks the way he does because he's learned to think that way.

c. Many habits formed at an early age often carry over into adulthood.
d. New experiences and success are needed, to develop a person's personality.

4. Distortions
   a. The picture a person has of himself affects the way he acts and thinks.
      (1) Superior
      (2) Inferior
      (3) Failure

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Part II

To the Teacher:

Part II is to relate family and school life to the world of work. The students of today will be the citizens of tomorrow. They will get ideas about their future work from the activities in which they are now involved. Their abilities and skills can be developed to benefit them later in life.

I. The importance of homelife for careers.

A. Home responsibilities help a person to become a skilled worker.
   1. Accepting responsibilities
   2. Seeing a job through
   3. Using time wisely

B. Basic needs met in the home help to prepare an individual to work with others.
   1. A feeling of worth
   2. Security
   3. Being able to accept criticism
   4. A feeling of belonging
   5. The ability to share
   6. Respect for others
   7. Interdependence
   8. Cooperation

C. School life is an important tool for the world of work.
   1. Group activities help a person in many ways.
      a. Share ideas
      b. Self-expression
      c. Getting along with others
      d. Team work
      e. New experiences
   2. Good criterias set by teachers.
      a. Getting to school on time
      b. Courses of general knowledge
      c. Following instructions
      d. Good work habits
      e. Organization of time
      f. Using good judgment
      g. Honesty
      h. Good work attitudes

D. Expectations on the job.
   1. Employers have certain requirements for their employees.
      a. Knowing how to work with others.
      b. Good attitudes about self, work and others.
      c. Being able to follow instructions.
      d. Using time wisely
      e. Enthisiasm about their job.
      f. Growth in knowledge and skill

III. Evaluation

A. Do the students understand that being able to relate to others is an important aspect in the world of work?

B. Are the students able to look at themselves realistically?

C. Are the students aware of the various ways of improving their personalities?

D. Do students realize the importance of a good self-concept?

E. Do students understand that an individual's goals should be based on his abilities?

F. Are the students aware that their goals and personalities will be varied because of experiences and growth?

G. Do the students understand the expectations in the world of work?

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Career Education Fields and Related Classroom Activities
Grades 4-6

Language Arts
- Communications and media occupations

Social Studies
- Marketing and distribution
- Manufacturing
- Transportation
- Public services

Science
- Environmental control
- Manufacturing

Mathematics
- Marketing and distribution
- Business and office occupations
- Personal service

Art
- Humanities
- Fine arts

Music
- Fine arts
- Humanities

Physical Education
- Hospitality
- Recreation

Grades 4-6 Purposes and Objectives

Purpose:

In grades four through six the Social Studies curriculum is extended in this sequence: the state of Indiana, the western hemisphere and the nations of the world. The inclusion of history and geography provides the teacher with a more varied approach. The child is able to grasp more complicated concepts of the world of work. The relationship of career awareness to other subject areas and to personal-social growth can be developed. Children are thus able to gain the understanding that many factors affect a person's situation in the world of work.

Objectives:

I. To increase students' interest in vocations by:

   A. Presenting information about occupations in their city, nation, and the world.

   B. Arranging for visitors from various occupations to talk with students.

   C. Providing field trips to local places of employment to see people at work.

   D. Relating regular classroom subject matter to the world of work.

II. To develop and support a positive attitude toward work by:

   A. Planning and arranging bulletin boards on the subject of occupations.

   B. Writing letters of thanks to community speakers.

   C. Interviewing parents and friends about the elements in their work.

III. To help each student develop good self concepts that will result in a vocation of his own choosing.

IV. To help each student develop the attitudes that are essential to regular employment by:

   A. Fostering cooperation and consideration for others in school situations.

   B. Emphasizing the importance of dependability.

   C. Developing an awareness of the elements of decision-making and the importance of making wise choices.

V. To help children develop varied interests that will provide an expanded basis for vocational choice.

Grade 4 - Sample Lesson Plan

Unit of Study: Occupations in Financial Institutions

General Objective

To increase students' interest in vocations.

Specific Objective

To enable children to demonstrate an awareness of the personal and professional qualifications of bank employees through discussion, role playing and math activities.

Approach

Present a bank savings account book to pupils for examination. Have the pupils tell what they know about banks and banking services.

I. Understandings

A. Specialization exists in complex socities.

B. Changing technology alters life and work.

C. Career information comes from many sources and experiences.

D. Attitudes, values, interests and activities affect vocation choice.

E. Different skills affect job choice

II. Activities

A. Plan a field trip to a bank.
   1. Preparation
      a. Present appropriate vocabulary including a list of workers and their jobs.
      b. Discuss students' experience with banks, and other prior knowledge in this area.

B. The Field Trip

C. Follow-up activities
   1. Role playing: children play the parts of depositors, loan applicants, bank employees, etc.
   2. Children make money for this activity from art materials.
   3. Children work math problems based on banking activities.
   4. Children play "What's My Line?" using duties and personal and professional qualifications of bank employees.

III. Evaluation

A. Are children aware that specialization exists in banking vocations?

B. Do children understand the role of technology in modern banking services?

C. Have the children added to their store of career information?

D. Are the children beginning to understand that their own attitudes, values, interests and activities will affect their future vocational choices?

E. Do the children recognize the different skills that are necessary in various banking jobs?

Resource Materials

Art paper, crayons, empty shoeboxes.

Books

Shay, Arthur, What Happens When You Put Money in the Bank

Sootin, Laura, Let's Go to the Bank

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Career Education Fields and Related Classroom Activities
Grades 4-6

Language Arts
- Communications and media occupations

Social Studies
- Marketing and distribution
- Manufacturing
- Transportation
- Public services

Science
- Environmental control
- Manufacturing

Mathematics
- Marketing and distribution
- Business and office occupations
- Personal service

Art
- Humanities
- Fine arts

Music
- Fine arts
- Humanities

Physical Education
- Hospitality
- Recreation

Grades 4-6 Purposes and Objectives

Purpose:

In grades four through six the Social Studies curriculum is extended in this sequence: the state of Indiana, the western hemisphere and the nations of the world. The inclusion of history and geography provides the teacher with a more varied approach. The child is able to grasp more complicated concepts of the world of work. The relationship of career awareness to other subject areas and to personal-social growth can be developed. Children are thus able to gain the understanding that many factors affect a person's situation in the world of work.

Objectives:

I. To increase students' interest in vocations by:

   A. Presenting information about occupations in their city, nation, and the world.

   B. Arranging for visitors from various occupations to talk with students.

   C. Providing field trips to local places of employment to see people at work.

   D. Relating regular classroom subject matter to the world of work.

II. To develop and support a positive attitude toward work by:

   A. Planning and arranging bulletin boards on the subject of occupations.

   B. Writing letters of thanks to community speakers.

   C. Interviewing parents and friends about the elements in their work.

III. To help each student develop good self concepts that will result in a vocation of his own choosing.

IV. To help each student develop the attitudes that are essential to regular employment by:

   A. Fostering cooperation and consideration for others in school situations.

   B. Emphasizing the importance of dependability.

   C. Developing an awareness of the elements of decision-making and the importance of making wise choices.

V. To help children develop varied interests that will provide an expanded basis for vocational choice.

Grade 5 - Sample Lesson Plan

Unit of Study: Occupational Understanding

General Objectives

1. To enlarge the child's understanding of his community and of the people who work there.
2. To help the children learn to gain information through the interview method.

Specific Objectives

1. To develop and support a positive attitude.
2. To gain more confidence when meeting adults.
3. To become more sensitive to his community and workers.
4. To improve in research and reporting skills.
5. To gain knowledge about the world of work.
6. To develop respect for the world and dignity of all types of labor.

Approach

Each pupil will select a job that interests him by using S.R.A. Work Kits (Widening Occupational Roles Kit).

I. Understandings

A. Adults have individual personal and human characteristics.

B. People choose occupations for various reasons.

C. All types of labor have worth and dignity.

D. Different jobs require specific preparations and specific skills.

E. Accurate reporting requires planned research.

II. Activities

A. Each pupil is urged to find out specific information about his job:
   1. benefits in
   2. amount of money earned
   3. amount of schooling required
   4. necessary courses in school
   5. working conditions on the job
      a. hazards
      b. noise
   6. amount of time for work, lunch and breaks

B. Prepare a list of questions to ask each person about his work.

C. Practice asking the questions using the tape recorder and with classmates.

D. Prepare an introductory statement before each taping which contains pupil's name, person's name being interviewed, his place of work and job title.

III. Evaluation

A. Are the children developing a more positive attitude toward work?

B. Is the pupil becoming more sensitive to his community and workers?

C. Have the pupils improved in research and reporting skills?

D. Have the children gained knowledge about the world of work?

E. Are the pupils showing signs of respect for the worth and dignity of all types of labor?

Career Education Fields and Related Classroom Activities
Grades 4-6

Language Arts
- Communications and media occupations

Social Studies
- Marketing and distribution
- Manufacturing
- Transportation
- Public services

Science
- Environmental control
- Manufacturing

Mathematics
- Marketing and distribution
- Business and office occupations
- Personal service

Art
- Humanities
- Fine arts

Music
- Fine arts
- Humanities

Physical Education
- Hospitality
- Recreation

Grades 4-6 Purposes and Objectives

Purpose:

In grades four through six the Social Studies curriculum is extended in this sequence: the state of Indiana, the western hemisphere and the nations of the world. The inclusion of history and geography provides the teacher with a more varied approach. The child is able to grasp more complicated concepts of the world of work. The relationship of career awareness to other subject areas and to personal-social growth can be developed. Children are thus able to gain the understanding that many factors affect a person's situation in the world of work.

Objectives:

I. To increase students' interest in vocations by:

   A. Presenting information about occupations in their city, nation, and the world.

   B. Arranging for visitors from various occupations to talk with students.

   C. Providing field trips to local places of employment to see people at work.

   D. Relating regular classroom subject matter to the world of work.

II. To develop and support a positive attitude toward work by:

   A. Planning and arranging bulletin boards on the subject of occupations.

   B. Writing letters of thanks to community speakers.

   C. Interviewing parents and friends about the elements in their work.

III. To help each student develop good self concepts that will result in a vocation of his own choosing.

IV. To help each student develop the attitudes that are essential to regular employment by:

   A. Fostering cooperation and consideration for others in school situations.

   B. Emphasizing the importance of dependability.

   C. Developing an awareness of the elements of decision-making and the importance of making wise choices.

V. To help children develop varied interests that will provide an expanded basis for vocational choice.

Grade 6 - Sample Lesson Plan

Unit of Study: Occupational Understanding

General Objective

To understand and appreciate the variety of workers and the skills needed to build a house and to understand the interdependence among workers.

Specific Objectives

1. To help pupils realize that a large number of workers are needed to build a house.
2. To gain knowledge of the work of surveyors, architects, heavy equipment operators, cement-finishers, carpenters, plumbers, electricians, brickmasons, painters, landscapers and others.

Approach

View films and filmstrips pertaining to building a house.

Write letters to various companies and/or unions requesting a representative to speak to the class.

I. Understandings

A. Many workers, skilled, semi-skilled and unskilled, are needed in the building of a house.

B. There are basic steps in the construction of a house that must be observed.

C. Each worker has particular tools and vocabulary peculiar to his area of work.

II. Activities

A. Visit a housing development.
   1. to see the building process in operation.
   2. to develop a sense of sequence in the construction of a house.
   3. talk with workers as they work, to discuss their likes and dislikes of the occupation.

B. Write about an occupation related to the building of a house and report to class.

C. Collect pictures and articles about workers in the housing trade.

D. Make up stories about workers in booklet form containing simple illustrations. Share these with the primary grades.

E. Write some "Who Am I?" descriptive paragraphs.

III. Evaluation

A. Can the children name at least ten occupations related to the building trade in two minutes?

B. Are the students able to arrange the steps in the construction of a house in correct sequence?

C. Are the students able to match workers with tools and workers with vocabulary?

9541

RELATED RESOURCES

8542

FIELD TRIPS

PLACE	CONTACT	TELEPHONE NUMBER
Police Department	Sgt. Heddon	633-7813
Garfield Park Greenhouse	John Phillips	784-3044
Indiana Bell Telephone Co.	Wanda Ludlow	630-2230
Fire Department	(See local station)	
Indianapolis Humane Society	Mrs. Zink	293-5656
Indianapolis Motor Speedway		241-2501
Normandy Farms	Mrs. Miracle	291-2213
Burger Chef	Mr. Strack	635-9440
Powerama (Allison Div. GMC)		243-1307
Indiana State Museum	Mrs. Finney	633-4948
Indiana National Bank	Cindy Burnett	263-5274
Central Library	Miss Strand	635-5662
Ayres Barnyard (Eastertime)		262-9737
City-County Bldg. (Jr. High)		633-3200
Indianapolis Zoo	Education Div.	547-3577
Indianapolis Post Office	Tom Moore	633-7218
Indianapolis News-Star	Mrs. Keller	633-9058
Colonial Baking Co.	Lois L. Wabnitz	923-3333
Weir Cook Airport	Marcia Forbes (no tour guide)	244-9538
Methodist Hospital (Children's Pavilion)	Bonnie Miles	924-8517
Indianapolis City Market	Market Master	633-3209
Children's Museum	David Casady	925-9263
TV Channel 13	Miss Calloway	639-2311
Stonycreek Farm (October) (Pumpkin Farm)	Jan Schmierer	(4)773-3344

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PLACE	CONTACT	TELEPHONE NUMBER
Adrian's Orchard 500 W. Epler Avenue		784-0550
Broad Ripple Planetarium	(See principal for special forms)	
Allington Planetarium	(See principal for special forms)	
Lilly's Orchard		251-3726
War Memorial Plaza (Veteran's Day)		635-1964
Indianapolis Museum of Art		923-1331
James Whitcomb Riley Home		631-5885
Scottish Rite Cathedral		635-2301
A.F.N.B.	Vera Jones	633-1461
Conner Prairie Farm		773-3633

Personal-Social Books

Alexander, Anne, Noise in the Night, Rand, McNally, Chicago, 1968.

Bailey, Carolyn Sherwin, The Little Rabbit Who Wanted Red Wings, Platt, New York, 1945.

Baum, Betty, A New Home for Theresa, Knopf, New York, 1968.

Blim, Jerrold, The Smallest Boy in the Class, Morrow, New York, 1949.

Bright, Robert, My Red Umbrella, Morrow, New York, 1959.

Carlson, Natalie Savage, Ann, Aurelia and Dorothy, Harper and Row, New York, 1968.

Clayton, Ed., Martin Luther King, The Peaceful Warrior, Printice Hall, New Jersey, 1968.

Cohen, Miriam, Will I Have A Friend?, MacMillan, New York, 1967.

DeSantis, Mallen, Bubble Baths and Hair Bows, Doubleday, New York, 1963.

Ets, Marie Hall, Bad Boy, Good Boy, Crowell, New York, 1967.

Haywood, Carolyn, Penny and Peter, Harcourt, Brace & World, New York, 1964.

Heyward, DuBose, The Country Bunny and the Little Gold Shoes, Houghton, Boston, 1939.

Hill, Elizabeth Starr, Evan's Corner, Holt, New York, 1967.

Hoban, Russell, A Birthday for Frances, Harper & Row, New York, 1968.

Hoban, Russell, Baby Sister for Francis, Harper & Row, New York, 1964.

Hoban, Russell, Bargain for Francis, Harper & Row, New York, 1970.

Hoban, Russell, Best Friends for Frances, Harper & Row, New York.

Hoban, Russell, Bread and Jam for Francis, Harper & Row, New York, 1964.

Johnston, Johanna, That's Right Edie, Putnam, New York, 1966.

Lansing, Jane K., Being Nice Is Lots of Fun, Hart Publishing Co., Inc., New York, 1955.

Lipkind, William, Finder's Keepers, Harcourt, New York, 1951.

Ness, Evaline, Sam, Bangs and Moonshine, Holt, New York, 1966.

Stolz, Mary, The Bully of Barkham Street, Harper and Row, New York, 1963.

Udry, Janice, Mary Jo's Grandmother, Whitman, Chicago, 1970.

Udry, Janice, What Mary Jo Shared, Whitman, Chicago, 1966.

Udry, Janice, What Mary Jo Wanted, Whitman, Chicago, 1968.

Waber, Bernard, You Look Ridiculous Said the Rhinoceros to the Hippopotamus, Houghton, Mifflin, Boston, 1966.

Zion, Gene, The Sugar Mouse Cake, Scribner, New York, 1964.

Zolotow, Charlotte, Big Sister and Little Sister, Harper & Row, New York, 1966.

Zolotow, Charlotte, If It Weren't for You, Harper & Row, New York, 1966.

8546

Pre-Vocational Books

Asimon, Isaac, ABC's of Space, Walker, 1968.

Bendick, Jeanne, The First Book of Automobiles, Watts, 1966.

Brewster, Benjamin, First Book of Firemen, Watts, 1951.

Brindze, Ruth, All About Courts and the Law, Random House, New York, 1964.

Brindze, Ruth, All About Undersea Exploration, Random House, New York, 1960.

Buckley, Peter, Living as Neighbors, Holt, Rhinehart & Winston, New York, 1966.

Cehster, Michael, Let's Go to Build A Suspension Bridge, Putnam, New York, 1966.

Colonius, Lillian, At the Bakery, Milmont, Chicago, 1967.

Cooke, Davic Coxe, How Automobiles Are Made, Dodd, 1957.

Gould, Jack, All About Radio and Television, Random House, New York, 1958.

Lifton, Walter M., What Could I Be?, Science Research Associates, Chicago, 1960.

Meshover, Leonard, Urban Living Series, Benefic Press, Chicago, 1966.
- You Visit A Steamship
- You Visit An Airport
- You Visit A Newspaper
- You Visit A Television Station
- You Visit A Bakery
- You Visit A Spaghetti Factory
- You Visit A Post Office
- You Visit A Telephone Company
- You Visit A Dairy
- You Visit A Clothing Factory

Shay, Arthur, What Happens When You Put Money in the Bank, Reilly & Lee, 1967.

Sootin, Laura, Let's Go to a Bank, Putnam, New York, 1957.

Wilkinson, Jean and Ned, Beginning Sextant Series, Sextant Systems, Inc., Milwaukee, 1970.
- Come to Work With Us in Aerospace
- Come to Work With Us in A Bank
- Come to Work With Us in A Dairy
- Come to Work With Us in A Department Store
- Come to Work With Us in A Hospital

Come to Work With Us in A Hotel
Come to Work With Us in House Construction
Come to Work With Us in Newspaper
Come to Work With Us at A Telephone Company
Come to Work With Us in A Toy Factory
Come to Work With Us in A T.V. Station

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Other materials available for loan from the elementary guidance office. See your counselor about their use.

P = Primary
I = Intermediate

Filmstrips

Choosing Your Career - I

Developing Your Study Skills - I

Dropping Out: Road to Nowhere - I

Exploding the Myth of Prejudice - I

Four Who Quit - I

Guess Who's in a Group (set of 3 filmstrips) - P

Hung Up on Homework - I

Let's Go Filmstrip Series with accompanying records and books - P
a. Let's Go to a Bank
b. Let's Go to a Firehouse
c. Let's Go to a Library
d. Let's Go to a Police Station
e. Let's Go to a Post Office
f. Let's Go to a School

What Do You Expect of Others (set of 3 filmstrips) - P

What Happens Between People (set of 2 filmstrips) - P

Who Do You Think You Are (set of 3 filmstrips) - P

Wal;y the Worker Watcher Series - P
a. Introductory Filmstrip (we all work)
b. Junior Homemaker and Newspaper Boy
c. Mail Delivery
d. Electrical Worker
e. Telephone Workers
f. Dairy Delivery

You Got Mad; Are You Glad (set of 2 filmstrips) - P

Film

They Beat the Odds - I

8549

Kits

Character Education Curriculum - a curriculum developed by the Character Education Project, American Institute for Character Education, San Antonio, Texas, based upon Freedom's Code.

a. First Semester - Living With Me
One book and one record for each grade (1-6) including exploration units on honesty, generosity, fairness, kindness, living honorably, helping those in need, having convictions and courage, tolerance, using time and talents creditably, providing security for self and dependents, understanding and fulfilling citizen obligations, standing for truth, and defending freedom's human rights.

b. Second Semester - Our Rights and Responsibilities
One book for each grade (1-6) including exploration units on freedom of speech, freedom of choice, citizenship, economic security, equal opportunity, and the right to be an individual.

c. A special kit has been designed for character education in the kindergarten. First semester's materials include 6 books in the Happy Life series, 6 accompanying filmstrips, 6 flip books, and a story wheel. Each book contains units on fairness, honesty, generosity, kindness, and helpfulness.

Second semester's activities are from the book You and Me. Units included are "You and Me at Home," "You and Me at School," and "You and Me in the Neighborhood."

SRA Focus on Self-Development Kits are currently available through the counselor for use in some schools. We have 1 stages to the Focus program.

a. Stage 1: (grades K-2).
Awareness. Emphasis is on development of awareness of self, others, and environment. Topics included are self-concept development, awareness of environment, socialization, sharing and problem solving.

b. Stage 2: (grades 2-4).
Responding. Stories and activities encourage the child's responses to his personal, social, emotional and intellectual life. Topics included are self-concept, abilities, limitations, interests, concerns, communications, companionship, acceptance, rejection, and others important to peer conscious middle graders.

c. Stage 3: (grades 4-6).
Involvement. This stage continues developing the concepts introduced in Stages 1 and 2. Currently, we do not have this stage available.

PERSONAL-SOCIAL FILMS AVAILABLE
FROM
INDIANAPOLIS CENTRAL LIBRARY, FILMS DIVISION
PHONE 635-5662, Ext. 67 or 68

P = Primary
I = Intermediate

A Child's Crhistmas in Wales - I

A Scrap of Paper and a Piece of String (interdependency) - P and I

Ain't God Good to Indiana, 30 min., color - 4th grade

Biography of a Rookie, 55 min. (Willie Davis-Los Angeles Dodgers) - I

Clown - P and I

Curious George Rides a Bike, 10 min., color - P

Evans Corner (resourcefulness; responsibility - P and I

First Cigarette, 9½ min., color - I

George Washington Carver (Negro history) - I

Helen Keller in Her Story - I

Litterbug (ecology, personal responsibility), 8 min., color - P and I

Neighbors (tolerance) - P and I

Noises in the Night (fears), 9 min. (animated) - P

Smoking and Health: A Report to Youth, 13 min., color - I

The Golden Fish (responsibility) - P and I

The Pidgeon that Worked a Miracle (love) Walt Disney, 47 min., color - I

The Princess of Patchin' Place (the birth of a baby affects others in the family) 14 min. - P and I

The Red Balloon - P and I

Skinny and Fatty (friendship and perseverance), 50 min. - P and I

The Steadfast Tin Soldier, 14 min. - P

The Story about Ping, 10 min., color - P

The Toymaker (prejudice) - P and I

W. C. Handy - I

Why Man Creates, 24 min., color - I

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PRE-VOCATIONAL FILMS AVAILABLE
FROM
IPS AUDIO-VISUAL DEPARTMENT
PHONE 634-2381

P = Primary
I = Intermediate

Building a House (skills), 12 min. - P

Bus Driver, 11 min. - P and I

Community Helpers - The Sanitation Department, 11 min. - P

Corn Farmer, 11 min. - P

Dairy Farm, 13½ min. - P and I

Duke Thomas - Mailman, 15 min, - P and I

Fireman on Guard, 11 min. - P and I

Food Cannery, 10 min. - P and I

Going to School is Your Job, 15 min. - P and I

Policeman, 11 min. - P and I

Policeman - Day and Night, 11 min. - P and I

Over the Plate (baseball player), 17 min. - I

Truck Driver, 17 min. - P and I

PERSONAL-SOCIAL FILMS AVAILABLE
FROM
IPS AUDIO-VISUAL DEPARTMENT
PHONE 634-2381

P = Primary
I = Intermediate

Act Your Age (emotional maturity), 14 min. - I

Am I Trustworthy - I

Beginning Responsibility: Doing Things for Ourselves in School, 11 min. - P

Better Use of Leisure Time, 10 min. - I

Choice is Yours (alcohol education) - I

Everyday Courtesy - I

Getting Along with Others, 11 min. - P and I

Guidance - What's Right (morals and manners) - P

Helen Keller in Her Story - I

How Friendly Are You? 10 min. - P and I

How to Read a Book - I

Improve Your Study Habits - I

Keeping Neat and Clean - P

Let's Be Good Citizens at School - P

Let's Be Good Citizens in Our Neighborhood - P

Listen Well, Learn Well - P

Manners at School - P

Manners in Public - I

Nothing to Do! (leisure time), 10 min. - P and I

School Problems: Getting Along with Others, 10 min. - P and I

The Toymaker (prejudice) - P and I

Values: Understanding Others, 8 min. - P and I

What It Means to be An American - I

What to Do About Upset Feelings - P and I

FILMSTRIPS AVAILABLE
FROM
IPS AUDIO-VISUAL DEPARTMENT
PHONE 634-2381

P = Primary
I = Intermediate

Americans All - I

American Negro Quest for Equality - I

Automobile Has Two Big Eyes - P

Better Study Habits: Handwriting, Punctuation, Reading, Spelling, Study Habits, and Vocabulary - I

Conduct: Responsibility - P

Give Your Friends a Break - I

How to Take a Test - I

Let the Ball Roll - Remember Your Name and Address (with record) - P

Manners Are Lots of Fun - P and I
(Set of 3 filmstrips about school manners, community manners, home manners)

Recognition of Responsibility - I

What Do You Think Series - P
(Martha's Discovery
Mark's Present
Timmy's Choice)

3555

APPENDIX C

JUNIOR HIGH GUIDANCE SYLLABUS

3556

FILM EVALUATION

"IS A CAREER AS A TECHNICIAN FOR YOU?"

I. Background Information

A. Teacher should read before viewing the films.
B. Could be used as a reference sheet throughout the lesson plan.
C. Could be presented to the class after viewing the film.

II. Film summary

III. Vocabulary

IV. Questions before screening

V. Questions after screening

VI. Suggested student activities

VII. Further information

Background

Technicians are among the fastest growing occupational groups in the United States. In recent years the needs of an expanding and increasingly technical economy have greatly intensified the demand not only for engineers and scientists but also for the technical workers who assist them.

The term "technician" as used here refers to technical workers whose jobs require both knowledge and use of scientific and mathematical theory; specialized education or training in some aspect of technology or science and who as a rule work directly with scientists or engineers. The term "technician" has no generally accepted definition. It is used by different employees to refer to workers in a great variety of jobs, requiring a wide range of education and training. It is applied to employees doing relatively routine work, to persons performing work requiring skills within a limited sphere, and to persons doing highly technical work. Among those doing highly technical work are assistants to engineers and scientists. The workers' job titles may be descriptive of their technical level (for example--junior engineer, biological aid, etc.) or their work activity (for example--quality-control technician, production analyst, etc.) Some employers use the word "technician" preceded by adjectives, such as mechanical, electrical, electronics, or chemical which are descriptive of the areas of technology in which their personnel are employed.

In general, the jobs of engineering and science technicians are more limited than those of the engineer or scientist and have a greater practical orientation. Many of these technician jobs require the ability to analyze and solve engineering and science problems and prepare formal reports on experiments, tests or other projects. Some require considerable aptitude in mathematics; others the ability to visualize objects and to make sketches and drawings. Many technician jobs require some familiarity with one or more of the skilled trades. Still others demand extensive knowledge of industrial machinery, tools,

equipment, and processes. Some jobs held by these technicians are supervisory and require both technical knowledge and the ability to supervise people. (Emphasize this.)

Limited listing of technician occupations:

X-Ray Technician
Physics Technician
Medical Technician
Industrial Technician
Forestry Technician
Dental Technician
Electronics Technician
Physical Therapy Technician
Electrocardiographic Technician
Engineering Technician
Chemical Technician
Broadcast Technician
Atomic Energy Technician
Air Conditioning Technician
Special Effects Technician
Photographic Laboratory Technician
Technical Writer Technician

Some related occupations:

Chief Technician
Technical Administrator
Medical Secretary
Sales Representative
Engineering

After screening discussion:

1. What were some of the occupations mentioned in the film? Can you add any?

2. What education or training would be needed in a specific technician type offupation that interests you?

3. What courses in school would assist someone interested in pursuing a career as a technician?

   a. Math
   b. English
   c. Drafting
   d. Electronics
   e. Chemistry

4. Do you think that there will be a greater demand for all types of technicians in the future? Why or why not?

5. What would be some of the advantages and disadvantages in a technician type occupation?

Student activities:

1. Visit library to research a particular area in the field.

2. See counselor for further information.

3. Invite a technician into the classroom to speak or demonstrate.

4. Invite parents in the community who are technicians to speak to the class.

5. Visit installations that rely on technicians and report on the duties of a technician.

6. Show a filmstrip dealing with a specific area.

7. Have members of the class interview a variety of technicians and report back to class.

8. Use SRA Kit for reports, discussion and general information.

9. Have students write to the places listed under "further info." Share responses.

10. Refer to the list of occupations and assign individual oral reports.

Further information:

Mallory Technical Institute
1315 East Washington
Indianapolis, Indiana 46201

American Society for Engineering Education
Technical Institute Council
DuPont Circle Building
1346 Connecticut, N.W.
Washington, D.C. 20005

Engineers' Council for Professional Development
345 East 47th Street
New York, New York 10017

FILM EVALUATION

IS A HEALTH CAREER FOR YOU?"

Introduction:

This film explains and illustrates the many career areas in the health field. Personal qualifications and educational needs are discussed. Important job aspects, employment outlook, the rewards, and advancement are viewed.

Follow-up:

I. There are four major reasons for the rapid and continuing growth of the the health field.

   A. The enormous scientific and technological advancements in health fields.

   B. The growing health-consciousness (health protection) of the American public.

   C. National prosperity and increased earning power enable the public to have more and better medical care.

   D. The nation's population is increasing at the rate of more than three million persons a year.

II. Possibilities in the health field

   A. More men and women are needed in health professions and occupations to put scientific and medical gains into application.

   B. There are jobs in this field for high school graduates and for those with higher education.

   C. There are at least 700 different career possibilities in health professions and occupations, each involves different skills, talents, education, and interests, and its own rewards, challenges, and satisfactions.

   D. Salaries within these occupations are comparable to those in other fields varying according to educational background, experience, and ability.

   E. Fringe benefits are numerous.

   F. Working conditions are excellent.

   G. Job security is usually good.

III. Those interested in investigating career opportunities in medicine and related fields are likely to find one matching their particular area of interest.

A. Medicine, nursing, physical therapy and occupational therapy call for working intimately with all kinds of people having all kinds of problems.

B. Speech audiology and pathology, therapeutic dietics, and psychiatric nursing involve working with people having specialized problems.

C. Areas of medical technology involve carrying out tests in laboratories.

D. Medical or dental assisting and statistical clerking involve secretarial and office work.

IV. Shortages of trained personnel exist in several health professions and occupations so more people are needed in nearly every health career.

A. Leaders in medicine and allied professions estimate that the nation will need 229,000 more nurses, 50,000 physicians, 40,000 speech pathologists, 38,000 medical technologists, 30,000 dietitians and 18,000 medical social workers within the next 5-10 years.

B. They also estimate a need for hundreds of thousands of auxiliary personnel in hospitals, laboratories, and other medical facilities.

V. Desirable personal qualities in a Doctor of Medicine

A. Intelligence

1. Are you a good student?
2. Do you learn relatively easily?
3. If you are not a capable student another career choice should be made.

B. Scientific Curiosity

1. Do you always ask why and how?
2. It takes an inquisitive mind to find the cause and solution to individual medical problems.
3. New discoveries must be stimulated.

VI. Self-Discipline

A. Daily, systemized study is imperative.

B. It takes about nine years or more to complete his formal college, medical school, and post graduate education, so that the medical student must dig in.

C. You must be able to establish standards and routines for yourself and stick to them.

VII. Physical and emotional strength

A. Great pressures begin in medical school and increase in medical practice.

B. The best candidate then is one with good health and emotional strength.

VIII. Interest in people

A. Must sincerely like, understand and enjoy people.

B. He must have compassion; must have feeling for and understand their pain, suffering, needs, and fears.

C. He must regard his patients as individuals.

IX. Objectivity

A. Can you be objective enough to face and weigh all of the facts?

X. Preparing yourself academically

A. In junior high plan to enter high school and college and take courses in preparation for that.

B. Most college admission officers recommend a liberal prep program:

1. 4 years of English
2. 2-3 years of laboratory science (chemistry, biology, physics)
3. 2-4 years of modern foreign language or classical language
4. 3 years of mathematics (2 yrs. algebra, 1 yr. plane geometry)
5. 3-5 years of social studies (history, sociology, economics, political science)

XI. Participating in special activities

A. Extra-curricular activities can help him build a solid background for his future work.

1. Ars Medica Club
2. Medical Explorers Club
3. The Future Physicians Club
4. Science Club

XII. Reviewing the preparatory steps to medical school

A. Complete all courses required for entrance to an accredited college or university.

B. Choose from among elective courses those which broaden intellectual interests.

C. Concentrate on developing good habits of learning and a desirable personality.

D. If your school has a related club and if eligible, join and participate actively.

E. Select an accredited college of arts and sciences or a university.

XIII. Financing a medical education

A. The cost of completing 4 years of college and 4 years of medical school depends upon the school.

B. Most schools have scholarship and loan funds for students in good academic standing.

C. Some grants are given on the basis of scholastic achievement and others on the basis of need.

Where To Write For More Information

The American Medical Association
535 N. Dearborn
Chicago, Illinois 60610

The Association of American
Medical College
2530 Ridge Ave.
Evanston, Illinois 60201

On financial aid to undergraduate students:

National Merit Scholarship Corp.
1580 Sherman Ave.
Evanston, Illinois 60201

Science Talent Search
1719 N. Street, N.W.
Washington, D.C. 20006=

National Honor Society
National Asso. of Secondary School Principals
1201 Sixteenth St., N.W.
Washington, D.C. 20006

Council on Rural Health
American Medical Association
535 N. Dearborn St.
Chicago, Illinois 60610

American Medical Women's Asso., Inc.
Women students only
1790 Broadway
New York, New York 10019

National Medical Fellowship, Inc.
Negro students only
3935 Elm Street
Downers Grove, Illinois 60515

Careers related to medicine

Careers in Rehabilitation
Physical Therapist
Occupational Therapist
Recreation Therapist
Speech Pathologist and Audiologist

Where to write for more information:

Dept. of Health, Education and Welfare
Vocational Rehabilitation Administration
Washington, D.C. 20201

National Society for Crippled Children and Adults
2023 W. Ogden Ave.
Chicago, Illinois 60612

United Cerebral Palsy Association
321 W. 44th St.
New York, New York 10036

Careers in clinical psychology:

American Psychological Association
1200 Seventh St., N.W.
Washington, D.C. 20036

On dentristy:

American Dental Asso. or Smerican Asso. of Dental Schools
211 E. Chicago Ave.
Chicago, Illinois 60611

American Dental Assistants Association
410 First National Bank Building
La Porte, Indiana 46350

Careers in medical social work:

Medical Social Worker
Psychiatric Social Work

Careers in medical technology:

Medical Technologist
Cytotechnologist
Blood Banking Technologist
Nuclear Medical Technologist
Laboratory Assistant
Histologic Technician

Careers in radiologic technology:

X-Ray Technologist

Careers in Dietetics and Nutrition:

Dietitians
Administrative Dietitian
Therapeutic Dietitian
Clinic Dietitian
Teaching Dietitian
Food Service Supervisor

Careers in Nursing:

Registered Nurse
Practical Nurse
Nurse Anesthesist
Nursing Aide and Orderly

Careers in medical office work:

Medical Assistant
Other office and clerical jobs

Other careers in hospitals:

Hospital Administrator
Administrative Assistant
Hospital Pharmacist
Medical Record Librarian
Medical Record Technician
Inhalation Technologist
Operation Room Technician

Where to write for information on some other health careers:

On the biological and other life sciences;

American Chemical Society
1115 Sixteenth St., N.W.
Washington, D.C. 20006

American Institute of Physics
2101 Constitution Ave.
Washington, D.C. 20418

American Physiological Society
9650 Rockville Pike
Bethesda, Maryland 20014

American Society of Biological Chemists
9650 Rockville Pike
Bethesda, Maryland 20014

On the environmental health field:

National Association of Sanitarians
University of Denver
Denver, Colorado 80216

American Industrial Hygiene Association
14125 Prevost St.
Detroit, Michigan

American Society of Civil Engineering
(Sanitary Engineering)
345 East Forty-seventh St.
New York, New York 10017

American Hospital Association
Hospital Engineers
840 North Lake Shore Drive
Chicago, Illinois 60611

On health careers in the Armed Forces

Medical and Health
Department of Defense
Washington, D.C. 20025

FILM EVALUATION

IS A SALES CAREER FOR YOU?"

Introduction:

"Is a Sales Career for You?" acquaints students with the great variety of sales careers available throughout the entire spectrum of business and industry.

It's difficult to imagine anything that is not sold. And if it is sold--there has to be somebody to sell it. The salesman is an important wheel in the country's economy.

The film discusses the nature of the work, the temperament and aptitudes salespeople should have, required education and training, the outlook for employment, where the jobs are, the rewards, the prospects for advancement and what lies ahead in sales occupations.

Follow-up:

1. Salesmen are an important wheel in the country's economy.
2. Almost everything must be sold
3. The different types of salesmen:

   A. Retail (department stores, service stations, drug stores)
   B. Wholesale
   C. Insurance
   D. Real Estate
   E. Manufacturing
   F. Auto Sales

4. Difference between career and job explained.
5. The importance of early planning in high school for a career in sales.
6. Meaning of the following words explained:

   A. Career
   B. Investment
   C. Economy
   D. Diplomatic
   E. Endurance
   F. Accessories
   G. Potential
   H. Initiative
   I. Perseverence
   J. Articulate
   K. Stamina
   L. Canvasser

7. High school courses that may be helpful for a person to become a salesperson:

   A. Business Education
   B. Distributive Education
   C. Psychology
   D. English
   E. Speech

8. Qualities of a good salesperson:

A. Understanding the needs and viewpoints of their customers
B. Poise
C. Energy; vitality
D. Self-confidence
E. Imagination
F. Able to communicate well
G. Self-discipline
H. Plan your work well

Questions and Discussions:

1. What different kinds of salesmen and saleswomen are there?

2. Do you think you might like to be in sales? Why?

3. Even if you think a sales career is for you, shouldn't you know about all the other career opportunities in the world of work before making a decision?

4. What traits and aptitudes should you have to be a good salesperson?

5. What is the employment outlook in this field now? In the next 10 years?

6. Where are salespeople needed in the U.S.?

7. What education or training should you have for a career in sales?

8. What are the prospects for advancement?

9. Are salespeople well paid?

10. Are there opportunities for young people from minority groups in sales?

11. Do you know any salespeople? What do they think of saleswork as a career?

12. What local companies employ salespeople?

13. What was the message in the ballad at the opening and closing of the film?

14. Why is it important to start thinking about your career now?

FILM EVALUATION

"IS A CAREER IN MACHINING FOR YOU?"

Introduction:

"Is a Career in Machining for You?" brings the sights and sounds, the people and products, the structure and practices of the world of machine tools to you.

The film examines the nature of the work performed by machine tool operators and highly skilled machinists, tool and die makers, instrument makers, set-up men and lay-out men. Citing the temperament, preferences and aptitudes people in machining occupations usually have, the film goes on to discuss the required education and training, employment outlook, where the jobs are, the rewards and prospects for advancement.

Follow-up:

If machining is for you, then you should probably understand that the term machining is a broad term and may be classified into several occupations dealing with machine tool operation. The major machining occupations consist of the following:

1. All-round machinists
2. Machine tool operators
3. Tool and die makers
4. Instrument makers
5. Set-up man (machine tool)
6. Lay-out man

The nature of the work for an all-round machinist is a skilled worker who uses machine tools to make metal parts. A machinist can set up and operate most types of machine tools. His wide knowledge of shop practice and the working properties of metals plus his understanding of what various machine tools can accomplish, enables him to turn a block of metal into an intricate part meeting precise specifications. Variety is the main characteristic of the work of an all-round machinist. He plans and carries through all operations needed in turning out machined products. He may switch frequently from the production of one kind of product to another. An all-round machinist selects the tools and material required for each job and plans the cutting and finishing operations in order to complete the finished work according to blueprint or written specifications.

Training and preparation:

According to most training authorities, a four year apprenticeship is the best way to learn the machinist trade. Many machinists, however, have qualified without an apprenticeship by learning the trade through years of varied experience in machining jobs.

A young person interested in becoming a machinist should be mechanically inclined and suited to do highly accurate work that requires concentration and physical efforts. A high school or vocational education including courses in math and physics or machine shop is desirable.

Questions for discussion:

1. What are the six types of jobs in machining?

   A. All-round machinist
   B. Machine tool operators
   C. Tool and die makers
   D. Instrument makers
   E. Set-up men (machine tool)
   F. Lay-out men

2. Would you like to be in machining? Why?

3. Even if you think a career in machining is for you, shouldn't you know about all the other career opportunities in the world of work before making a decision?

4. What traits and aptitudes should you have for working with machine tools?

5. Are workers in machining well paid?

6. What are the prospects for advancement?

7. In what industrial areas do you find men working in the machining occupations?

8. Are there opportunities for women?

9. What local companies employ people in the machining occupations?

10. Why is it important to start thinking about your career now?

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FILM EVALUATION

"IS A CAREER IN THE SERVICE INDUSTRIES FOR YOU?"

Introduction:

"Is a Career in the Service Industries for You?" explains and illustrates the many career and occupational areas. The film surveys the education and training needed for jobs in service industries, and discusses where the jobs are, the employment outlook, the rewards, advancement, and other important job aspects.

Follow-up:

What do the people do that are employed in service industries?

Workers in service occupations police the street, serve food, put out fires, clean our homes and buildings, and in numerous other ways provide services to the American people. The nearly 9.4 million service workers who were employed in 1968 included a wide range of diverse occupations, such as babysitters, policemen, firemen, cleaning women, golf caddies, theater ushers, barbers, and laundresses.

Those occupations related to food preparation include cooks, chefs, kitchen workers, waitresses and waiters, and bartenders.

Building cleaning and servicing occupations include workers like janitors, charwomen, chambermaids, porters, and elevator operators.

Protective service workers, another large group of service workers, are needed to help safeguard lives and property.

The majority of these workers are policemen and detectives. Together they account for more than one-third of the total number of protective service workers. Most policemen and detectives are government employees, but some work for hotels, stores, and other businesses.

The remaining service workers--those concerned with providing health care, grooming, and personal services, and people in occupations related to entertainment and leisure time activities account for nearly two million workers.

Training and skill requirements differ greatly among the various service occupations. F.B.I. agents, for example, must have a college degree. Barbers, beauty operators, etc. need special training. Other occupations like general maids, waitresses, for example, do not require a formal education. However, a high school diploma is always an advantage.

FILM EVALUATION

"IS A CAREER IN GOVERNMENT FOR YOU?"

The federal government is the largest employer in the U.S. There are 2.5 million civil servants. It employs workers in thousands of occupations, the majority of which are also represented in private employment, as well as in some unique to the federal government, such as postal clerk, border control, immigration inspector, and internal revenue agents. All government service employees are appointed to their jobs rather than elected. These appointments are made for the most part by the Civil Service merit system, which insures the selection of the best qualified person for the job being filled through the use of competitive examinations.

Local and state governments are concerned with the administration of all civil service functions below the federal level. Many of these occupations are also found in private businesses; others, such as city manager, city planner, and traffic engineer are unique to local government. State government - highway engineering, forestry, labor relations and social insurance.

Questions for discussion:

1. Define civil service and merit system.

2. Discuss political versus non-political jobs.

3. What specific jobs are employed at all levels of government?

World of Work--occupational briefs
- City managers
- Firemen
- Recreation workers
- City planners
- FBI Agents
- Translators and interpreters
- Civil engineers
- Foresters
- Postal clerks
- Surveyors

Suggested activities:

1. Take a field trip to the City-County Building or the State Office Building.

2. Invite a guest speaker.

FILM EVALUATION

"IS A CAREER IN RADIO OR TELEVISION FOR YOU?"

Introduction:

This picture explains and illustrates that there are four main career areas in braodcasting--engineering, sales, business and programming--and then goes on to describe the many occupations in each.

The film surveys the education and training needed for jobs in broadcasting, and discusses where the jobs are, the employment outlook, the rewards, advancement and other important job aspects.

Follow-up:

1. There are four main areas in radio broadcasting and television telecasting:

   A. Engineering
   B. Sales
   C. Business
   D. Programming

2. Education and training are needed for jobs in radio and television.

3. Employment outlook, rewards, and advancement are discussed.

4. It is important to plan course selection early in high school for radio and television careers.

5. Meanings of the following words are stressed?

a. State set	e. Dramatics	i. Video tape
b. Props	f. Media	j. Shutterbug
c. Transmit	g. Spot time	k. World of work
d. Disc jockey	h. Radio ham	

Questions and Discussion:

1. What are the four basic career areas in radio and TV broadcasting?

2. Name some specific occupations?

3. Would you like to work in radio or TV? As what? Why?

4. What aptitudes and interest do you have now that would help you in a career in broadcasting?

5. What education or training do you need?

6. Even if you think a career in radio or TV is for you, what should you do before making a decision?

7. Are many women employed in broadcasting? What areas offer women the most opportunities?

8. Where do people in radio and television work in the U.S.?

9. While most are employed by networks and stations, many work for other kinds of organizations. What are some of these?

10. Do you know anybody who is employed in broadcasting? What does he think of the field?

11. Why is it important to start thinking about your career now?

12. What was the message in the ballad at the beginning and close of the film?

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FILM EVALUATION

"IS A CAREER IN THE HOTEL OR MOTEL BUSINESS FOR YOU?"

Introduction:

"Is a Career in the Hotel or Motel Business for You?" takes a thoughtful and informative look at employees in the four categories of occupations found only in the lodging industry--those in housekeeping, in guest services, such as doormen and bellmen; in the front office, including various kinds of clerks, and those who are managers and their assistants. The film also glances at the many other kinds of workers needed to run hotels and motels and found in other industries as well--from waitresses and accountants to lifeguards and engineers.

The educational and training requirements for jobs in the hotel and motel business are discussed in the film. And it goes on to describe where the jobs are, the employment outlook, the rewards, the advancement possibilities and where further information can be obtained.

Background:

The hotel and motel industry provides accomodations and meals for both travelers and permanent residents. The range of facilities include clean and attractive guest rooms and baths, dining rooms, convention and conference rooms, banquet rooms, and exhibit areas, magazine stands, valet and laundry services, drug stores, and barbershops. Hotels are usually located in downtown areas, in the cneter of business. Motels are usually located on or near busy highways on the outskirts of towns and cities. Resort hotels, which cater to vacationers, conventions, and sales meetings usually take advantage of geographical location. More hotels and motels have opened in the last few years than in all the history of public accommodations.

Types of hotels and motels: commercial or transient, resort, residential, motel-motor hotel.

Questions before the film:

1. What is a career? (Career - a profession or occupation)

2. What is a job? (Job - a position of employment; work) Discuss the difference.

3. Wh would be some careers in the hotel-motel field?

4. Ha you ever stayed in such a lodging? What services were provided?

Present film.

Follow-up:

1. Major departments

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a. Rooms
b. Housekeeping
c. Uniformed services (front offices)
d. Food and beverage sales
e. Accounting
f. Engineering
g. Security
h. Laundry
i. Budgeting
j. Planning
k. Management

2. Jobs found in SRA Kit

a. Bus boy
b. Apartment managers
c. Executive housekeeping
d. Hotel and motel managers
e. Hotel room clerks
f. Restaurant managers
g. Hotel maids
h. Cooks and chefs

3. Related occupations

a. Chef
b. Social director
c. House Detective
d. Hospital administrator
e. Housekeeper
f. Butler

4. Vocabulary

a. Career
b. Fringe benefits
c. Bellman
d. Elegance
e. Dude ranch
f. Cater
g. Reservation
h. Supervisor
i. Aptitude
j. Accommodate
k. Budget
l. Maintenance

Questions:

1. What are the four different groups or occupations found only in the lodging industry?

2. Name some specific occupations in hotels and motels. What would be their pay range? Advantages and disadvantages?

3. Would you like to work in a motel or hotel? Why or why not?

4. What education or training would you need? (The more management involved the more education or training.)

5. Are many employed in hotels and motels? How are they employed?

a. Housekeeping
b. Switchboard
c. Receptionist
d. Waitress

6. Are there opportunities for young people in minority groups in this field?

7. What qualities should you possess in order to be in the hotel and motel field?

a. willingness to meet people
b. friendliness
c. willingness to help people
d. tact

8. Where are motels and hotels located?

9. List some of the jobs in a hotel and motel.

10. What courses should you take in school in order to pursue a career in the hotel and motel field?

a. math
b. English
c. foods
d. psychology
e. speech
f. bookkeeping
g. business accounting

Student activities

1. Invite a manager of a hotel or motel to speak to the class.

2. Assign a group of students to interview the manager of a local hotel or motel. Report back to class.

3. Have students to visit businesses for further information.

4. Invite parents in the community who are in the field to speak.

5. Group studies of individual areas in the field.

6. Use SRA Kit information.

7. Make a list of hotels and motels near you. Visit them in regard to obtaining part-time jobs.

8. See your guidance counselor for further information.

9. Role playing--appoint manager, receptionist, bellhop, switchboard operator, and guest.

Further information

American Hotel and Motel Association
888 7th Avenue
New York, New York 10019

Council on Hotel, Restaurant, and
Institutional Education
1522 K Street, N.W.
Washington, D.C. 20005

FILM EVALUATION

"IS A CAREER IN FINANCE, INSURANCE, OR REAL ESTATE FOR YOU?"

In order for a child to be interested in a particular job, he ought to explore the different areas. One such way is to know the several factors in each of the job areas. They are as follows:

BANK CLERKS

Duties:	Deliver mail and records; keep files; handle checks, deposits, and withdrawals; maintain accounts and other records; type letters and reports; operate calculating, bookkeeping, and other business machines.
Where Employed:	Commercial banks, mutual savings banks, the 12 Federal Reserve Banks, and similar financial institutions. In towns and cities of all sizes.
Number of Workers:	Nearly 645,000 bank clerks, including 165,000 tellers. About 75% of bank clerks are women.
Education and Training:	High school diploma required. On-the-job training may last a week to 5 months. Night courses helpful for advancement.
Specific Qualifications:	Accuracy, honesty, dependability, politeness and attractive personality required for employees dealing with public. Clerical aptitude necessary to acquire speed, skill.
Ways to Enter Field:	Want ads, employment agencies, direct application to banks. May start as a messenger, file clerk, transit or bookkeeping clerk, trainee machine operator.
Chance of Advancement:	Can advance to teller, supervisory positions. Chances good for those who can take responsibility.
Salary:	Beginning clerks get $2600-4000 a year. Experienced tellers may get $3000-6000; over 5 years service, $7500. Men are paid more than women.
Supply and Demand:	New job openings are increasing, and bank clerical jobs have high rate of turnover. Over 80,000 openings a year expected.

BANK OFFICERS

Duties:	Administer banking services such as loans, trust funds, safety deposit services, investment counseling, checking and savings accounts. Officers include president, vice-president, cashiers, treasurer, junior officers.
Where Employed:	Commercial banks, mutual savings banks, other financial institutions.

Number of Workers:	About 140,000 bank officers; 10% are women.
Education and Training:	College degree in business or liberal arts required. Many banks have formal executive training programs.
Specific Qualifications:	Dependability, honesty, integrity, tact, prudence, good judgment, respectability. Logical mind and mathematical ability desirable.
Ways to Enter Field:	Apply to personnel office of a bank. Most start as trainees in clerical positions such as teller, and are rotated among the departments as they gain experience.
Chance of Advancement:	It may take years to become an officer. Advancement to top positions often depends on death or retirement of incumbent.
Salary:	Executive trainees: 5,000-6,000. Junior officers: $7,000-$15,000. Senior Officers: to $50,000 or more. City banks pay more than those in small towns.
Supply and Demand:	Banking is still a growing industry, and officers' jobs are increasing. Estimate 9,000 available each year. Competition is keen for both entry and top positions.

INSURANCE ADJUSTERS

Duties:	Make sure policy covers claim; arrange for any necessary emergency measures; secure written evidence of loss; examine every detail regarding cause and extent of loss; determine with the insured the amount owed to him.
Where Employed:	Insurance companies, adjustment bureaus, independent adjustment organizations throughout U.S., particularly in heavily populated areas.
Number of Workers:	About 70,000
Education and Training:	High school is required; sometimes college or even law training. In-service training programs are also given.
Specific Qualifications:	Tact, sympathy, courtesy, patience, knowledge of human nature, ability to inspire confidence, sound judgment, keen observation, resourcefulness, alertness.
Ways to Enter Field:	Minor adjusting jobs open to college graduates. Without college or experience, begin as a clerk. After 2 or 3 years experience, may qualify as trainee in claims work.
Chance of Advancement:	With ability, can advance through branch office to home office, to manager of claims department; start own adjustment service.

Salary:	Start: about $4,800 a year. With few years experience $7,000-$8,000. With legal training: $10,000.
Supply and Demand:	As the insurance industry continues to grow, so will the opportunities for good adjusters.

INSURANCE AGENTS

Duties:	Find prospects, make appointments with them, discover policy best suited to their needs and ability to pay, sell the policy. Arrange for loans on policies. May file claims, help arrange finances in emergencies, collect premiums.
Where Employed:	Throughout U.S., especially where population is expanding and in industrial centers. Life agents usually represent only one company. Those selling casualty and property insurance may represent many.
Number of Workers:	Approximately 406,000 agents and brokers; 10% are women.
Education and Training:	Most agents hired in recent years have had some college training. Beginning agents usually receive training courses.
Specific Qualifications:	Sales ability, friendiliness, tact, sincerity, self-confidence. Ability to plan one's own time and be self-motivating. Meet requirements for state license.
Ways to Enter Field:	Apply to insurance companies or to local agencies. Possibly begin by selling part time until you have enough contacts to support yourself full time.
Chance of Advancement:	Excellent for the ambitious. Competition for sales is keen. May become assistant manager or manager of an agency office; regional supervisor overseeing agencies in a specific geographical area. A few become company executives.
Salary:	Guaranteed income during training; thereafter, commissions only. Beginners: $5,000-7,000. Experienced: $7,500-10,000. Most successful agents, to $50,000.
Supply and Demand:	Expansion plans of life insurance companies alone call for 5,000 new full-time agents annually for the next few years.

REAL ESTATE AGENTS

Duties:	Sell, buy, rent, and manage land, houses, and commercial buildings. Brokers advertise properties, handle financing and legal details, manage business. Agents call on clients, show properties, negotiate, make sales.
Where Employed:	Throughout U.S., especially in and around urban areas. Most brokers are independent businessmen. Agents work for brokers, banks, insurance companies, large real estate companies.

Number of Workers:	More than 200,000 real estate agents and brokers; 25% women. About 500,000 more are part-time salespeople.
Education and Training:	High school required, some college training preferred. Some experience needed to become broker in most states.
Specific Qualifications:	Must pass exam for state license. Sales ability, knowledge of community, liking for community, liking for people, courtesy, tact, neat appearance, and patience.
Ways to Enter Field:	Can start as a part-time agent or assistant in a real estate office. Check with local real estate board, apply to broker or other employer.
Chance of Advancement:	Mostly in terms of increasing earnings. An agent can become manager, go into business for himself as a broker.
Salary:	Usually paid a straight commission. Experienced agents: $5,000-10,000 a year. Brokers: to $20,000 or more.
Supply and Demand:	Some growth expected. Jobs are easy to get, but competition for sales is keen, especially during times of slow economic activity.

REAL ESTATE APPRAISERS

Duties:	Estimate market value of land, buildings for legal, financial, tax, business purposes. Study location, physical condition, equipment, cost of upkeep, depreciation; check records; photograph or sketch property; write detailed report.
Where Employed:	Local, state, and federal government agencies; real estate companies, including some that specialize in appraisal; insurance companies, banks, other financial institutions. Some work as consultants.
Number of Workers:	Estimated 50,000. Some women.
Education and Training:	College degree usually required, plus real estate experience. Some large companies have training programs.
Specific Qualifications:	Knowledge of real estate, economics, business ability, thoroughness, attention to detail, honesty, responsibility, tact, sound judgment.
Ways to Enter Field:	Previous experience as real estate agent, broker, or building contractor is usually necessary. After getting experience, apply to employers or civil service office.
Chance of Advancement:	Can become chief appraiser, start own appraising business.

Salary:	Trainees: $4,800-5,500. Experienced: $6,500-$10,000. Top: $15,000 or more.
Supply and Demand:	Outlook very good. Growing demand for appraisers expected to continue. Considerable competition for positions at all levels.

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LESSON PLANS--7th GRADE

Lesson 1

Orientation--Orient the children about the guidance program. Subjects that will be discusses in the future are

A. Teachers and the student
B. Importance of school
C. Developing your study skills
D. School records
E. Preparing for the world of work
F. How do I look? A self-evaluation of oneself
G. Different kinds of workers
H. Field trips
I. Guest speakers

Remember that all guidance programs need to be flexible in order to meet the needs of all children.

Lesson 2

Teachers and the students--each student in every classroom needs to feel secure. He needs to be accepted by his teachers. Teacher and child must understand each other.

The teacher should try to motivate his students to do all he can to improve in his school work. He needs to help the child to be a whole child.

Read the chapter in the text "Our School Life," pages 32-38.

Questions:

1. Make a list of the ways that you want the teacher to help you more.
2. What are some of the things you might do to make your teacher's work easier?
3. What are some of the actions of children that help to make the classroom climate warm and friendly?
4. What are some actions that hinder?
5. What are characteristics of a good teacher which help to make the classroom climate warm and friendly?

Lesson 3

The importance of grades--page 22, Our School Life

Objective--to assist students in developing a proper attitude--to count grades important but not too important. Show to the pupils the values of grades to the pupils themselves, to the teacher, to the school, and to the future of each pupil.

Discussion--

1. What purposes do grades serve?
2. What makes a fair grading system?
3. What about the student who does all his daily work, but who gets nervous and fails all the tests?
4. How would you students know what things you are good at if there were no grades placed on your work?
5. Do you feel that your parents understand your grades as well as they might?
6. Name some things that will help improve most student's grades.
7. After all, "How important are grades?"

Lesson 4

Have the children work the Employment Education Quiz. (Ask the counselor for this.) Before having the children work the quiz, please give the following instructions:

1. Please give honest answers!
2. Inform students that they should be serious about the quiz.
3. To be successful a child must take this test three times a year. A comparison should be done. Talk with the children individually about their answers.
4. Read each aloud as the children take this quiz.
5. Talk about the questions.
6. Point out certain values that children will receive. For example, forming good daily habits. "Do you always come to school on time?"
7. Perhaps children can construct a chart to remind them how they are doing.
8. Remind the children that this is a self-evaluation.

Lesson 5

Evaluation of report cards--children should be presented a report card. Students should be taught how to evaluate each subject. In addition to this, children should discuss the sections on social habits and work habits. (Use the overhead projector and report cards.)

<u>Social habits</u>

1. Self-control
2. Courtesy in speech and action
3. Cooperation
4. Acceptance of responsibility
5. Care of property
6. Acceptance of criticism

<u>Work habits</u>

1. Full use of his ability
2. Attentiveness
3. Promptness
4. Obedience to directions
5. Pride in his work
6. Participation

Lesson 6

HINTS ON STUDYING

Usually junior high students are carrying a heavier load than ever. After carrying this load for a few weeks they become conscious of the need for knowing how to study. They are open for anything that will help them to do their studying better, help them to read with greater skill, help them to make better grades. It is real guidance when the student is motivated to self-improvement.

The objective of this lesson is to show the importance of some skills that will help the students form better study habits. Studying involves many skills; the skill of attention, concentration, ability to read, how to find what we want, using the library, etc.

Study the chapter, "Hints of Studying" in the textbook, Our School Life. Discussion:

1. How many of you try to study with the radio going full blast? Does it help you or hinder you? How do you know?
2. What kinds of material can you study best in the library? In the study hall? At home?
3. How many of you do your homework cooperatively over the phone?
4. Do you have a place to study at home?
5. Why is homework important?

Lesson 7

SCHOOL RULES

The objective of this lesson is to lead the pupils to see the reasons for rules and to grasp the necessity of rules in all group situations.

Motivate the children to feel that rules are made to help them, not to limit them. There are rules of behavior in all kinds of situations.

Discussion:

1. Did you ever stop to wonder why rules are made at all?
2. Why do we have rules in football?
3. Why do we have rules when using a knife and fork?
4. Make out lists of school rules.
5. How old do we have to be before we are free from rules?

Lesson 8

Film--"When I'm Old Enough, Goodbye." 28 minutes. Present this film to the 7th grade class. The story of a boy who drops out of school and his difficulties in finding work.

Discussion:

1. Name the important people in the film.

2. How did Doug's friend feel when he left school?
3. Was Carlos a good follower of Doug? Explain.
4. Name some of the bad experiences that this boy had because he left school.
5. Do you think the guidance worker did a good job in helping Doug make a good adjustment?

Lesson 9

WHY WORK?

Have you ever stopped to ask yourself why many students like yourself go to school? Why do people go to work? Just take a moment--think of men of great wealth who choose to work. Name a few of these great men. It must be that money is not the only reason, although it is an important reason.

There are many good reasons, besides earning money, that make people want a job to go to every working day. Some good reasons are:

1. To feel useful
2. To feel independent
3. To get working experience
4. To be with other people
5. To care for their future by learning a trade or new skill

Now let us think about the most important reason why people what to work--MONEY.
Discussion:

1. How much do you spend for recreation?
2. How much do you put away in savings?
3. Name other ways that you spend your money.
4. Name some of the ways your parents spend their money.

Remember this--plan wisely--don't waste your money!

Lesson 10

HOLDING A JOB

Children should be taught about their responsibilities outside and inside the classroom in relationship to holding a job in the future. They should be asked to think about habits that they have already formed, such as good appearance, good manners, good health, and a nice smile.
Discussion:

1. Reporting to school or work on time
2. Being regular in reporting every day and being absent only when you are too sick to go to school or work.
3. Doing your work the very best you know how to do it.
4. Being polite to all people who work with you.
5. Minding your own business but not being a "busybody."

6. Being willing to do the job as your teacher or employer has asked you to do it.
7. Being careful with tools and supplies with which you work.
8. Not being wasteful with materials with which you have to work.
9. Never lie to your teachers or your boss.
10. Never act as if you are doing your teacher or employer a favor by working for him.

Lesson 11
Lesson 12

WORDS TO LEARN WELL--preparation for filling out an application for a job.

In your employment education class, you will learn to read and understand many new words. Most of them will be found on job application forms. Unless you know such words, you may not be able to give all the answers to questions asked on a job application blank. You may also put down the wrong information if you do not understand what the words mean.

Look in the dictionary for the meaning of these words--your teacher will be working with you all the time.

1. Nationality	8. Education	15. Married
2. Citizen	9. Personal	16. Single
3. Height	10. Reference	17. Previous
4. Weight	11. Relative	18. Reason
5. Dependent	12. Notify	19. Company
6. Maiden	13. Handicap	20. Defects
7. Signature	14. Experience	

Lesson 13

Have children fill out APPLICATION BLANK
1. Give each child an application form.
2. Discuss with the children each section of application form.
3. While studying each section, point out to the children what employers will expect of them in the future; for example, education.
4. Have the children project into the future.
5. Point out to them that everyone needs goals.
6. Have children independently fill out application form this period.

Note--guidance counselor will have application forms on file. Please request these forms.

Lesson 14

FINDING A JOB

There are several ways to go about finding a job. They are:

1. Look in your local newspaper in the help-wanted section. Bring five to class.

2. Report to the state employment office near you.
3. Go to different places such as cafeteria, department stores, gas stations, and fill out applications with the hope that you will be called when there is an opening.
4. Ask a friend or relative to help you get a job where he or she is working.

Remember when studying job ads that it will benefit 7th graders to understand the following:

1. The amount of education that is required.
2. Types of jobs that are in demand.
3. Pay scale for different jobs.
4. Physical requirements.
5. Need for references.
6. Citizenship--background.

Lesson 15

WORKING PAPERS

There are certain labor laws which were made to protect the working teenager. These laws state that teenagers cannot work at just any kind of job. Also, they may work only a certain number of hours each day if they are still attending school.

Guidance counselor has a guide for employers of minors. Please request the pamphlet for your class.

Stress the following points:

1. Age--employment of minors.
2. Where a teenager may be employed.
3. Maximum hours of work for youth.
4. Work permits
5. Exceptions

Lesson 16

ABOUT A FACTORY

Children ought to be informed about what to expect when working in a factory. Since it is wise to know all parts of our world, a factory is one large make-up of job opportunities in our United States.

Discussion words:

1. Factory
2. Machines
3. Products
4. Production
5. Assembly Line
6. Skilled
7. Semi-skilled
8. Unskilled
9. Apprenticeship
10. Manual dexterity
11. Architect
12. Engineers
13. Raw materials

Have children check their school encyclopedia about a factory. Reports can be assigned to all the children.

Lesson 17

FIELD TRIPS

Your guidance counselor will want to take your class on a field trip to industry.

There are certain things about the places you will visit that your counselor will want to have you look for and learn about. The main reasons for such trips are that you will:

1. Learn how a factory or place of business looks.
2. Get ideas of different kinds of work.
3. Get ideas for the kind of job you would like to train for and have some day.

Reporting on a visit to a factory:

1. Name of the place visited
2. Address
3. What is being made?
4. What kind of materials are used?
5. How is the produce made?
   a. assembly line work
   b. piecework
   c. any other way
6. How many are made in one day?
7. Are there different kinds of machines?
8. What do the machines do?
9. Can a person make what the machines make?
10. How long does it take to make the product?
11. Is this a big company?
12. Do many people work here?
13. Are there more men than women? Many young people? More young girls than boys?
14. Are the employees unskilled? Semi-skilled? Skilled?
15. Do the employees have to wear special clothing for their work?
16. Do you see any good safety habits?
17. Is the work dangerous?
18. Does the work look hard?
19. Can you do this work?
20. Are there some part-time workers?
21. How many hours a day do the employees work?
22. Do the employees belong to a union?
23. How many days are allowed for sick leave?
24. Are there paid vacations for the employees?
25. What is the history of the company?

Lesson 18

HOW YOU EARN YOUR PAY

Children need to know some of the ways a person can earn his pay. The objective of this lesson is to show some of these ways. They are:

Piecework	Hourly wage
Weekly wage	Earnings

Piecework
You may have a job where your pay depends upon the amount of work you do. The more you do, the more you will be paid. You are paid for the exact amount of pieces you turn out. For example, 200 dolls' heads times $.05 for each wig pasted on a doll's head. $10.00 is your day's pay. Your boss or employer will call this type of work piecework.

Hourly wage
Another way for your employer to pay you is to give you a certain amount of money for each hour that you work. This ks known as being paid by the hour, or getting an hourly wage.

Weekly salary
You might have a job where you are told that your weekly salary is a certain amount for which you will have to work a fixed number of hours. You will be paid by the week.

Base pay
Base pay means the amount of money to which any increase in pay is added.

Time and one-half
Your regular pay plus an extra one-half of your regular pay.

Double pay
Two base pays or twice your regular pay.

Practice problems may be given the students to figure out different rates and pay scales.

Lesson 19

FRINGE BENEFITS

Objective--children need to know about extra benefits.
Vocabulary: fringe
benefit

An industry or company wants to keep good workers for a long time. That is why some places of business give their workers more than just wages. They give their employees extra benefits. These benefits are sometimes called fringe benefits.

Some of the extras an employer may give to his employees are:

1. Vacation with pay.
2. A certain number of sick days a year which will be allowed with full pay.
3. A certain number of holidays which are allowed with full pay.

There may be other benefits not mentioned here. You will learn about them from the company or employer that employs you.

Questions:

1. Is your regular pay a fringe pay?
2. Why does a company give fringe benefits to its employees?
3. Name three fringe benefits.
4. Ask your father to tell you about the fringe benefits he gets from the company where he works.
5. If your mother is working, ask her, too. Write down the fringe benefits she receives.

Lesson 20
Lesson 21

SOCIAL SECURITY

Objective--children should know about the aims of social security. The student should have a card.

Social security is a plan worked out by the United States Government. It is a plan for people to receive money every month to help suppor them. They need the support because they can no longer take care of themselves. They cannot take care of themselves because:

1. They are too old to work.
2. They have been injured in an accident and can no longer work.
3. Their main support--usually the father, has died. His widow and children need money for food, clothing, and a place to live.

You will receive more money in social security benefits or payments

1. The more regularly you work.
2. The more you earn.

The exact amount you will get as social security cannot be given now. It will depend upon:

1. How many years you work.
2. How much money you earned all those years.
3. How Congress writes the law.

Lesson 22

HOW TO APPLY FOR SOCIAL SECURITY CARD

To find the address of the social security office nearest you, look in the telephone book under United States Government, Department of Health, Education, and Welfare, Social Security Administration. Also, the post office can be very helpful.

Questions:

1. Look in your phone book, write down the address of the Social Security office that is closest to you.
2. If there is no Social Security office near you, where may you go to apply for a social security card?
3. How many social security numbers can you have?
4. Tell the reason for your answer.

5. How long must your social security number be with you?
6. Do you need a different social security card each time you change your job?
7. If a child needs a social security form, get one for him and help him fill it out.

Lesson 23

SOCIAL SECURITY continued

Where to keep your social security card
1. There are two parts.
2. Keep one part in your billfold.
3. Keep the other half in a safe place.

If you lose your social security card
1. Go to the local social security office.
2. Inform them that you have lost your card.
3. Fill out a new form.
4. Inform them that you have had a social security number before.
5. Take care of your new card.

When do you need a social security number?
1. You need to apply as soon as possible.
2. No minimum age.
3. Whenever you have a new employer, you must show your social security card to him.

If you change your name--if you are a girl, your name will be changed when you marry. Get in touch with the Social Security office.

Lesson 24

SOCIAL SECURITY continued

WHAT DOES RETIRE MEAN?

1. The word retire means to rest--resting from work. We mean resting from full-time work for the rest of your life.
2. You may retire at age 62.
3. You may retire at age 65.
4. You do not have to stop work to retire and collect social security payments.
5. At age 72, you will get full social security payments no matter how much you earn.

Questions:
1. What does the word retire mean?
2. When you retire, do you have to stop working altogether?
3. How much can you earn a year and still get your full social security payments?
4. How much can you earn a year and still get some social security payments?

5. When you are ready to retire, what must you do to make sure that you will receive your social security payments?
6. At what age can a woman or man retire?

Lesson 25

DIFFERENT KINDS OF JOBS

Objective--recognizing different jobs and exposure to these jobs.

Have the children list jobs in the following areas--remember there are many, many different kinds of jobs. Just as people are different, jobs are different.

Agricultural jobs--working on farms and ranches.

Hand on grain, fruit, or berries (male)
1. Helps plant and care for fruits, grains, berries.
2. Helps harvest and prepare products for shipment.
3. Does general farm work.

Hand on truck farm
1. Helps do general farm work.
2. Helps plant and care for vegetables.
3. Helps harvest and prepare vegetables for shipment.
4. Helps deliver vegetables to market.

Hand on chicken farm (male and female)
1. Helps care for and feed chickens.
2. Helps prepare chickens for market.
3. Gathers eggs.
4. Helps ship chickens or eggs to markets.
5. Does general farm work.

Hand on hog or sheep ranch (male)
1. Care for, feed, and water animals.
2. Saddle and ride horses.
3. Help sheer sheep.
4. Does general farm work.

Hand on dairy farm (male)
1. Care for, feed, and water animals.
2. Help milk cows by hand or by machine.
3. Clean barns and farm area.
4. Clean milking equipment.

Hand on cattle ranch (male)
1. Care for, feed, and water cattle.
2. Do general farm work.
3. Brand cattle
4. Clean barns.
5. Take care of fences.
6. Take of irrigation ditches.
7. Saddle and ride horses.

Lesson 26

JOBS Continued

Building Service Jobs--working in all kinds of buildings.

Janitor (male or female)

1. Sweeps, vacuums, and polishes floors.
2. Cleans and dusts.
3. Empties garbage.
4. Cleans restrooms.
5. Washes windows.
6. Moves furniture.
7. Maintains heating system.
8. Shovels snow.
9. Makes simple repairs.

Elevator operator (male or female)

1. Operates elevators either for people or freight
2. Tends elevator door
3. Answers questions for people

Doorman (male)

1. Greets people at door
2. Answers questions for people
3. Helps with light baggage.

Night watchman (male)

1. Checks cards of visitors
2. Operates elevator
3. Checks doors and windows for security
4. Checks for fire or other unusual things
5. Sweeps or cleans parts of buildings

Lesson 27

Clerical jobs--working in offices and libraries

Typist (male or female)

1. Types and files papers
2. Stuffs and seals envelopes
3. Sorts cards and papers
4. Packages materials
5. Operates duplicating machines
6. Staples papers
7. Takes telephone messages

Messenger (male or female)

1. Delivers messages and packages on foot, by truck, or on bicycle
2. Runs errands
3. Receives and delivers mail
4. Stamps envelopes
5. Packages materials for mailing
6. Folds, punches, and cuts paper

Filing clerk (male or female)

1. Types and files papers
2. Arranges materials alphabetically
3. Sorts papers and cards
4. Takes telephone messages
5. Staples papers

Library Assistant (male or female)

1. Sorts books
2. Puts books on carts
3. Shelves books
4. Types
5. Checks library books in and out

Lesson 28

JOBS continued

Cloth and Clothing Manufacturing--working in cloth and clothing factories

Worker in clothing or cloth items factory (male or female)

1. Sews either by hand or machine
2. Collects waste and cleans work area
3. Makes buttonholes
4. Sews on buttons or inserts zippers
5. Assembles and sews pieces of material together
6. Maintains, greases, and oils machines
7. Packages and transports products
8. Irons or presses by hand or machine
9. Cuts or folds materials
10. Loads and unloads materials

Worker in cloth factory (male or female)

1. Works at cloth weaving looms
2. Cuts, folds, or sorts materials
3. Loads or unloads bolts of materials
4. Transports materials by cart or truck
5. Collects waste materials
6. Sweeps and cleans work areas

Lesson 29

JOBS continued

Construction Jobs--working in the construction of highways, dams, bridges, and buildings.

Highway construction worker (male)

1. Shovels cement, sand, and gravel
2. Digs ditches
3. Helps lay roads or highways
4. Loads and unloads materials

5. Mixes cement
6. Greases and oils machinery
7. Cleans tools and equipment
8. Paints by hand or by spray gun
9. Signals road traffic

Building Construction Worker (male)
1. Helps carpenters, plasterers, plumbers, and others
2. Cleans and sorts bricsk
3. Greases and oils machinery
4. Stores tools
5. Picks up scrap lumber and cleans work areas
6. Paints by hand or spray gun

Dam and Bridge Construction Worker (male)
1. Loads and unloads equipment and materials
2. Cleans tools
3. Uses common hand tools
4. Greases and oils machinery
5. Assists with simple construction jobs
6. Paints by hand or by spray gun

Lesson 30

Fishing and Fishery Jobs--working on boats or in fish hatcheries

Fisherman (male)
1. Helps catch fish
2. Watches and checks traps
3. Sets traps and empties them
4. Shovels fish into storage places
5. Weighs fish
6. Delivers fish for processing

Fishing boat deck hand (male)
1. Does general housekeeping work on a fishing boat
2. Helps set and empty traps
3. Folds and stores fish nets
4. Shovels fish into storage places
5. Washes and hangs sponges
6. Mends nets

Workers in fish hatchery (male)
1. Helps with cultivation of fish
2. Feeds fish in hatchery
3. Tends water temperatures
4. Cleans water areas
5. Cares for Equipment
6. Assists in other jobs

LESSON PLANS FOR 8th GRADE

Lesson 1

Orientation to Guidance Program

A. Orient the children about what to expect of the guidance program

1. Five major areas should be stressed
   a. School records
   b. How to study
   c. Learn to make study of yourself
   d. Different kinds of workers
   e. Preparing for jobs

B. Additional information

1. See filmstrips
2. Discuss pay, deductions, fringe benefits, and overtime
3. Become acquainted with work kits
4. Meet and talk with visitors from industries
5. Vocational courses in Indianapolis Public Schools
6. Field trips to industry
7. How to look for a job
8. Discuss personal interviews
9. Fill out application blanks for jobs
10. Expose children to many jobs in the world of work

Lesson 2

Present to all classes the filmstrip, "What Good Is School?" This filmstrip demonstrates the relations between school work and the world of work, and between school subjects and careers in which they are interested. It also points up some of the rewards that come from studying various subjects.

Questions to discuss:

1. Have you ever wished you didn't have to go to school?
2. Do you ever ask yourself, "Why do I have to study subjects which I dislike?"
3. Why do people dislike things they do not understand?
4. Will you use what you are learning?
5. Why do you need to know math, English, science, and history?

Lesson 3

FIELD TRIPS

Objective--exploration of the world of work. Child should be acquainted with what a particular place has to offer. What jobs are within this particular place that you are to visit?

The following points need to be stressed:

1. Learn how a factory or place of business looks.
2. Different kinds of workers
3. Get ideas for the kind of job you would be trained for and have in the future
4. Talk with the children about behavior on a field trip
5. Know something about the place that you are to visit. Guidance counselor has the information on file.

Lesson 4

LADDER OF SUCCESS

Have the children draw a ladder with eleven steps. Label each step in the following manner: 100% I did; 90% I will; 80% I can; 70% i think I can; 60% I might; 50% I think I might; 40% what is it?; 30% I wish I could; 20% I don't know how; 10% I can't; 0% I won't.

The purpose of the ladder of success is to motivate the children to do better in their school work and it is also a teaching tool for self-evaluation of their work. Study each step and use your own imagination to motivate the children for success.

Lesson 5

DEVELOPING YOUR STUDY SKILLS

The purpose of this lesson is to show and introduce to the pupils the methods of successful studying. The material or the lesson should cover the following points:

1. Homework
2. Physical environment
3. Note taking
4. Preparing for tests
5. Listening

Each above point should be discussed. Stress that a child cannot be successful in school if he doesn't follow certain rules and procedures with the above points in mind. Guidance counselor has information pertaining to above items.

Lesson 6

EVALUATION OF REPORT CARDS

Present each child with a report card or place card on overhead projector. Guidance counselor has transparencies. Please request them.

Teach the children how to read a report card correctly. Discuss with the children the following points for understanding:

1. Social habits
2. Work habits
3. Individual subject matter

SOCIAL HABITS

1. Self-control
2. Courtesy in speech and action
3. Cooperation
4. Acceptance of responsibility
5. Care of property
6. Acceptance of criticism

WORK HABITS

1. Full use of his ability
2. Attentiveness
3. Promptness, attendance
4. Obedience to direction
5. Pride in his work
6. Participation

Lesson 7

Evaluation of report cards and self-picture check list are aimed to stress progress in school and project into the world of work. Transparencies on file in guidance office!

Discuss with the children the following self-picture check list. Consider the word in this list and check how often you think it describes you as you are. (always, usually, sometimes, or never.)

1. Honest
2. Happy
3. Friendly
4. Sad
5. Serious
6. Sensitive
7. Jealous
8. Popular
9. Shy
10. Clumsy
11. Show-off
12. Afraid
13. Kind
14. Modest
15. Proud
16. Lazy
17. Neat
18. Thrifty
19. Even-tempered
20. Dependable
21. Angry
22. Moody
23. Open-minded
24. Unreasonable
25. Demanding

Lesson 8

Show filmstrip, "Your First Year of High School." On file in guidance office at SCIPS Building.

The purpose of this filmstrip is to show what high school life will be like. Remind the children that they will be going on a field trip to the high school to which they have been assigned sometime during the school year. Stress the importance of high school.

Lesson 9

Discuss the following chart. Draw the chart on the board.

Supply and Demand

Special Qualifications

Duties

JOB

Chances for Advancement

Where Employed

Earnings

Number of Workers

Education and Training

Lesson 9 continued

Use an occupation as you teach this chart. Use the occupational handbook. One could use a policeman as an example. This should familiarize each child to know what to be thinking about when he is planning for future jobs.

Lesson 10

SCHOOL RULES

This topic needs to help children understand why we have school rules. Children need to be informed that there is a need to learn and accept school rules. Not only will rules be followed in elementary school and high school, but they will also be used throughout life.

The objective of this lesson is to lead the pupils to see the reasons for rules and to grasp the necessity of rules in all group situations. Make students feel that rules are made to help them, not to limit them. There are rules of behavior in all kinds of situations.

Discussion:

1. Did you ever stop to wonder why rules are made at all?
2. Why do we have rules in football?
3. Why do we have rules when using a knife and fork?
4. Why do we have traffic rules?
5. Make out a list of school rules.
6. How old do we have to be before we are free from rules?
7. Can you imagine what this school would be like if all rules were abolished beginning tomorrow morning?

Lesson 11

GUIDANCE FORM RECORD

Objective--to teach a child to make out a life history of himself. Have a child make a guidance notebook. It should stress the life of the individual child. This can be helpful in applying for a job and applications for almost anything. The following items should be in the notebook:

1. Education--complete
2. Activities in school and outside of school
3. Special awards
4. References
5. Employment record
6. Social security number
7. Medical record
8. Family history--complete

Lesson 12

PLANNING FOR HIGH SCHOOL

Present the reference booklet, "Planning for High School" to the children. Study the booklet with them.

1. Study table of contents
2. Introduction
3. Section to the pupils--read this to the children
4. Section to the parents

Lesson 13

PLANNING FOR HIGH SCHOOL continued

Definitions:
1. What is a major?
2. What is a minor?
3. What is an elective?
4. What is a credit?
5. What are the basic requirements?

Lesson 14

Show the film, "They Beat the Odds." Synopsis--a Negro youth considers dropping out of school because he feels that regardless of the extent of his education, a Negro is limited in his career opportunities. His counselor reviews the lives of several successful Negroes who, through diligent effort and persistent study, did beat the odds. The film points out that in our society qualification comes through education.

Lesson 15

GETTING READY FOR WORK

Every child needs to know what he needs to get ready for work. He needs the following:

1. Birth certificate
   a. Employers may want proof of age
   b. A birth certificate tells when you were born and where

2. Everyone needs a social security number

3. Work laws
   a. Contact the guidance counselor about the work laws
   b. State Department of Labor or Department of Employment can tell you about the work laws
      i. Work you cannot do
      ii. Hours you can work
      iii. Pay you must receive

4. Work permits

5. How to get your work permit

6. References

Note--check booklet, "Getting a Job." Guidance counselor has the booklet on file.

Lesson 16

APPLICATION FORM

You must know how to fill out an application form. You should prepare ahead of time about what to anticipate, what they ask for on an application form.

Think about the following items:

1. The kinds of work you have done
2. Your education and training
3. Your favorite school subjects and your grades

Lesson 17

JOB APPLICATION Continued

In order to fill out job applications correctly, the student should be told that he should be able to understand the words that are used in the form. The following words should be taught and discussed for their meaning and pronunciation.

1. Nationality	11. Married	21. Spouse
2. Citizen	12. Single	22. Minor
3. Height	13. Previous	23. Guardian
4. Weight	14. Experience	24. Termination
5. Dependent	15. Company	25. Commuting
6. Education	16. Maiden	26. Convicted
7. Personal	17. Handicap	27. Responsibility
8. Reference	18. Defects	28. Contingent
9. Relative	19. Reason	29. Employer
10. Notify	20. Signature	30. Employee

1. Answer every question on the application form
2. Write or print legibly.
3. Please fill out application form--guidance counselor will provide the forms.

Lesson 18

PREPARING FOR A JOB INTERVIEW

1. Meaning of interview
2. Meaning of employee
3. Meaning of employer
4. Why have an interview?
   a. Helps you decide if you would like to be employed with this company.
   b. An opportunity for the employer to become acquainted with you, which will help him to make a decision about your employment.

Your appearance affects the employer's opinion of you

1. Is your clothing clean and pressed?
2. Is your shirt tail out?

3. Is your hair combed and neat?
4. Are your shoes shined?
5. Are your nails and hands clean?
6. Is your makeup neat and toned down?
7. If you wear glasses, are they clean?
8. Are you well shaved?
9. Is your breath pleasant?
10. Is your perfume too strong?
11. Is your posture pleasant?

During the interview

1. Be on time--better to be early than late
2. Boys should give a firm handshake
3. Introduce yourself
4. Be yourself
5. Don't sit during the interview and look at the floor; instead, look the interviewer in the eye when you talk
6. Express your interest in the company
7. Appear alert--show interest in what the employer is saying
8. Believe in yourself; tell yourself that you are as good as the next applicant
9. Take a pencil along
10. Know something about the job you want and the company you are interested in working for
11. Have a sense of humor
12. Don't say too much during the interview; answer questions and express your interest
13. Don't ask how much money the job pays

Questions the employer may ask

1. Why did you want to interview with our company?
2. Where and how long did you go to school?
3. What were some of your extra-curricular activities in school?
4. How do you spend your spare time?
   a. Hobbies
   b. What do you read?
5. What other work have you done?
6. Would you be interested in working overtime or would you be interested in working nights?
7. Would you object to being transferred to another location?
8. Would you object to travel?
9. Do you like to work with people?
10. Will you be willing to take a test?

Lesson 19

NEWSPAPER ADS--where to find jobs and job information

1. Newspaper--have children bring one into school
2. Radio
3. Television
4. Magazines and bulletin boards; for example, U.S. Employment Office and Post Office

5. Calling companies
6. What do you look for when looking for a job?

List the job, pay, age, under the following headings:
1. No high school education
2. High school education
3. College education

Discuss the number of jobs under each heading and show the advantages of at least a high school education over no high school education

Lesson 20

"What I Want Out of Life"
1. Read the stories to the class. (Guidance counselor has copies)
2. Watch for clues to the goals of life
3. Is it good to dream?
4. Does it pay to work hard in life? Why?
5. What are the different occupations mentioned in this story?
6. Do you like the story?
7. Have the children write "What I want out of life."

Lesson 21

1. Present to the class the employment education quiz. (Guidance counselor has copies.)
2. Read each question to the children.
3. Stress being sincere in answering the questions.
4. Every student should think about these questions.
5. There must be a follow-up on these questions.
6. Children must be taught why these questions are good for all of them.
7. Have the children put the quiz papers on the bulletin board. Remind the children about these questions at least once a week.

Lesson 22

From the booklet, "Planning for High School," teach the children the following definitions. The teacher may receive the booklet from the guidance counselor.

1. Business opportunities practices
2. Cosmetology
3. Auto trades
4. Auto mechanics
5. Aviation
6. Home nursing
7. Drafting
8. Building trades
9. General shop
10. Masonry

Children should be exposed early in the school year to these areas. With this background, the children could have a better selection for high school.

Lesson 23

Continuation of previous lesson--definitions

1. Wood work
2. Electrical trades
3. Electricity I
4. Graphic arts I
5. Foods (catering)
6. Stage craft
7. Photography
8. Power mechanics
9. Off-set printing
10. Printing design

Lesson 24

Continuation of definitions

1. Metal trades
2. General metals
3. Machine shop
4. Tailoring
5. Auto body repairing
6. Auto mechanics
7. Service operations
8. Barbering
9. Mechanical drawing
10. Stress business courses

Lesson 25

Read this to the class--

"Today will never come again--use it or lose it!"
"Take time to help friends--it is the source of happiness."

THE ANT AND THE GRASSHOPPER

One summer day as a grasshopper was singing and chirping merrily in a meadow, she met an ant who was staggering along under a kernel of cor.

"Come and play with me,"siad the grasshopper. "The day is warm and sunny. There is no need for you to toil and drudge in this manner. Come, and dance and have a good time!"

"I am laying up food for the winter," replied the ant, "and I recommend that you do the same."

"Why bother about winter?" chirped the grasshopper. "Winter is a long way off." She went on dancing and singing while the ant plodded on with her kernel of corn.

After a time, summer was gone and cold autumn winds blew through the meadow. The ground was white with snow. The ant was warm and comfortable in her snug little house. Outside, the grasshopper was cold and hungry and miserable. Finally the grasshopper tapped at the ant's door.

"May I come in?" asked the grasshopper. "The weather is freezing and I have nothing to eat."

"I am sorry," said the ant, "but you danced all summer while I worked. Now you can dance all winter!" She shut the door in the poor grasshopper's face.

Questions:

1. Does this story have anything to do with life?
2. Give a summary of the story.
3. Do you want to be the "ant" or the "grasshopper?"
4. Children could act this out in class--two members.
5. Discuss the two quotations at top of the page.

Lesson 26

WHY WORK?

Let us think about the most important reason why people want to work--MONEY. Money is the reward that we receive for putting in a good day's work. Once you start earning, you will find that money has to take care of many things. Have the children list the things that they received in the past that cost them money. Children will most likely answer with these responses:

Lunch
Movies
Bowling
Candy
Cokes
Clothes
School activities
Savings

Now you can see that it is a must that you work. When you are older, and after you leave school, you may find that your money will be needed for many more things. Just think about the ways your father and mother have to use money they earn. Are these some of the ways your parents spend the money they earn?

Food
Clothing
Shelter
Insurance
Medical bills
Recreation
Car
Savings
Taxes

Lesson 27

APPRENTICESHIPS

Define and explain the term apprenticeship. Define and explain the following terms:

Auto trades	Electrical trades
Building trades	Home economics
Business education	Metal trades
Drafting	Printing

1. What is a vocational school?
2. What is a trainer?
3. Reference--"Help Yourself to a Job." Booklet, pages 8 and 9

Lesson 28

How you earn your pay--present to the classes the different ways one can earn his pay.

1. Piecework
2. Weekly salary
3. Hourly wage
4. Earnings
5. Base pay
6. Time and a half
7. Double time

Request from counselors transparencies on file.

Lesson 29

SALARY DEDUCTIONS AND FRINGE BENEFITS

Present to the children material about salary deductions. Inform the children that when they receive their first regular pay at a steady job, they will learn that some money is held back, or withheld, from their pay. The employer has to do this because there are laws that tell him to do just that. The money that the employer holds back from your pay is money that goes to our government to pay your

1. Social Security
2. Federal income tax
3. State income tax
4. City income tax

Lesson 30

Filmstrip, "What Are Job Families?"

The major purpose in showing this filmstrip is to help the children realize that their interests and abilities will enable them to enter more than one occupation. It shows how jobs may be grouped into families. With the grouping of these job families, children are able to think more intelligently about future careers.

In each of the schools serviced, plan to meet with the staff to explain the function and duties of the counselor in the school. Secure the principal's approval to do this prior to the first day of school.

At this session, explain to the staff the type of referrals they should make, how to do so, the possibility of group counseling, and enlist their aid in setting up a schedule so that the counselor may teach a guidance class at least once or twice a month (at the junior high level.) Also schedule the elementary classes on a weekly or bi-monthly basis, depending upon the schedule at each school. Tell the teachers the schedule for their particular school and give them an opportunity to ask any questions they might have. Also ask for any suggestions they might have which would help the counselor be more effective in the school and make it clear to them that the counselor will welcome any suggestions or criticism which they might have during the school year.

Hopefully, during the first three weeks of school, plan to visit each classroom in the school (with the teacher's permission). Some, of course, will already know the counselor, but others will be new to the school. Plan to make this visit about 10-15 minutes in length, depending on the group.

The purpose of this is to allow those students who know the counselor from the past semester to realize that he/she is back and ready to work with them again, and to acquaint new students.

As much as scheduling will permit, plan to teach the 7th and 8th grade guidance classes at each school as often as possible during the opening weeks of school. It is felt that the beginning weeks of the guidance classes set the tone for the whole semester, or year.

Work as closely with the guidance teacher in each school as possible to help implement the proposed program. Also make any changes necessary to fit any particular group or situation as the principal or guidance teacher may see fit.

Solicit permission from the principal of each school to talk to the parents at a P.T.A. meeting during the very first part of the semester. During this meeting, explain to the parents the role of the counselor, the duties, and functions. Try to enlist their support and urge communication lines be established between parent and counselor. Tell the parents the counselor's schedule and how to contact him/her. In addition, explain how the counselor plans to work with individual students as well as small groups and classes. Tell briefly some of the things the counselor plans to cover in class. The forms to be used should be shown to the parents and make them aware of the confidential nature of personal counseling sessions.

Sometime before individual programming of 8th grade students for high school, schedule another meeting with parents and their 8th graders to cover in detail the importance of careful thought and conference with their children relative to planning for high school. Time will be allowed for questions and

answers. For long or involved questions or problems, set up personal appointments. It may be necessary to schedule a morning meeting and a night meeting of the aforementioned nature in order to see as many parents as possible.

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SUGGESTED LESSON PLANS
SEVENTH GRADE

Week of September 11, 1972

Orientation of all 7th graders to junior high school (in schools where sixth grade is part of junior high system, this lesson may be altered, or a substitute lesson used.)

Explain to students the set-up of the junior high program in their particular school. Point out whatever rules and regulations with which they must abide. Be sure to explain why these rules were made and the reasoning behind them. (For example, if no gum chewing is allowed, explain why; if they are not allowed to use water fountains between classes, explain why; if passes are necessary when out of the classroom, explain why.)

Also, be sure to tell students what they can do and how to go about it. If they are passing to classes for the first time, explain how and what rules their school observes for passing. Use of the library facilities is also important information to be given.

In general, make sure that each student knows the "ropes" of his school and how he can best hope to function successfully in his school.

Week of September 18, 1972

Film to be shown. See section on film evaluation.

Week of September 25, 1972

Give detailed explanation of the guidance program as it is set up in your school. See your individual counselor if you are unfamiliar with the manner in which he plans to work.

Emphasize these goals of the guidance program in particular: The program strives to increase the self-awareness of the students and help them implement a positive self-concept. The counseling program hopes to instill a sense of self-pride, school pride, and loyalty to both. We hope to stimulate the pupil's natural curiosity to learn more about himself, the world around him, and the world of work.

The counselor in each school should provide aid in school problems, home problems (if possible), personal counseling, high school programming, career counseling and testing.

Please make students aware of how the students can request a conference with the guidance counselor of that school. Tell the students the schedule of the guidance counselor so that he will know what days the counselor will be in.

Stress the importance of doing their best work. Discuss getting along with several teachers. Offer suggestions as to how to get started in junior high on the "right foot."

For example, be sure to write down all assignments. Keep a section in notebook for each subject to be studied. Learn to do all homework assigned and keep up with reading assignments. Encourage students to ask questions of teachers when they do not understand something.

Discuss the importance of learning to get along with fellow students. Discuss moral and ethical standards of conduct. Work on creating a positive self-image.

Reference: Chapters 2 and 3 in 7th grade guidance book, About Growing Up.

Week of October 2, 1972 -- Film

Week of October 9, 1972 -- Knowing Oneself

Discuss the importance of learning about oneself in order to try to plan a successful, fruitful life.

Use of SRA filmstrip #1 in Widening Occupational Roles Work Kit is a good introduction to this lesson. Its title is "Who Are You?"

If this film is not available, let the children list ways of identifying themselves; i.e., name, address, telephone, (children usually give these first). Let them write on paper this information. List their physical characteristics, likes, dislikes, interests, and abilities.

Be sure to discuss interests and abilities. They could be the same but not necessarily so. (I may like art, but not have the ability to be an artist.) Define and discuss these words.

Introduce the words introvert and extrovert. Explain the difference to children. Let them list the things they enjoy doing most and then help them decide whether they think they are more of an introvert or extrovert.

Discuss the fact that at this point in their life their likes and dislikes may change as well as their interests and abilities, but point out that it is necessary to know and try to understand as much about themselves now as possible in order to try to chart a successful school life.

October 16, 1972 -- Film

October 23, 1972

Listed below is a series of questions and open-ended sentences which the children can use and you can utilize in learning more about each student. These papers would be of great value to the guidance counselor especially if a personal interview and counseling session take place.

I would encourage the students in each guidance class to have a special folder with guidance lessons in it which would remain with the guidance teacher. (Since the information is so personal in many instances, I think the teacher should be responsible for storing it so that the children would not lose the information and have it fall into the hands of some of their peers who might misuse the information.)

Tell Me About You

1. The Person I'd Like to Be--(let the students use their imagination and dream a little and have them write the kind of person they would like to be if they had it in their power to make themselves into that person right now.)

2. If I Were Sixteen--(What are some of the things they would like to do if they were sixteen?_ Watch for those who say "quit school." Refer them to the guidance counselor.

3. List of Good Things to Do -- Who would praise you?

4. Bad Things to Do -- Who would blame you?

5. I was happy when-----

6. I was sad when-----

7. I was afraid when-----

8. I was angry when-----

9. The best thing that could happen to me right now is-----

10. The worst thing that could happen to me right now is-----

October 30, 1972 -- Film

Week of November 6, 1972 -- School and Why It Is Important

Let volunteers in class tell why they think school is important. List reasons given on the board. Let those students who do not think school is important give their reasons and also list on the board. Let two factions of students discuss and try to substantiate their opinions. Be sure not to condemn or ridicule any statement made, but try to elicit and stimulate their thinking in order to let students see the truth or fallacies in their reasoning.

Show the filmstrip from Widening Occupational Roles Work Kit--"What Good Is School?" Use questions at end for discussion. (Your school counselor should be able to see that this ket is at your disposal when needed. Try to notify him a few days before you need it.)

Week of November 13, 1972 -- Film

Week of November 20, 1972 - Importance of School Records

Use blank pink and white cards and explain to students the various items on the card and how they are used. Explain the necessity of keeping records of this kind and how the records are sent to various schools when a student transfers. Give students the opportunity to ask questions and voice their gripes of various points in the school system. Try to explain reasons why these records are necessary. Point out the fact that records will be kept on them in the "world of work" and they should get accustomed to this fact now. Stress the importance of doing their best work at all times.

Use blank health card and explain items recorded on it and their necessity.
Do the same with a blank report card.

Week of November 27, 1972 -- Film

Week of December 4, 1972 -- Developing Good Study Habits

See Chapter 5, page 38 in book About Growing Up
Main points to stress:
1. Know exactly what you are studying about.
2. Keep an assignment notebook.
3. Take time to think about the subject. Know why you are studying the assignment.
4. Look at the main points of the lesson.
5. Get all materials needed lined up.
6. Find a good place to study.
7. Do the assignment and review it before going to class.

Discuss SQ3R method. Survey, question, read, recite (to yourself), review.

Week of December 11, 1972 -- Film

Week of December 18, 1972 -- Improving Study Habits and Skills

Discuss need for good study habits, i.e., habits formed now will carry over into adult life. Many study habits already formed, however, if they are not positive ones, are too late to change. The older one gets the harder it is to change a habit.

Develop proper attitude toward study. Good attitude is a necessity in doing anything successfully. Maintain an active interest in achievement.

Keep a written study schedule.

Divide study time among various subjects. Do hardest subjects first. Discuss why this should be done.

Discuss effective use of study time in class periods.

When reading, skim material before reading it in detail.
Make use of clues in the book such as headings, heavy print, pictures, etc.
Have in mind important questions which you are trying to answer as you read.
Find the main idea in what you read.
Try to get the meaning of important new words. If necessary, keep list of few words and write down their meanings.
Practice recall while reading.

Try to take notes in class as well as when reading.
Review and revise the notes as soon as possible after class.
Summarize the main points.

Arrange to talk over any questions you may have about the lesson or assignment with the teacher.

Discuss the content of your studies with others outside the class.

Keeping up with the assignments daily will eliminate the necessity to "cram" for a test. Discuss the pros and cons of cramming.

Week of January 8, 1973 -- Film

Week of January 15, 1973 -- Making and Keeping Friends

Discuss importance of being friendly in order to have friends. Everyone wants to have friends. What are some of the qualities we look for in choosing a friend and qualities we find in the friends we now have?

Discuss and give examples illustrating the following traits. Let children tell of occasions when they have encountered people showing any or some of these characteristics:

a. friendliness
b. cheerfulness and sense of humor
c. dependability
d. loyalty
e. self-respect
f. self-control
g. thoughtfulness
h. honesty
i. sincerity

Have students think back and recall friends they have had for as long as they can remember. (There will be only a few who can really name friends they have had steadily since even grade one.)

Discuss why friendships change

a. physical growth and rate of development
b. new and different interests
c. moving to new locations

Sometimes it is wise to change friends. Why? Let children offer reasons and examples. If a friend begins to do things which you know are wrong, what should you do to help him--or should you help him or just shun him?

Discuss value of old friends.

Should you try to widen your circle of friends? Why?

How do you make new friends? (let children offer suggestions first.)

a. Try to smile and have a pleasant expression. People tend to shun sour-puss faces.
b. Show an interest in the other person.
c. Listen when others are talking. Try to get interested in what others are saying--there is always the possibility that you will learn something new.
d. Develop new hobbies.
e. Avoid cliques. It is immature. It would be well to discuss the meaning of the word. How do children get started in various cliques?

January 22, 1973 -- Film

Week of January 29, 1973 -- What is Character?

(The next few lessons will be spent in discussing some character building traits. Check your list of available filmstrips and ask your counselor to get the ones you desire which are pertinent to your character studies.)

Character might be defined as the sum-total of our habits. It is clear, the, that to build a strong character, we must build the right kind of habits. Since our habits are the result of our everyday actions and thoughts, the boy or girl who would build a strong character must eliminate those thoughts and actions that go to make up bad habits.

Have children begin to list habits which build strong character.

Discuss how to develop the right kind of habits.

Discuss how to change or avoid those habits which are undesirable.

You might want to discuss the following poem:

MYSELF

I have to live with myself, and so
I want to be fit for myself to know:
I want to be able as days go by
Always to look myself straight in the eye.
I do not want to stand at the setting sun
And hate myself for the things I've done.

I don't want to keep on the closet shelf
A lot of secrets about myself,
And fool myself, as I come and go,
Into thinking that nobody else will know
The kind of person I really am,
I don't want to dress myself up in sham.

I want to go out with my head erect,
I want to deserve all men's respect:
But here in the struggle for fame and self
I want to be able to like myself.
I do not wnat to look at myself and know,
That I am a blunderer and bluff, an empty show.

I never can hide myself from me,
I see what others may never see.
I know what others may never know;
I never can fool myself, and so,
Whatever happens I want to be
Self-respecting and conscience free.

See if the class can give interpretations of the following quotations:

Character is what you are in the dark.

Our character is the result of our conduct.

Character is like a tree and reputation is like its shadow. The shadow is what we think of it; the tree is the real thing.

Week of February 5, 1973 -- Film

Week of February 12, 1973 -- Continuation of Discussion of Character Traits

Ambition

Ambition has been defined as the habit of mind that strives to excel.

Discuss with class the need for striving to get ahead in school and in life.

Read and discuss the following poem:

Be the Best of Whatever You are - by Douglas Malloch

If you can't be a pine on the top of the hill,
Be a scrub in the valley--but be
The best little scrub by the side of the hill;
Be a bush if you can't be a tree.

If you can't be a bush be a bit of the grass,
And some highway happier make;
If you can't be a muskie then just be a bass--
But the lovliest bass in the lake!

We can't all be captains, we've got to be crew,
There's something for all of us here,
There's big work to do, and there's lesser to do,
And the task you must do is near.

If you can't be a highway then just be a trail,
If you can't be the sun be a star;
It isn't by size that you win or you fail--
Be the best of whatever you are!

Have children give their interpretation of the following quotations:

He who would climb the ladder must begin at the bottom.

If you don't aim high, you will never hit high.

Week of February 19, 1973 -- Film

Week of February 26, 1973 -- Obedience

To the teacher: Obedience comes naturally to children, if we ask for it in the right way. But it is not an end in itself. It is a means of education, not a final purpose. The problem is really one of what we shall ask children to do, or what they must do; and of how we give our commands and prohibitions.

The difficulties of many people come from not being clear about things beforehand. Our own uncertainties get passed on to the children, and they never really know whether we really mean what we say or not. If we do make demands and prohibitions, we must keep them. The child readily accepts conditions when he is quite clear that they are clear and firm. Some children may still sometimes try to rebel and get their own way; but they won't make a habit of it on each occasion like the child who does not know where he is with our hasty "do's" and "don't."

Pupils must be made to realize that discipline is one of their first duties. They should be made conscious of the fact that obedience brings happiness and disobedience brings unhappiness.

Discuss with the children the fact that all people have rules to follow. Everyone must learn to obey and follow directions. Teachers follow rules of the various principals; principals follow orders from the downtown office; downtown administrators follow rules from the state office, to some degree, etc.

When children get into the world of work, they will have to follow rules of their superiors. Even if they become self-employed, they will still have to follow certain guidelines and rules set up for self-employed persons.

Children in the seventh grade should have been used to obeying teachers since the beginning of school. Some of them have done a good job. Others at this age begin to rebel (as a sign of growing up.)

Point out that obedience in school is a reflection upon the child's home training. Most parents try to instill obedience in their children from the time they are born.

Discuss the following poem:

Obedience

The boy and girl who will obey
And who respect what parents say
And who are prompt and cheerful, too,
In doing what they are told to do,
Will show a parent's trust and love,
And from a habit that will prove
The greatest treasure they can own
Both while they are young and when they are grown.
For only those who can obey
Know how to rule, the wise ones say.
And so I shall my parents mind
And prompt and cheerful be, and kind.

My teacher takes my parents' place,
So I am sure I shouldn't disgrace
My home and parents, too, should I
Strict obedience to them deny.
So I shall try in every way
To do just what my teachers say:
Thus shall I show my home respect
And my dear parents' name respect.
This habit formed in home and school,
Of promptly minding every rule,
Will make it easy to obey
The laws which are my country's stay.

I'll never
Be such a gosling as to obey instince.
But stand---
As if a man were author of himself
And know no other kin.

Week of March 5, 1973 -- Film

Week of March 12, 1973 -- Honesty

For the teacher: Children need models more than they need critics. Let us be honest with ourselves and with others (especially the children). The way a child is treated, the kind and amount of training he receives, are powerful factors in determining the kind of person he will become.

Discuss with the class the reasons for being honest. Children of this age and in various areas do not feel the same about honesty as they did some years ago. It takes quite a bit of discussion, empathy, and illustrating to convince some students that "honesty is the best policy."

It is well to let the students discuss incidents which they have seen happen or situations in which they have become involved and their outcomes. Sometimes we can see why they have developed a rather negative attitude toward honesty.

Discuss the story of the Shepherd's Boy and the Wolf--the one where the boy yelled "wolf" so often that when a wolf actually did come to the boy and his flock, the villagers went on with their work and the wolf killed what he wanted of the sheep, etc. The shepherd boy learned that liars are not believed, even when they do tell the truth.

Honesty

Do what conscience says is right:
Do what reason says is best:
Do with all your mind and might:
Do your duty and be blest.

Discuss the difficulty a child might have in trying to secure work if he has a reputation of being dishonest.

Week of March 19, 1973 -- Film

Week of March 26, 1973 -- Kindness

Kindness costs so little yet it goes so far. Children need to be taught kindness early in life. Sometimes just a kind, gentle word or smile goes a long way toward making someone happy.

Children of junior high age have a tendence to be very unkind many times. Try to let the children plan a short skit showing the wrong way and the kind way of many small incidents which they see take place in the school day. For example, they might show what happens when someone walks down the aisle and a child has his foot sticking out--in one case the child who falls becomes loud and belligerent and the one who caused the fall gets angry--thus a possible fight. How should the situation be handled?

What happens when passing to classes? Why should students keep to the right? Illustrate several outcomes when one student brushes against another in the hall. What happens when books are dropped? Should others stop and help pick them up? Or walk by and utter annoyances.

How should students react to teacher when they are late for class? And vice versa?

What can students do to help a new child become adjusted to his school?

There are numerous situations which students can think of and can be acted out and discussed.

Week of April 2, 1973 -- Discussion of ways children can be of service to the school

List organizations which are available to your particular school; i.e., Student Council, Big Sisters, Cafeteria Helpers, Library Helpers, Monitors, etc., and whatever organizations you may have in addition to these.

Discuss the reasons and purposes of having these organizations and how the students can help by joining and how the organizations can help them.

Discuss the qualities of a good leader and a good follower. How can a good follower help an organization? How can a poor one tear down a group?

The dates on these lesson plans will not run accurately in all instances. I have included some dates in which school will not be in session due to Christmas vacation, Thanksgiving, and spring vacation, etc.

The dates that are not listed further will be taken care of because during both semesters, I will schedule at least four field trips and four guest speakers, so these suggested plans should be quite adequate for one school year.

Please see counselor for other additional and supplemental materials.

SUGGESTED LESSON PLANS
EIGHTH GRADE

Week of September 11, 1972

Explanation of the guidance program in this school and what accomplishments are desired. (Even though this was done in the beginning of the seventh grade, there will undoubtedly be new students and it does some good to repeat the purposes of the guidance program again to the eighth graders.) Review objectives and purposes of guidance program.

Emphasize the importance of being an eighth grader and the important choices which must be made during this coming year.

The guidance counselor assigned to your school will strive to:

1. Assist administration, teachers and students in providing a meaningful guidance experience in relation to self-awareness, school, and job or occupational information.

2. Help students solve their own problems.

3. Help students make intelligent course selections for high school.

4. Help students to develop acceptable personal and social attributes.

Discuss with students some of the group activities planned for the year--Honors Day, Career Day, Student Council meetings, Parents' Night (when high school curriculum and assignments will be discussed), possible field trips, guest speakers, etc.

Week of September 18, 1972 -- Autobiography and Guidance Information Sheet

This lesson will require two sessions. Next week, October 2, a film is scheduled so the autobiography will have to be completed on October 9, 1972.

Suggest that the children keep a guidance folder and all information done in class will be kept in this folder.

This autobiography will be helpful to the teacher as well as the guidance counselor. Let the students do a rough draft first and give as much individual assistance as necessary.

Do the Guidance Information Sheet first. Stress good penmanship and accuracy. Go over each item with the students and answer questions they may have. Collect these and give to guidance counselor for his files. See guidance counselor for these forms.

October 2, 1972 -- Film

October 9, 1972 -- Complete autobiography

October 16, 1972 -- Film

October 23, 1972

Use and discuss booklet, "Why High School?" Bring to students' attention what companies think about a high school education and the opportunities available for high school graduates. Point out how much money can be made in a lifetime without a high school education and what can be made with a high school education.

Approximately $1.65 - $2.00 per hour for non-high school graduates, 8 hours per day, 40 hours per week. Work approximately 40 years.

$7.00 - $10.00 per hour for high school graduates, 8 hours per day, etc.

Put figures on board and let students compute yearly salary and amount for 40 years for both groups.

October 30, 1972 -- Film

Week of November 6, 1972

Discuss facts surrounding the importance of choosing high school subjects wisely. Adequate selection of subjects should provide basis of preparing the children for the world of work. In choosing to prepare for a job, it is necessary for the student to know himself and his likes and dislikes.

Have students make a list of things they can do well--discuss. Make a list of things they cannot do. Make list of things they would like to do and discuss the possibility of learning how to do them.

Week of November 13, 1972 -- Film

Week of November 20, 1972

Use Widening Occupational Roles Work Kit film SVE A778-2, "What Do You Like to Do?" Use discussion questions at the end as follow up.

November 27, 1972 -- Film

Week of December 4, 1972 -- Why Study Occupations?

Try to make students aware of the necessity and importance of learning about jobs. Points to stress:

1. Choosing a career goal is one of the most important decisions a child may ever have to make.

2. Ever though the student is too young to make a definite decision (in most instances) at this point in his life, it is necessary to acquaint the children with the wide range of jobs open to them today in order that they may begin to prepare for something which they like.

3. It may be the first really complex adult decision a child will be called upon to face.

4. In order to choose intelligently, a child must have some basis for making a choice. Choosing without knowing about different jobs is like reaching in a grab bag.

THINGS STUDENTS WILL WANT TO KNOW

1. What is it like to work in various occupations?

2. What kinds of satisfactions may one expect?

3. What kinds of abilities are needed for various jobs?

4. What kinds of education and training are needed to enter certain fields?'

5. What school subjects help prepare students for particular careers or give them the opportunity to know more about them?

6. What are the employment opportunities likely to be in the career fields you are considering?

Let students try to list answers to these questions in connection with careers in which they show an interest.

December 11, 1972 -- Film

December 18, 1972 -- Choosing a Career

In choosing a career, one must learn how to choose one field of work in preference to another. This means you must know something about many fields of work which are open.

Simple sounding words can be the sugar coating for some good advice:

Little Jenny was given a penny--
Told to get
One sweet--
To eat, for a treat.

Jenny went to a shop with her penny,
Found sweets on display--oh so many!
So she got in a fret;
Creid, ""Whichever, I choose
Look how many I lose!"
Little Jenny went home with her penny--
The sweets were so many, she hadn't picked any!"

Moral: You'd best not forget
That the choice is for you--
And the sweet is too!

Introduce Widening Occupational Roles Kit. Show students how to use it and explain in detail the information which may be gained from its use. Assign two students to be in charge of kit to be sure that all folders are returned to their proper places. Set up schedule or arrange time and place when students may make use of the kit on their free time. Some may want to report in guidance class of some of the jobs they have investigated.

January 8, 1973 -- Film

January 15, 1973

Show filmstrip A778-3 "What is a Job?" Use discussion questions at end for follow up.

January 22, 1973 -- Film

January 29, 1973

A Few Words About Work

Let students copy down following terms after which discuss thoroughly:

Occupation--Group of similar jobs. Secondary school teaching is an example of an occupation.

Employment--Any work for pay or profit.

Career--The course of an individual taken in his progress through life. This may include a variety of jobs and a number of different occupations.

Career exploration is like the beginning of a long journey into unknown territory. The journey can be made easier and more entertaining by a good briefing and consultation with an experienced guide. Don't rely on hearsay.

A good guide will provide maps and comprehensive guide books. Your guide may be your counselor, teacher, experienced friends or relatives.

Girls should not feel that they do not need an education just because they plan to marry. Discuss this and get student's reactions.

Statistics show that 9 out of 10 girls will hold a full-time job at sometime during their lifetime.

At the present time--50% of women over 45 years of age are working. The more education you have, the more likely you are to hold down a job.

Work--Any kind of planned and responsible activity in which an individual engages with an expectation of getting a gainful return for his efforts.

World of Work--The sum total of all kinds of work--from very simple to highly complex--in which men and women of today engage in order to earn a living.

Position--A group of tasks performed by one person.

Job--A group of similar positions in a single plant, business establishment, educational institution, or other organization. There may be only one or there may be many persons employed in the same job. Teaching American history in your school is an example of a job.

February 5, 1973 -- Film

Week of February 12, 1973

Why Work

Discuss in detail making sure to point out that money is not the only reason for working. Other reasons:

1. To feel useful
2. To feel independent
3. To get working experience
4. To be with other people
5. To care and prepare for the future by learning a trade or new skills.

Money is one of the most important reasons for working, however. Money is the reward you receive for putting in a good day's work. It is the one most satisfactory way an employer says "Thank you" to his employees. There are other ways in which he may say thank you, but the best is money.

Discuss ways in which money is spent--as a child--when getting an allowance. Recreation, saving, school supplies, etc. Let students give examples of their allowances and how they spend them. How much direction do they receive from parents about spending their money?

When students are older, and after they leave school, money will be needed for many more things. Ask students to list some of the ways their parents must spend the money they earn. Write their answers on board for further discussion.

Examples: Rent or house payments, food, clothing, medical bills, savings for some special need for the home, savings for the future, recreation, church, travel and vacation, taxes, etc.

February 19, 1973 -- Film

February 26, 1973

Preparing for high school - This will be carried for several sessions.

March 5, 1973 - Film

March 12, 1973

Preparing for high school

March 19, 1973 -- Film

March 26, 1973

Preparing for high school

April 2, 1973

Preparing for high school

Issue booklet, Planning for High School, to each student. Read section "To the Pupil" to students and discuss. Also discuss section entitled, "To the Parent" and discuss with them.

Explain to the students the high school to which they will be assigned and why.

Explain transfer procedures (at first session). See counselor for current information regarding this.

Discuss course offerings at various schools and answer any questions students may have concerning these. Make sure students understand what is meant by a major and a minor, "credits," elective, basic requirements.

Be sure students realize importance of making careful selection of majors and minors in high school. Point out how this will affect their work career. Be sure they talk over decisions with parents.

Pass out blank program (mimeographed) to let them take home and fill out. (Counselor will furnish you with these.) These should not be returned until after the night or morning meeting with parents. Parents' signature should be secured and this form brought to counselor when he has individual conference with each child prior to making out permanent high school program card.

Discuss the differences between junior and senior high school. See counselor in order to set up a visit to the high school to which the bulk of the students of your school will attend.

Show filmstrip and record "Four Who Quit." See counselor to obtain.

Discuss further the possibility of trying to choose a career before going to high school. Do not discourage those who cannot decide--this is quite common. Discuss interests, abilities, courses needed in high school for a particular vocation, how much education needed, etc.

April 9, 1973

Explanation of Social Security

See counselor for the kit of material for your use. Discuss what Social Security is, why needed, where to apply, what happens before 65, etc. All this information and pamphlets are available for your use.

April 16, 1973

How To Get A Job

Places to look for a job:

1. Want ads in newspaper. Let students bring in examples.

    a. Discuss words used in ads such as time and a half, O/T-overtime, app-application and rec-recommendations, etc.

2. Family, friends, neighbors

3. School counselors or placement bureau

4. State employment service

5. Civil Service employment offices

    a. local office
    b. regional office

6. Commercial employment agencies

    a. List examples of local agencies taken from yellow pages of phone book

7. Union Hiring Halls

8. Direct contact

    a. Going directly to place where there is a job vacancy

April 23, 1973

Applying

Let students "act out" applying for a job. Use ad from want ad section. Let them choose ad of their choice. Work in several groups of 2's or 3's. Need employer, employee, maybe receptionist. Let remainder of class observe and make suggestions and criticisms, etc.

Teacher must offer suggestions and lay ground rules for this.

April 30, 1973

Learning to Write Letter of Application

1. Fill out form completely.
2. Use ink, write or print legibly.
3. Answer each question. If question does not apply, mark N/A.

See Chap. 3, p. 38, Succeeding In The World of Work.

JUNIOR HIGH SCHOOL
LESSON PLANS

Note: Suggestions for many of the following lessons cannot be completed in one class period. It is recommended that counselors select the activities that best fit their particular class. It is also recommended that the counselor selects the lesson that he feels best suits the particular group he is working with. For example, some 7th grade groups may gain much from a lesson which is commonly thought of as an 8th grade lesson, and vice versa.

I. Orientation of Guidance Program

A. What will be done in guidance classes

1. Vocational information will be presented in guidance classes
2. Films and filmstrips will be presented
3. Vocational tapes will be presented
4. Lessons of the vocational nature will be presented

B. Representatives from business and industry may visit class to answer questions

II. Definition of a counselor

A. Counselor assists students in completing his high school program
B. Counselor helps small groups solve common problems
C. Counselor helps individual students solve individual problems

1. Counselor will interview each 7th and 8th grade student at least once during the year
2. Students may set up appointments with the counselor by first talking with the teacher, principal, or vice-principal

D. Counselor may assist students visiting business and industry for additional vocational information
E. Counselors may present vocational information in the assigned guidance classes

III. What this class can do for you

A. Learn something about yourself which will help you to decide which job or jobs would be best for you. Discover your interests, abilities, and personality.
B. What are some of the available jobs in Indianapolis?
C. What are some qualifications for certain jobs?
D. How do you get a job?
E. How to meet the personnel director.
F. Where are the jobs?
G. What is the pay of certain jobs?
H. Why do people work?
I. How does school help in getting a job?

J. Which jobs have the greatest demand?
K. The need to be able to do more than one job.
L. What are the opportunities in the Indianapolis high schools and vocational schools?
M. What about high school records?
N. If possible, we will visit work areas to see first hand men and women on the job.
O. An opportunity to work in small groups.
P. What is your responsibility to your country?

IV. The importance of elementary, junior high, and high school

A. Each year of school is another step on the ladder toward your goals (Being Teenagers, p. 153)
B. Setting goals discussed. (Our School Life, p. 52)
C. Lifetime earnings of dropouts, high school graduates, and technicians and college graduates discussed.

V. The purpose of the Metropolitan Achievement and I.Q. tests given to eighth grade students discussed.

A. Test scores used for selecting students for a particular group
B. Test scores used for scheduling students for certain classes
C. Test scores are recorded in school office and transferred to the high school
D. There are separate test scores for reading, spelling, math, science, and social studies
E. Validity of the test discussed

VI. Dropping out of school vs. staying in school

A. Filmstrip--"Dropping Out, Road to Nowhere."
B. Before film
1. Talk about dropping out of school
2. What is meant by "dropping out"
3. It has been estimated that by 1970 more than 7 million youngsters will have dropped out of school--will you be one of them?
4. These figures include boys as well as girls
5. If you are: bored, restless, anxious to be on the move, wanting to prove yourself, then you should "for your own good" record some of the information in your brain
6. This film is based on the experiences of kids who have quit school
7. 15% of all teenagers are out of school and out of work
C. After film
1. What does the future hold for the drop out?
a. last hired
b. first fired
c. lower pay
d. poorer jobs
e. in and out of jobs
2. Explain company that only wants drop outs

3. You will be working 40 years, you better be doing something you like
4. Employment doors do not open automatically; you must have skills and knowledge to make them open
5. 15% of all teenagers are out of school and out of work

VII. Distributing instructions on how to use the high school booklet, "Planning for High School." Discuss the following:

A. Courses offered to freshmen
B. Majors and minors
C. Reqauired subjects and electives
D. Credits required

VIII. Making plans for high school

A. Participating in high school is a very important step in your life. You will be
   1. Preparing for a job
   2. Preparing for entering college
   3. Picking out a life partner, husband or wife
   4. Participating in clubs and sports
   5. Making a lifetime high school record
B. Differences between high school and junior high school
   1. Students are given more responsibilities
   2. Students are given more freedom
   3. Students have the opportunity to choose many of the subjects he will take
C. Discuss how many and what kind of subjects he must take to graduate from high school
D. Discuss what is an elective subject
E. What is a major?
   1. Six credits of work in the same subject area
   2. Student must have two majors to graduate
   3. Majors must be in different areas
F. What is a minor?
   1. Four credits of work in the same area
   2. Student must have two minors to graduate
   3. Minors must be in different subject area from those of majors and each minor must be in a different area
G. A student must attend at least seven semesters in grades 9-12 to graduate.

IX. Your first semester in high school
A. Filmstrip, "Your First Year in High School."
B. Filmstrip, "High School Course Selection."
C. Being Teenagers, p. 160

X. Distributing the plan sheets for high school
A. Demonstrate the filling out of the plan sheet. The use of the overhead projector is very helpful.
B. Instruct the students when plan sheets should be returned

XI. School records and their importance
- A. Show samples of school records
- B. Stress the permanency of school records
- C. Explain who uses school records
- D. Show sample of personality traits records (example below)

APPEARANCE	1 Pleasing	2	3 Acceptable	4	5 Needs Improving
CONDUCT	1 Excellent	2	3 Fair	4	5 Unsatisfactory
COOPERATION	1 Helpful	2	3 Neutral	4	5 Antisocial
DEPENDABILITY	1 High	2	3 Medium	4	5 Low
EMOTIONAL CONTROL	1 Good	2	3 Fair	4	5 Poor
INDUSTRY	1 Industrious	2	3 Average	4	5 Lazy
INITIATIVE	1 Much	2	3 Some	4	5 Little
INTEGRITY	1 High	2	3 Medium	4	5 Low
LEADERSHIP	1 Good	2	3 Neutral	4	5 Bad
MANNERS	1 Pleasing	2	3 Acceptable	4	5 Objectionable

Comments:

Rated by:

Return to:

XII. The vocational opportunities in Indianapolis discussed
- A. A career educational program
- B. Mallory Technical College (show examples of Mallory Tech brochure)
- C. Vocational areas in Indianapolis high schools
- D. School of Practical Nursing

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XIII. How to find a job; the following are discussed:
- A. State Employment Agency
- B. Employment ads in newspapers
- C. High school counselor and teachers may be helpful
- D. Friends may be helpful
- E. Radio and television

XIV. Looking for a job in the newspaper
- A. Distribute to each student a copy of the employment ad section of the newspaper
- B. Students discuss ads
- C. Job requirements are stressed

XV. Preparing for a job interview
- A. Reference, Film, "Getting a Job is a Job."
- B. Distribute and discuss the mimeographed copy of points given to students concerning preparing for a job interview (see below)
- C. Students role play employee and employer
- D. Reference, filmstrip, "Your Job Interview."

PREPARING FOR A JOB INTERVIEW

1. Meaning of interview
2. Meaning of employee
3. Meaning of employer
4. Why have an interview
   - a. Helps you decide if you would like to be employed with this company.
   - b. An opportunity for the employer to become acquainted with you, which will help him to make a decision about your employment.

5. Your appearance affects the employer's opinion of you.
   - A. Is your clothing clean and pressed?
   - B. Is your shirt tail out?
   - C. Are your shoes shined?
   - D. Is your hair combed and neat?
   - E. Are your nails and hands clean?
   - F. Is your makeup neat and toned down?
   - G. If you wear glasses, are they clean?
   - H. Are you well shaven?
   - I. Is your breath pleasant?
   - J. Is your perfume too strong?
   - K. Is your posture pleasant?
6. During the interview
   - A. Be on time--better to be early than late
   - B. Boys should give a firm hand shake.
   - C. Introduce yourself.
   - D. Be yourself.
   - E. Don't sit during the interview and look at the floor; instead, look him in the eye when you talk.
   - F. Express your interest in the company.
   - G. Appear alert--show interest in what the employer is saying.
   - H. Take a pencil along.

I. Believe in yourself, tell yourself that you are as good as the next applicant.
K. Have a sense of humor.
L. Don't say too much during the interview, answer questions and express your interest.
M. Don't ask how much money the job pays.

7. Questions the employer may ask
   A. Why did you pick this company to interview?
   B. Where and how long did you go to school?
   C. What were some of your extra-curricular activities in school?
   D. How do you spend your spare time? (Hobbies, reading, etc.)
   E. What other work have you done?
   F. Would you be interested in working overtime or would you be interested in working nights?
   G. Would you object to being transferred to another location?
   H. Would you object to travel?
   I. Do you like to work with people?
   J. Will you be willing to take a test?

XVI. Film, "Getting a Job Is a Job."

XVII. The job interview
   A. Set up desk for role play session
   B. Define employee and employer
   C. Discuss the role play sessions

XVIII. Filmstrip, "Your Job Interview"

XIX. Filling out an application for employment
   A. Show samples of applications for employment with Indianapolis companies
   B. Distribute a mimeographed sample copy of an employment application to each student
   C. Discuss and complete each item of the application as a group

XX. What industry expects of its employees
   A. Reference, pages 39 and 45, "Help Yourself to a Job."
   B. Reference, page 166, Being Teenagers.
   C. Reference, page 202, About Growing Up.
   D. Reference, filmstrip, "Getting and Keeping Your First Job."
   E. Reference, filmstrip, "What You Should Know Before You Go to work."
   F. Sample copies from industry concerning company rules are discussed

XXI. Defining and discussing terms used in the world of work
   A. Gross pay
   B. Net pay
   C. Fringe benefits
   D. State and federal taxes withheld from pay check
   E. Union and non-union work areas
   F. How to calculate overtime pay
   G. Medical insurance
   H. Social Security
   I. Work permits

XXII. Make your high school career worthwhile. Discuss the following:
- A. Worthwhile electives--mechanical drawing, typing, etc.
- B. Obtain a skill for a future job after high school.
- C. If college is a possibility for you, then be prepared and qualified.
- D. Reference: filmstrip, "How to Succeed in High School by Trying."

XXIII. How to Study
- A. Reference: filmstrip, "Developing Your Study Skills,"
- B. Reference: page 38, About Growing Up
- C. Reference: filmstrip, "Preparing for the Jobs of the 70's."
- D. Questions for discussion following filmstrip, "Preparing for the Jobs of the 70's."
  1. Has automation increased the number of jobs available today? How?
  2. Is the general job market expanding or contracting? Why?
  3. Will the market for unskilled workers remain the same as it is today?
  4. What is the biggest single industry in the United States?
  5. At what point in your schooling do you believe it is time to start thinking about and planning your future career?
  6. Have you had any serious discussions with your guidance or vocational counselor about what you will do after high school?
  7. What areas or fields of work will have fewer job opportunities in the 70's?
  8. What field has shown the greatest growth in the past five years? Will it continue to expand as rapidly? Why?
  9. How has the process known as micro-miniaturization benefited our efforts in the space program?
  10. How can atomic energy be used for civilian purposes?
- E. Reference: page 112, Being Teenagers
- F. Reference: filmstrip, "Preparing for the World of Work."

XXIV. What do you want out of life?
- A. Students list what they want out of life; for example, money, cars, home, good job, etc.
- B. Students explain how these goals can be reached
- C. Reference: page 46, Seeing Ourself

XXV. Why do people work
- A. Ask students to list their reasons why they think people work.
- B. Place each on overhead projector and discuss
- C. Add and discuss any reasons not mentioned by the class
  1. For moeny
     - a. to buy food
     - b. to buy clothes
     - c. to buy a house or pay rent on house or apartment
     - d. to buy a car, a boat, to travel, to entertain
     - e. to impress people, to buy something for someone else
     - f. to pay bills, for education purposes, pay insurance, etc.
  2. For enjoyment
     - a. Commercial fisherman, farmer, musician
     - b. to meet people and be with them
     - c. to work with hands--surgeon, dentist, machinist, typist
     - d. to be outdoors (or indoors)

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3. To acquire a skill and/or knowledge
   a. to learn how to operate machines
   b. to gain experience in business, etc.
4. To be a boss
5. Because someone tells you to--such as wife or husband
6. To get away from home
7. To prevent boredom
8. To make a better world--politicians, ministers, etc.
9. For savings
10. For the exercise
11. Who doesn't have to work
    a. Bedfast, handicapped
    b. Those that are willed money or a business
    c. Those who cannot find jobs are helped by the state--welfare, unemployment insurance
12. Factors that may control where you work
    a. Distance from your living quarters to work area
    b. Fringe benefits
    c. Pay
    d. Your skills
    e. Your education

XXVI. Your abilities and interests
- A. Students define abilities and interests
- B. Value of hobbies discussed
- C. Reference: page 277, Seeing Ourself
- D. Reference: page 137, Being Teenagers
- E. Reference: page 189, About Growing Up
- F. Reference: filmstrip, "Choosing Your Career."
- G. Reference: filmstrip, "What Do You Like to Do?"

XXVII. Is college for you
- A. Cost discussed
- B. College requirements discussed
- C. Advantages and disadvantages of going to college
- D. Advantages and disadvantages of going to work after high school
- E. Selecting the college of your choice discussed

XXVIII. If you attend summer school
- A. Courses offered discussed
- B. Credits received discussed
- C. Hours and student requirements discussed
- D. Advantages of summer school discussed
- E. How to enroll explained

XXIX. Introduction to S.R.A. work kit
- A. Distribute a mimeographed copy of the jobs described in the S.R.A. work kit to each student
- B. Two students are assigned to distribute the desired booklet for each student
- C. Class discussion conducted by students concerning their S.R.A. booklet

XXX. Is failure worthwhile?

A. Filmstrip, "Failure: A Step Toward Growth"--this filmstrip points out that everyone fails at something during their life. What we do about our failures is discussed.

B. Key points
   1. Failing can be of value if handled right
   2. Examples of great men who at some time failed
   3. Reasons for failure

C. Basic thought-provoking questions for students
   1. Who is to blame for your failures in most instances? Could it be your teachers, your parents, other students, the weather, your health, or a friend?
   2. How can a person hurt himself when he is afraid to ask questions in class when he or she is confused?

D. Main points to discuss
   1. What is meant by failure?
   2. What is meant by success?
   3. Who is to judge if you failed?
   4. Does anyone go through life without failing at something?
   5. What can we do when we fail?
   6. What is the value of failure?
   7. What do we mean by "bouncing back?"
   8. Why do you fail?
   9. How can you become interested in a subject you don't like?
   10. How many times did Babe Ruth strike out?; why do people forget this and remember the number of times he hit home runs?
   11. What is the first step you should take when you fail?

XXXI. A visit to industry

A. Why visit industry?

B. Student behavior during the tour at plant stressed

C. Discussion concerning expected jobs to be observed

D. After the visit to industry, students are asked to discuss jobs they observed and qualifications for these jobs.

XXXII. Guest speakers from industry and service occupations

A. Purpose of visitors visiting class discussed

B. Students discuss questions to be asked during the speaker's presence

XXXIII. Opportunities in the Armed Services for men and women

A. Learning a skill in the service for future use

B. Gaining educational assistance after discharge from services

C. Retirement pay after twenty years in the service

D. Obtain travel experiences

E. Distribute and discuss armed services bulletins

XXXIV. Exploring your interests

A. Hand out to each student a copy of "My Interests"

B. Instruct students to be honest with themselves and complete it

C. Discuss in class the list of career fields and ask students to list an activity under each field.

XXXV. How important are the decisions and choices you make?

A. Discuss with students at what age did they begin to make choices

B. Discuss with students how they make choices

C. Discuss how their future is affected by the choices they make

1. Where they work
2. Who they associate with
3. The amount of money they make
4. Their health'
5. Who their life partner will be
6. The type of home they may have

To: The Teachers of Guidance

The following is a suggested lesson outline for use with eighth grade guidance classes. You may also find some of the lessons appropriate for seventh grade guidance classes.

It should be understood that this is only a suggested outline, and as the teachers of guidance you should by all means feel free to use what will benefit your students, and substitute other lessons that you feel are more appropriate for your particular group.

It should be noted that the information in the outline was compiled as to subject relevance to the school year. If you find this is not the case with your students by all means feel free to change the plans.

OUTLINE FOR 8TH GRADE GUIDANCE PROGRAM

1. Definition of guidance and the role of the guidance counselor.

   A. To assist administration, teachers and students in providing a meaningful guidance experience in relation to self-awareness, school and job or occupational information.
   B. To assist students in developing acceptable personal and social attributes.
   C. To help students solve their own problems.
   D. To inform students of the various occupational choices.
   E. To help students make intelligent course selections for high school.

2. Understanding yourself.

   A. What do you like to do?
   B. What are your likes and dislikes?
   C. Taking advantage of strong and weak points.
   D. Knowledge of your abilities.
   E. Knowledge of your interest.
   F. The Free and Responsible Person:
   The free and responsible person strives to solve problems of life as they are encountered; also, he can reflect upon himself and his life. He uses his total capacity to know and to understand himself as he seeks to integrate his learnings with his concept of self to create a life.

   He chooses among available alternatives. He recognizes that his freedom is limited by his nature as a person and by the culture that gives meaning to his life. He learns to be free and responsible, progressively building upon past experiences to face the present and the future.

   He recognizes that he is cumulatively a product of his physical, spiritual, emotional, social, and psychological nature as he learns from experiences. The values that he learns and accredits are determining forces in the establishment of his life objectives and of his life purposes.

He understands that freedom is the opportunity to use his total capacity to solve problems. He views his freedom to create his own life as his most precious possession. He knows that he is constantly in the process of becoming responsible.

He defends and attempts to extend the freedom of others to live their lives with a dignity, worth, and integrity that are an extension and a reflection of his respect for his own dignity, integrity, and worth as a unique person. He respects and is responsible to his own free, open society and culture as an environmental and supporting force that permits him to be free to choose and to value.

The free person accepts the responsibility for his decisions. He seeks aid and counsel from others in resolving any issue, but accepts the implications and the complications of his actions.

He accepts youthful dependence while striving for mature independence. He attempts to understand the irrational and rational forces within himself. He seeks security, acceptance, recognition, and self-esteem in psychologically healthy ways. He is capable of loving and being loved. Hate, ignorance and bigotry are his recognized enemies.

He values education as an opportunity to learn creatively about life while preparing himself to live a richer, fuller life. Educational decisions become related to step-by-step formulations of career concepts. He views work and career development as expressions of his own relations to the world.

The free and responsible person views life as an opportunity to realize his own potential as an individual while demonstrating by each act of life that he knows self-realization as at the same time social self-realization.

The free and responsible person, capable of reflective thinking and appropriate problem-solving, creates values to guide the personal process of helping those younger than he determine objectives and purposes in life. The worth of the individual is one of the most basic values within a free society, and the individual is the raw material of guidance-education. The infinite variability of students within a democracy dictates that each person be aided through learning to have equal access to all available opportunities for self-recognition, self-assessment, and personal development.

3. Developing your study skills.

   A. Show filmstrips "Developing Your Study Skills" and "Hung Up On Homework."
   B. Discuss note taking
   C. Speed reading
   D. Test preparation and how to take a test.

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4. The importance of your Metropolitan Achievement Test.

   A. Metropolitan Achievement Test gives indication of achievement level.
   B. Good predictor of what student may be capable of doing.
   C. Results of test have to do with class placement.

5. The importance of a high school education.

   A. The value of diploma in dollars (Census Bureau reports) (Stress)
   B. Better job
   C. More earning power
   D. Self-support and pride in self-support.
   E. Responsible citizen
   F. Decision making

   The helping of students to make decisions has long been a major objective of education and guidance, and perhaps one of the most significant contributions education and guidance can make to the future of our society is to provide students with training and practice in decision-making.

   Personal values are used to determine satisfying outcomes; personal values play a role in what information is sought and how it is evaluated. Once a person has identified his values he must be able to convert these into clear objectives which suggest appropriate actions. Students faced with decisions need training and practice in making clear statements of objectives and in identifying actions which might achieve these objectives.

   Identifying and looking at one's own values in light of your behavior is a very difficult thing to do. It is difficult because we don't always want to reveal our true values. Converting these values into clear statements of objectives is even more difficult because we then discover when confronted with each other in a choice situation.

   Questions for discussion:

   Consider the degree of difficulty involved in these decisions that youngsters face by the time they reach the eighth or ninth grade:
   1. What curriculum should I take in high school?
   2. What goals should I set for myself in high school?
   3. Can I be myself and still have friends?
   4. Should I try drugs?
   5. Should I leave home?
   6. Should I go to college?
   7. Should I drop out of school?
   8. Do I decide or will my parents and counselor decide for me?

   Now take any of these questions facing youngsters today and try to answer them without considering:
   1. Personal values
   2. All the alternatives available
   3. The risks involved in each decision
   4. A plan to seek out, evaluate, and use information
   5. Clearly stated short and long objectives

Difficult? Yes, it is difficult to pursue almost any task without knowing how to go about it. Yet, youngsters faced with these decisions typically do not know how to go about dealing with them.

6. Making intelligent high school course selection.

   A. Show filmstrip "High School Course Selection."
   B. Discuss making course selection with some specific goal in mind.
   C. Avoid taking courses or selecting courses because some friend selects a course.
   D. Failure: A step toward growth.
      1. Know your interests and abilities.
      2. Understand your likes and dislikes.
      3. You usually cannot be fooled in everything. Learn by your mistakes.
      4. Talk to people that can help you when you experience trouble.
      5. Ask for suggestions and alternatives from students, teachers, counselors, and others.

7. Your first year in high school.
   A. Show filmstrip "Your First Year in High School."
   B. Show filmstrip "How to Succeed in High School."
   C. Making adjustment from junior high school to high school.
   D. Developing good study habits.
   E. Participation in extra-curricular activities.

8. Dropping out of high school.

   A. Show filmstrip "Dropping Out--Road to Nowhere."
   B. Discuss the following: difficulty in finding good paying jobs.
   C. First fired and last hired.
   D. No advancement in carwashing and dishwashing.

9. Preparation for jobs of the 70's.

   A. Show filmstrip "Preparing for the Jobs of the 70's."
   B. Job classes, skilled, semi-skilled and unskilled.
   C. Show filmstrip "Choosing Your Career."
   D. Consider interest, abilities, working conditions, supply and demand of certain areas.

10. Work permits and Indiana law.

   A. What are work permits and where do students get them?
   B. Jobs minors can and cannot do according to age.

11. Job Application

   A. Making a resume (see next section)
   B. Explain terminology found on job applications
   C. Practice filling out job applications, with reference to good spelling, neatness, and accuracy.
   D. Now is a good time to also discuss the advantages of having a guidance folder.

Making a Resume

Before you go to an employment agency or to an interview, it is a good idea to make a resume. A resume should show all the important information about yourself that you will be asked to give on an application form. Writing this information down ahead of time will help you fill out an application form. You may have to ask your father or mother for some of the information. You may have to consult others for information that will make up your resume.

Listed below are just a few of the items that should be included:

1. Name
2. Address, city, state and zip code
3. Telephone
4. Social Security number
5. Draft status
6. Age, height, and weight
7. Date of birth, place of birth
8. Marital status
9. Father's name
10. Mother's name
11. Educational record
    A. Elementary School - from_____to_____.
    B. Junior High School - from_____to_____.
    C. Senior High School - from_____to_____.
    D. Vocational Training - FROM_____to_____.
12. Previous work experience
    A. Company
    B. Address
    C. Kind of Work
13. References (Do not list relatives)

12. How to conduct yourself in a job interivew.
    Use pamphlet "Job Hunting?" Eighteen helpful hints on "Selling Yourself to an Employer" by the Indiana Employment Security Division.

13. Job planning if you are not going to college.
    A. Show filmstrip "If You're Not Going to College."
    B. Mastering the basic skills while in high school.
    C. Making the necessary pre-planning for vocational occupation.

14. How to keep your job: be a good worker.

    A. Be willing to learn.
    B. Be able to take constructive criticism.
    C. Be prompt.
    D. Be willing to do more than is expected.

15. Fifty ways to avoid being hired

    1. Poor personal appearance.
    2. Overbearing, overaggressive, conceited, superiority complex--don't be a "know-it-all."
    3. Inability to express himself clearly--poor voice, diction, grammar

4. Lack of planning for career--no purpose and goals.
5. Lack of interest and enthusiasm--passive, indifferent.
6. Lack of confidence and poise--nervousness, ill at ease.
7. Failure to participate in activities.
8. Overemphasis on money--interested only in best dollar offer.
9. Poor scholastic record--just get by.
10. Unwilling to start at the bottom--expects too much too soon.
11. Makes excuses, evasiveness, hedges on unfavorable factors in record.
12. Lack of tact.
13. Lack of maturity.
14. Lack of courtesy--ill-mannered.
15. Condemnation of past employers.
16. Lack of social understanding.
17. Marked dislikes for schoolwork.
18. Lack of vitality.
19. Fails to look interviewer in the eye.
20. Limp, fishy handshake.
21. Indecision.
22. Disrespect.
23. Unhappy married life.
24. Friction with parents.
25. Sloppy application blank
26. Merely shopping around.
27. Want a job for a short time only.
28. Little sense of humor.
29. Lack of knowledge of field of specialization.
30. Parents make decisions for him.
31. No interest in company or in industry.
32. Emphasis on whom he knows.
33. Unwillingness to go where we send him.
34. Cynical
35. Low moral standards.
36. Lazy
37. Intolerant, strong prejudices.
38. Narrow interests.
39. Spends too much time at motion pictures.
40. Poor handling of personal finances.
41. No interest in community activities.
42. Inability to take criticism.
43. Lack of appreciation of the value of experience.
44. Radical ideas.
45. Late to interview without good reason.
46. Never heard of company.
47. Failure to express appreciation for interviewer's time.
48. Asks no questions about the job.
49. High-pressure type.
50. Indefinite response to questions.

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16. What are job families?
    Look at jobs in different categories in SRA kit.

17. All about apprenticeship programs.

    A. Explain how apprentices are selected
    B. Length of training
    C. Use film "Apprenticeship Training" from state office of apprenticeship training.
    D. Importance of making good grades and school record.

18. Requirements for graduation from high school.

    A. Use booklet "Planning for High School."
    B. Discuss credits.
    C. Majors
    D. Minors
    E. After school activities.

19. Causes of failures and remedies.

    A. Cutting school
    B. Teachers are human, they make mistakes
    C. Not doing homework
    D. Tardiness to class
    E. Failure to put forth best effort on test

20. If you're in trouble.

    A. Talk to someone that is in a position to help you.
    B. The someone may not be a person that you like, but one you can trust
    C. Admit your mistakes and profit by them; don't make the same one twice. Learn by your wrongdoing.

21. Self-Concept (Use "Just for Today") See counselor for this concept.

22. Rap session.

    A. Let students discuss subject of their choice.
    B. Different subjects may be suggested by the teacher.
    C. The following subjects:
        1. School spirit
        2. Guidance services we would like
        3. Qualities boys like and dislike in girls
        4. Qualities girls like and dislike in boys.

23. Good school manners.

    A. Courtesy to all when you come in contact with them.
    B. Give others a chance to express their side of a situation--listen.

24. Field trips

25. Where to find jobs and job information.

    A. Newspapers
    B. Friends
    C. TV
    D. Meaning of resume

26. Meaning of "Fringe Benefits"

    A. Paid vacation
    B. Paid hospitalization
    C. Retirement
    D. Insurance benefits
    E. Credit Union

27. Pay check terminology

    A. Union dues
    B. Federal taxes
    C. State Gross Income Tax
    D. Net pay
    E. Gross pay

28. A plan for after high school

    A. Personal plan
    B. Job selection
    C. Type of girl or type of boy
    D. Type of additional training

29. When friends are not really friends.

    A. If he asks you to cut school.
    B. If he asks you to ride in a stolen car.
    C. If he asks you to try drugs.

30. Drug abuse

    A. The pitfalls
    B. Relate legal use of legitimate drugs and the good they can do if used properly.

31. Are you taking advantage of your community services.

    A. Legal services for those that cannot afford them.
    B. Free medical care if the family cannot afford services of a doctor.
    C. Dental school for those that can't afford the services of a private dentist.
    D. Other services.

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32. Pardon Me--Is Your Prejudice Showing?

A. Words can be killers
B. Both black and white students bring prejudices from homes and other sources to school.

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HOME ROOM GUIDANCE

The "Stunts" of Education - Education still, to too many individuals, appears to mean a something represented by an array of marks, a collection of credits, a certificate or diploma, or other visible proof of the student's ability to do the prescribed stunts of education. To these persons, education is an organized system or institution that must be successfully passed through if the individual is to deserve and win the highly desirable designation of "educated." So "education" becomes synonymous with graduation," and the more "graduated" the individual is, the more "educated" he is.

Just as it is possible for a boy to be able to build a fire in the rain with only two matches, apply a tourniquet, or recite the Scout Oath and Law and not be a scout, so is it equally possible for the student to be able to work a problem in algebra, parse a verb, repeat some array of definitions, names, dates and other materials and still not be educated.

Growing out of recent scientific study of childhood by educators and scientists there has developed an entirely new conception of the nature of children which has made possible a wholly new approach to the problems of education. This view is that children are not miniature adults at all, but an entirely different kind of creature. They are creatures who will later become adult men and women, it is true, but for the time being they are living a life of their own and can, in a sense, be thought of as being an entirely different species of animal.

This attitude can be understoof if we think of children as being the raw materials out of which adults are being made in much the same sense that wood and iron are the raw materials out of which automobiles are made. We may compare the school to a factory. Just as in the automobile factory, it is the business of the workers to take the raw materials, which are wood and iron, and by using certain tools and certain methods of manufacture turn out finished automobiles, so in our schools and other educational agencies it is the business of the principals, teachers, counselors, parents and others to take the raw material, in the form of children, and make adult men and women of them by using any available tools and materials.

The Modern Demand for All-roundness

We must not forget than an individual lives in physical, social, ethical, moral, civic, emotional and spiritual relationships as well as in mental, and without suitable training in all of these he is as incomplete, useless, and ludicrous as an automobile with important parts missing. Moreover, a development in one direction does not guarantee a satisfactory development in the others. For instance, it is possible for the valedictorian of the class to have the honor of possessing the finest array of marks (only fairly intelligent guesses) and still be offensive personally, dumb socially, vicious morally, weak spiritually, a grafter politically, a misfit vocationally, and a wreck physically. Is he educated? Hardly.

In short, the conception of education solely as a mental process is not logical, sufficient, or satisfactory. The individual passes through many dif-

ferent phases of experience and needs to be educated for all of them. This is, then, the demand of modern education - the development of all-roundness in spirit, mind, and body.

It is now evident that we must direct our attention and energies beyond mental education if we are going to educate the whole child. It has already been established that nearly all of the education of the earlier school, above the three-R grades, was of the mental type, and that it was composed of pretty useless materials. In fact, useless materials were desired and this ideal is still reflected in many school subjects and in the writings of those who emphasize "liberal education." Illustrations of this attitude are to be found today in the philosophy underlying almost any college of liberal arts. Subjects and material of practical value are considered cheap and unworthy of a place alongside of the cultural or liberal material usually spoken of as "the finer things of life." And because many teachers are trained in this liberal arts college, they reflect to a surprising degree, but in a lesser and much more amateurish way, its educational program and ideals.

The Importance of Guidance in the Homeroom

The homeroom, with its main emphasis upon the education of the student rather than the passing along of a body of subject matter, epitomizes the very soul of the modern conception of education: that the pupil himself is far more important and sacred than any mass of information he may ever accumulate. In reality the homeroom creates a situation in which the pupil himself becomes the subject studied, worked with, and learned about. He and his activities, experiences, and interests compose the curriculum. He is the curriculum and all subjects, courses, knowledge and information are justifiable only if they contribute directly and definitely to his development.

The formal and artificial atmosphere of the classroom is replaced by the informal and intimate relationship of the family; complete teacher responsibility gives way to pupil participation; knowledges only are supplements by knowledges that function in forming habits; and external authority is supplanted by social pressure. The homeroom is not a preparation for life, it is life - real and vital - in which members live naturally in a most natural setting. The development of the ideals and habits of all-roundness - this is the opportunity and function of the homeroom.

The homeroom is the most important institution in the intermediate school. Beyond question, the duties performed by homeroom teachers are the most vital and far reaching duties performed in the intermediate school.

The influence of the well-poised, even tempered, kindly, sympathetic homeroom teacher, who takes an aggressive interest in the welfare of his or her charges, is by all odds the most important single educative influence with which our pupils come in contact, and it also represents to us our greatest single opportunity for constructive service. The homeroom period in our school is the backbone of our organization. We find here a wonderful opportunity for teaching guidance in our schools. It might well be said of any modern junior high school, "as is the homeroom so is the school." The homeroom is the pulse of the school, reflecting quite accurately the general condition of the school. If many schools have found the homeroom of value, then the blame for the failure

of other similar schools to be impressed with its influence cannot be put on itself but rather on the method by which it is organized and administered. If it is successful in one school, there is no reason why it should not be successful in another similar school.

Objectives of the Homeroom

1. To Develop Desirable Pupil-Teacher Relationship

This rather blunt statement may appear to imply that, normally in the school, desirable pupil-teacher relationships are not developed or are not present. This is, of course, not true, for there are many instances in all schools in which these relationships are to be found. However, a detailed discussion of the possibilities of these relationships will indicate that, because of the very nature of the school subjects, ideals, organization, and methods, they are not developed so much as they might be. The "lost pupil-teacher relationship" has been, and still is, the topic of many a serious discussion among educators.

This relationship is twofold: acquainting the teacher with the pupil and acquainting the pupil with the teacher. More than ever before, the school is interested in remedial instruction - in locating the weakness, lacks, and deficiencies in the pupil, in his personality, make-up, ideals, habits, ambitions, and in developing a program for improving these. The diagnosis of the individual pupil, not in his success with his four or five subjects only but in all of the successes and failures of the activities and relationships of his whole life, is the first step in this remedial work.

The present great emphasis upon guidance is proof of the demand for this program of diagnosis and treatment.

Where, just how, and upon the basis of what contacts with the pupil can the guidance teacher initiate and develop such a program of diagnosis and improvement? The most logical answer to this question is that the teacher can learn to know her pupils through her contacts with them in their regular classroom activities.

While on the surfact this answer appears to have considerable foundation, a closer and more critical analysis of these possibilities will result in an evaluation of them that is a great deal less optimistic, to say the least.

In the first place, the regular classroom teacher can never know very much about her individual pupils through classroom contact with them and the reason is quite obvious. She normally teaches five or more classes with a total of some one hundred or more members each day, and it is unreasonable to believe that she can become intimately acquainted with this number during the short period of a semester or term.

Another good reason why she cannot become well acquainted with her pupils is the very nature of the class exercise itself. This exercise or "recitation" is usually a group and not an individual affair and, because of the presence of other members of the group, there is comparatively little opportunity really to know pupils personally.

A third reason is because of the pupil-teacher relationship. The teacher is a task setter, an assigner, the examination giver, a keeper-of-the-pupils busy. The student is the task doer, the getter of the assignments, the taker-of-the-examinations, and the one kept busy. In this organization the teacher and the pupil are in a sort of superior-inferior or employer-employee relationship in which the superior's main job is to give the inferior something to do and see that he does it.

A fourth very important reason is that the teacher is held responsible for their success in the subjects which she teaches; the emphasis is not upon them but rather upon their success in her subject. In short, almost all that any teacher can know about the average pupil is what he does in her room, at a particular hour, in a particular class. It is logical that beneficial guidance will have to take place in the homeroom.

The homeroom teacher functions in all phases of guidance. It is in this capacity that she comes to know each pupil in the room more intimately than any other teacher. She alone has the opportunity of knowing the pupil in all his relationship; his studies, his difficulties with teachers; his problems of discipline; his home conditions and environment; his associates in school and out; his attitudes, interests, and abilities. Therefore, whether the school be large or small, it is with the homeroom teacher that the foundations for guidance must be laid.

Moral and Ethical Guidance

Because character, of some type or another, is absolutely fundamental to any kind of civilization, the development of it has always been, and probably always will be, a most important emphasis in any civilization's educational system. Although the basic objectives of character training have changed but little in recent times, the methods by which these are developed have changed greatly as our philosophy of education has been influenced by what we have discovered through the various phases of child study.

Formerly, our character education was largely of a negative (prohibitory, disciplinary, perceptual, thou-shall-not) and a learn about (maxims, slogans, illustrations) type while the modern conception of it is a more positive and active type, based largely on action in natural situations. Although there is considerable disagreement among teachers on the concept of these methods, these two represent fairly accurately the so-called methods of character instruction, the direct and indirect.

The direct method of teaching character is to develop desirable elements of character by centering attention very directly upon them, by analyzing, discussing, and by memorizing slogans, codes, creeds, and verses.

By the indirect method the learner does not merely formally learn a lesson about some particular trait, but he practices this trait, or its opposite, in an actual situation. In short, he learns the trait by really doing, performing and practicing it in some more or less natural situation in which this trait is commonly desired and practiced.

Suggestions for Teaching Conduct

There is not space enough in this guideline to permit of a detailed discussion of the materials for and the methods of teaching conduct, but a few basic and rather widely agreed-upon principles will serve as a background for the presentation of quite an extensive array of suggested programs.

1. Very Definite Material Should Be Selected

The faculty with, perhaps, more mature students should select a few fundamental traits upon which to center attention. A few items forcefully presented are worth more than twice as many only half as well presented.

2. Natural Learning Situations Should Be Selected and Capitalized

Learning about traits of character apart from the situation in which they function is probably a waste of time. Ideals do not exist for themselves but for their possibility of functioning in habits.

3. A Wide Variety of Illustrative Materials Should Be Used

Material illustrating both the presence and the absence of desirable ideals should be utilized.

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GUIDANCE INFORMATION SHEET APPENDIX D

NAME_____
Last First Middle

ADDRESS_____ TELEPHONE_____ SCHOOL_____

DATE OF BIRTH_____ CIRCLE BOY GIRL PRESENT GRADE_____
Month Day Year

With whom do you live?_____
Your own parents, aunt, mother and stepfather, stepmother and own father, foster parents, grandparents, guardian, etc.

How many brothers?_____ sisters_____ How many still live at home?_____

What school did you attend last semester?_____

What subjects do you like best?_____

What subjects do you like least?_____

What subjects do you make your best grades in?_____

What high school do you plan to attend?_____

Do you plan to graduate from high school?_____Yes _____No (Circle one)

If your answer to the above is "No," briefly explain what you plan to do when you leave school_____

Father's employment_____

Is your mother employed?_____Where?_____

Where were you born?_____Other schools attended_____

How long have you attended this school?_____Have you thought of what you would like to do for a living when you get out of school?_____ How much education will this require?_____Do you think you will be able to master the educational requirements of this job?_____In what school subjects will you have to work harder to attain the necessary background for your chosen field?_____

How do you plan to finance the preparation required for your chosen career?
_____

Name any special interests or hobbies you have_____
_____

DATE_____

AUTOBIOGRAPHY

This is to be your story, written by you. What is your earliest memory? What kind of child were you? (Your father and mother will probably furnish details you may have forgotten.) What were (or are) your grandparents like? Who was your first real friend? Were you punished unjustly? What was your earliest ambition? What has been your greatest disappointment?

As you think about your first twelve or thirteen years, jot down memories and observations that you might use.

1. My parents
2. My earliest recollections
3. My early childhood
4. Places I have lived
5. Pranks of my youth
6. Punishments I remember
7. Great days in my life
8. Ways I spend my weekends...vacations
9. An animal I liked
10. My best friend
11. My favorite relative
12. My likes and dislikes
13. A sport I follow
14. A hobby I follow
15. Books I like
16. Amusements at home
17. My favorite subject
18. My first job
19. Plans for the future

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NAME_____ MONTH_____

ELEMENTARY GUIDANCE_____ LOCATION_____

VOCATIONAL GUIDANCE_____ _____

JUNIOR HIGH COUNSELORS_____ _____

1. Number of individual conferences_____
2. Number of teacher conferences_____
3. Number of social worker conferences_____
4. Number of parent conferences_____
5. Other conferences_____
6. Number of teacher referrals_____
7. Number of self referrals_____
8. Other referrals_____
9. Number of class presentations_____
10. Number of group meetings_____
11. Number of guest speakers_____
12. Number of field trips_____
13. Number of PTA presentations_____
14. In-service training with teachers_____
15. Filmstrips or films shown_____

OTHER ACTIVITIES (brief summary)

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APPENDIX E

OCCUPATIONAL CLUSTERS

FOR

EACH JUNIOR HIGH SUBJECT AREA

1052

SUPPLEMENT TO OCCUPATIONAL CLUSTERS
FOR
EACH JUNIOR HIGH SUBJECT AREA

Due to the long list of occupations assigned to Industrial Arts, the following occupations have been reassigned to other subject areas:

Art

16. Designer, Industrial #33
18. Instrument Makers, Model Makers #60
40. Jewelers #63
46. Lithographers #67
66. Photoengravers #85
76. Repairmen, Watch #96

Language Arts

70. Printing Pressmen #89
82. Servicemen, Office Machine #104
86. Taxicab Drivers #110

Physical Education

11. Bus Drivers, Local #19
12. Bus Drivers, Long Distance #19
50. Managers, Industrial Traffic #69
64. Parking Attendants #82
69. Power Truck Operators #89

Music

74. Repairmen, Instruments #95

Home Economics

5. Beauty Operators #15
18. Drycleaning Workers #37
44. Laundry Workers #64
52. Meat Cutters #72

Mathematics

80. Servicemen, Data Processing #103
41. Keypunch Operators #63

Science

88. Technicians, Chemical #113
89. Technicians, Electrical #114
90. Technicians, Phys. #115

Social Studies

38. Merchant Seamen #75
60. Office Machine Operators #80

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ART

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10.	Cooperative extension workers	Page 29
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13.	Engineers, chemical	Page 41
14.	Engineers, nuclear	Page 44
15.	Engineers, metallurgical	Page 43
16.	Engineers, mining	Page 44
17.	Engineers, petroleum	Page 45
18.	Farmers	Page 48
19.	Farmers, vegetable	Page 49
20.	Fishermen	Page 51
21.	Flight engineers	Page 51
22.	Florists	Page 52
23.	Foresters	Page 53
24.	Forestry, technicians or aides	Page 53
25.	Funeral directors	Page 53
26.	Gardeners and grounds keepers	Page 54
27.	Geographers	Page 54
28.	Geologists	Page 55
29.	Horticulturists	Page 57
30.	Landscape architects	Page 12
31.	Meterologists	Page 75
32.	Miners	Page 77
33.	Nurserymen and landscapers	Page 78
34.	Oceanographers	Page 79
35.	Pest control operators	Page 83
36.	Pharmacologists	Page 84
37.	Pharmacists	Page 84
38.	Physicists	Page 86
39.	Physicians	Page 80
40.	Podiatrists	Page 87
41.	Poultrymen	Page 88
42.	Prosthetics and orthotists	Page 91
43.	Psychiatrists	Page 92
44.	Psychologists	Page 92
45.	Scientists, crop and soil	Page 101
46.	Technologists, dairy	Page 115
47.	Veterinarians	Page 123
48.	Wildlife managers	Page 124
49.	Zoologists	Page 125

SOCIAL STUDIES

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13.	Internal Revenue agents	Page 62
14.	Lawyers	Page 65
15.	Mail carriers	Page 69
16.	Merchant seamen	Page 75
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18.	Political scientists	Page 88
19.	Probation and parole officers	Page 89
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28.	Vocational rehabilitation counselors	Page 123

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APPENDIX F

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LIST OF COMPANIES AND PERSON TO CONTACT
FOR
GUEST SPEAKERS

COMPANY	PERSON TO CONTACT	TELEPHONE NO.
I.U. Medical Center	Mr. Howard Morris	264-7617
Stouffer's Inn	Mr. Schmidt	924-1241
TWA	Mr. Schmallbach	243-3541
Ford Motor Co.	Mr. Jim Wittig	359-8411
Indiana Bell Telephone Co.	Mrs. Linda McMahan	630-4216
Eli Lilly & Company	Mr. Bob Bush	636-2211
Hook Drug Co.	Mr. Norman Reeves	353-2181
U.S. Post Office	Mr. Brunsma	633-7363
Indiana National Bank	Mr. Moore	263-6000
Hatfield Ford Co.	Mr. Swingley	639-5581
Allison Div. GMC	Mr. McMahan	243-1523
Banquet Ice Cream Co.	Mr. Von Pein	637-3456
Coca-Cola Co.	Mr. Neal	243-3771
Naval Avionics	Mr. Paul Larson	353-3157
Herff-Jones Co.	Mr. Salge	635-1554
Ft. Benjamin Harrison	Mr. Drybread	542-3401
Merchants National Bank	Mr. Norcross	638-2461
WRTV	Mr. Steve Scott	635-9326
Chevrolet Indpls. Div.	Mr. Larry Stevens	631-8331
United Parcel Service	Mr. Barry Mills	923-3601
Colonial Baking Co.	Mr. Huesing	923-3333
Mechanical Contractors	Mr. Layman	255-5980
Sears, Roebuck & Co.	Miss Wehr	636-5381
The Wm. H. Block Co.	Mrs. Ward	631-8511
Summit Laboratories	Mr. Crowe	243-3561
P. R. Mallory Co.	Mr. Shiply	636-5353
National Starch Co.	Mr. Comrie	638-1515
Uniroyal, Inc.	Mr. Frey	632-2461
Penn Central Railroad	Mr. Gene Rice	632-8321
Western Electric Co.	Mr. Schwark	356-8811
Indpls. Power & Light Co.	Mr. C. L. Muller	635-6868
Peerless Pump Co.	Mr. LeRoy Grady	925-9661
City-County Building	Mr. Frazell	633-3700
RCA	Mr. Bob LaFace	635-9000
The Indianapolis Star	Miss Jane Binford	633-9054
Burger Chef	Mr. Crabel	635-9440
Bryant Manufacturing Co.	Mr. Risch	243-0851
Lilly Industrial Coating	Mr. Hawkins	634-8512
Citizens Gas Co.	Mr. Chuck Dorral	924-3341
Chrysler Corp.	Mr. Jay Cunningham	546-9251

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APPENDIX G

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LIST OF COMPANIES AND PERSON TO CONTACT
FOR
FIELD TRIPS

COMPANY	PERSON TO CONTACT	TELEPHONE CO.
Ford Motor Co.	Mr. Jim Wittig	359-8411
Indiana Bell Telephone Co.	Mrs. Linda McMahan	630-4216
Eli Lilly & Company	Mr. Bob Bush	636-2211
U.S. Post Office	Mr. Brunsma	633-7363
Indiana National Bank	Mr. Moore	263-6000
Hatfield Ford Co.	Mr. Swingley	639-5581
Allison Div. GMC	Mr. McMahan	243-1523
Coca-Cola Co.	Mr. Neal	243-3771
Naval Avionics	Mr. Paul Larson	353-3157
Ft. Benjamin Harrison	Mr. Drybread	542-3401
Chevrolet Indpls. Div.	Mr. Larry Stevens	631-8331
United Parcel Service	Mr. Barry Mills	923-3601
Colonial Baking Co.	Mr. Huesing	923-3333
Summit Laboratories	Mr. Crowe	243-3561
Peerless Pump Co.	Mr. LeRoy Grady	925-9661
The Indianapolis Star	Miss Jane Binford	633-9054
Burger Chef	Mr. Crabel	635-9440
Citizens Gas Co.	Mr. Chuck Dorral	924-3341

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APPENDIX H

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FILMS AND FILMSTRIPS AVAILABLE -
AV DEPT., EDUCATION CENTER

FILMSTRIPS:

What to Ask, Parts I * II
Who Are You?
Who Are Your Ideals?
Why Study?
Words:
  Increase Your Stock of Words
  Roots and Shoots
  The Right Word in the Right Place
  Time and People Change Words
  Words and Your Work
  Words Then and Now
What Good is School?
Your First Year in High School
  (w/record)
As Others See Us
Directing Your Dollars
  (w/record)
Dollars and Sense (WCTU)
Dropping Out-Road to Nowhere
Failure-A Step Towards Growth
  (w/record)
Getting Down to Work
High School Courses-Selection &
  Your Career (w/record)
How to Take a Test
How to Succeed in High School
  by Trying (w/record)
If You're Not Going to College
  (w/record)
Leading American Negroes:
  (w/record)
  Banneker and Smalls
  Carver and Bethune
  Douglass and Tubman
You're Part of a Family
Learning to Manage Your Money

FILMS

Act Your Age
Annapolis and West Point
As Others See Us
Everyday Courtesy
Find the Information
I Never Went Back
Improve Your Study Habits
Metal Shop Safety
Mickey's Big Chance
Vandalism-Crime or Prank
When I'm Old Enough, Good-Bye
You and Your Work
Your Junior High Days

AIRPORT IN THE JET AGE (Encyclopedia Britannica)

Explores a jet airport from the traffic control tower to the baggage-processing center. Shows the equipment and services involved in preparing for a jet flight: ground and flight crews, traffic controllers, passenger agents, and baggage handlers.

11 minutes -(color)

FILM LIST

1. Fresh As A Daisy (16 mm)	produced by a refrigeration company; describes produce operation at retail level before the advent of mechanical refrigeration.
2. Geraldine (16 mm)	produced by a paper bag company; describes proper technique for bagging and carrying out groceries.
3. It's Everybody's Business (16 mm)	animated, technicolor explaining the American business system. Shows how the system of free enterprise, financed by the savings dollars invested by individual Americans, has made American business the most productive in the world.
4. Life's Higher Goals (16 mm)	Bob Richard's film
5. Motivation for Living (16 mm)	Bob Richard's film developed especially for the food industry. An inspirational message concerning the opportunities and challenged offered by the industry.
6. Million Dollar Pantry (16 mm)	Looks at the supermarket through the eyes of a customer. Points out the importance of courtesy and its necessity in running a successful supermarket.
7. The Front Line (16 mm)	basic factors involved in operation of the checkout counter are spelled out.
8. O'Mara's Chain Miracle (16 mm)	describes contagious spread of a simple smile and a little courtesy.
9. Profits In The Bag (16 mm)	animated short describing proper bagging techniques.
10. The Shoplifter (16 mm)	clearly points out the techniques used by shoplifters. How to spot them and what to do about it are covered. (1/2 hour, color, sound, a really outstanding presentation produced in late 1964.)

12.	The Spud and You (16mm)	Importance of the farmer, processor-distributor relationship. The complete story of Idaho potatoes from farm to table.
13.	What's in Sight (2) (16mm)	Campbell Soup workshop film aimed at management development.
14.	To Make The Best (16mm)	Campbell Soup
15.	Pilferage (16mm)	10 minute old time movie on shoplifting.
16.	Marksmanship (F.S.)	Garvey filmstrip and record on price marking.
17.	Behind These Doors (16mm)	Story of food distributor industry from producer to consumer.
18.	The Paper Hangers (16mm)	Similar to the shoplifter, deals with passing of bad checks.
19.	Communications (F.S.)	Good for Meat Dept. Dealing with customers through communications.
20.	First Impressions (F.S.)	Customers comments on their impressions as they come in contact with store personnel.
21.	The Old Fashioned Touch (F.S.)	Setting - Produce Dept. Personal touch and knowledge of people is still necessary to attain success.
22.	It's How You Say It (F.S.)	Effective speech is an important to
23.	Understanding Yourself (F.S.)	Key to understanding others lies in understanding oneself.
24.	Understanding Others (F.S.)	For new and experienced checkers who might have a problem of poor front-end service. Customer proble and complaints at front-end.
25.	Leadership (F.S.)	A leader, whether he's a Rockne on the football field or a person with a responsible position in the food industry, inspires his people to gi their best at all times. And when the going's touch he inspires them to give better than their best.
26.	People, Personnel, & Profits (F.S.)	

25. Leadership (F.S.)	A leader, whether he's a Rockne on the football field or a person with a responsible position in the food industry, inspires his people to give their best at all times. And when the going's tough, he inspires them to give better than their best.
26. People, Personnel, & Profits (F.S.)	
27. Through Two Pair of Eyes (F.S.)	The new job is important to the new employee and to you. But remember: The new job is always viewed through two pairs of eyes. The beginner sees the job through untrained eyes. You sii it from an experienced viewpoint.
28. A Day in the Life of a Supermarket Operator (F.S.)	Silent filmstrip of 13 panels. Depicting events in everyday store operation that pressure the store manager.
29. It's Up To You (F.S.)	Each problem in supermarket management represents a genuine opportunity. What you do determines what you are. How far you go depends on what you do every day. It's up to you.
30. Your Attitude Is Showing (F.S.)	Good for all employees. Shows advantage of having the proper attitude toward a person's job, his fellow workers and customers.
31. What's In It For Me (16mm)	Good for recruiting employees or to orient trainees to program. Shows opportunities in Retail Supermarket operations.
32. Unloading at #25 (16mm silent)	Shows unloading at store #25 with Crown Lift Equipment.

CONTACT MARSH SUPERMARKET FOR FILMS.

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LIST OF FILMS AND FILMSTRIPS AVAILABLE FOR COUNSELORS THROUGH MR. WINEGARD'S OFFICE:

1. An Overview of Technical Education (Filmstrip) (1)
2. Choosing Your Career (Filmstrip) (2)
3. Developing Your Study Skills (Filmstrip) (2)
4. Dropping Out - Road to Nowhere (Filmstrip) (2)
5. Exploding the Myths of Prejudice (Filmstrip) (1)
6. Failure: A Step Towards Growth (Filmstrip) (1)
7. Four Who Quit (Filmstrip) (2)
8. Getting A Job Is A Job (Film) (1)
9. Getting and Keeping Your First Job (Filmstrip) (2)
10. High School Course Selection (Filmstrip) (1)
11. How to Succeed in High School (Filmstrip) (2)
12. Hung Up on Homework (Filmstrip) (2)
13. If You're Not Going to College (Filmstrip) (1)
14. Jobs for High School Students (Filmstrip) (1)
15. Liking Your Job and Your Life (Filmstrip) (1)
16. New Horizons: Careers in School Food Services (Filmstrip) (1)
17. New Horizons in Vocations (Film) (1)
18. Preparing for the Jobs of the 70's (Filmstrip) (2)
19. Preparing for the World of Work (Filmstrip) (a)
20. The Role of the Counselor in the Secondary School (Filmstrip) (1)
21. They Have Overcome (Filmstrip) (1)
22. They Beat the Odds (Film) (1)
23. What You Should Know Before You Go to Work (Filmstrip)(2)
24. Why Work at All (Filmstrip) (1)
25. Your First Year in High School (Filmstrip) (2)
26. Your Job Interview (Filmstrip) (2)

APPENDIX I

1. Purdue University materials - personality booklets
2. National Forum Foundation Guidance Service - Seeing Ourselves (Book)
3. Guidance in the Elementary School
4. Know Yourself, Arnold Gauley, George Elias, Authors
5. Elementary School Guidance and Counseling, (Amer. School Counselor Association)
6. S.R.A. Junior Guidance Series (variety of booklets)
   a. Planning Your Job Future
   b. Your Abilities
   c. Make Your Study Hours Count
   d. All About You
   e. Getting Along in School
7. You and Your Abilities, John Byrne and Katherine Byrne, authors
8. You and Your Health, J. Roswell Gallagher, M.D., Guidance
9. Character Education (project materials), San Antonio, Texas

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TELECOURSE SCHEDULE SHEET CHANNEL 5

FALL, 1971

"LOOK TO THE FUTURE"

Guidance - Grade 8

Monday	9:45
	2:35
Tuesday	9:00
	1:10
Wednesday	10:30
Thursday	11:10
	1:50

Week of:	October 4 -	General Introduction
	October 11 -	Business Education
	October 18 -	Distributive Education
	October 25 -	Health Services
	November 8 -	Careers in Public Service
	November 15 -	Careers in Industry
	November 29 -	Careers in the Hotel and Restaurant Industry
	December 6 -	Construction Industry
	December 13 -	Technicans and Repairmen
	January 3 -	General Series Review

* This is the same series that was shown last year.

FINDING JOB LIKE GETTING A GIRL

With so much being said and written about teenagers these days, I thought you might be interested in an open letter that hit my desk today. Here it is:

Dear Kid: Today you came to me for a job. From the look of your shoulders as you walked out, I suspect you've been turned down before, and maybe you feel by now that kids out of high school can't find work. Well, don't believe it. I hired a teenager today. Perhaps you saw him on your way out. He was the boy with the polished shoes. He wore a necktie. He didn't have any experience either--but his attitude put him on my payroll instead of you. That boy cared enough to make an impression. He left his leather jacket at home. His suit was a little shabby but it was pressed. His hair wasn't exactly short, but it was neat. And it wasn't the first thing you noticed when you looked at him.

The way to get a job is to use the same approach as when you are trying to get a girl. No guy in his right mind would try to impress a chick in a dirty shirt and faded jeans. And it doesn't hurt to case the situation. Have some facts. The kid I hired instead of you went to the trouble to find out what we manufacture.

You might not believe it but there are hundreds of employers in this town who are looking for bright, young people who are smart enough to go after a job in the old-fashioned way. Then they find one they like, they can't wait to unload some of their responsibilities on him. For both your sakes, get eager, will you?--The Man Who Passed You By.

A MESSAGE . . . FROM A FATHER

Dear World:

My young son starts to school today. It's going to be strange and new to him for awhile, and I wish you would sort of treat him gently.

You see, up to now, he's been king of the roost. He's boss of the backyard. His mother has always been around to repair his wounds, and I've always been handy to soothe his feelings. But now things are going to be different.

This morning, he's going to walk down the front steps, wave his hand, and start out on the great adventure. It's an adventure that might take him across continents. It's an adventure that will probably include wars, tragedy and sorrows

To live his life in the world he has to live in will require faith, love and courage. So World...I wish you would sort of take him by his hand and teach him the things he will have to know. Teach him gently if you can.

He will have to learn, I know, that all men are not just, that all men are not true. But teach him also that for every scoundrel there is a dedicated leader. Teach him that for every enemy, there is a friend.

It will take time, World, I know, but teach him, if you can, that a nickel earned is of more value than a dollar found. Teach him to learn to lose and to enjoy winning. Steer him away from envy, if you can, and teach him the secret of quiet laughter. Let him learn early that the bullies are the easiest people to lick. Teach him, if you can, the wonder of books, also give him quiet time to ponder the eternal mystery of birds in the sky, bees in the sun and flowers on a green hill.

In school, World, teach him it is far more honorable to fail than to cheat. Teach him to have faith in his own ideas, even if everyone tells him he is wrong. Teach him to be gentle with gentle people and tough with tough people.

Try to give my son the strength not to follow the crowd when everyone else is getting on the bandwagon. Teach him to listen to all men, but teach him also to filter all he hears on the screen of truth and take only the good that comes through.

Teach him, if you can, how to laugh when he is sad. Teach him there is no shame in tears. Teach him there can be glory in failure and despair in success.

Teach him to scoff at cynics and to beware of too much swoetness. Teach him to sell his brawn and brains but never put a price tag on his heart and soul.

Teach him gently, World, but don't coddle him because only the test of fire makes fine steel. Let him have the courage to be impatient, let him have the patience to be brave.

Teach him always to have sublime faith in himself, because then he will always have sublime faith in mankind.

This is a big order, World, but see what you can do. He's such a little fellow--MY SON.

"I Had The Meanest Mother In The World"

"I had the meanest mother in the world. While other kids ate candy for breakfast, I had to have cereal, eggs or toast. When others had cokes and candy for lunch, I had to eat a sandwich . . .

"My mother insisted upon knowing where we were at all times. You'd think we were on a chain gang. She had to know who our friends were and what we were doing. I am nearly ashamed to admit it, but she actually struck us . . . Can you imagine someone actually hitting a child just because he disobeyed?

"My mother actually had the nerve to break the child-labor law. She made us work. We had to wash dishes, make beds, learn to cook and all sorts of cruel things.

"My mother always insisted upon our telling the truth, the whole truth and nothing but the truth, even if it killed us -- and it nearly did.

"By the time we were teenagers, our life became even more unbearable. None of this tooting the horn of a car for us to come running. She embarrassed us no end by making our dates and friends come to the door to get us. If I spent the night with a girlfriend, she checked on me to see if I was really there. While my friends were dating at the mature age of 12 and 13, my old-fashioned mother refused to let me date until the age of 15 or 16 . . .

"We could not lie in bed, 'sick,' like our friends did, and miss school. Our marks in school had to be up to par. Our friends' report cards had beautiful colors on them, black for passing, red for failing. My mother would settle for nothing less than ugly black marks.

"We were graduated from high school. With our mother behind us, talking, hitting and demanding respect, none of us was allowed the pleasure of being a dropout. Two of us attained some higher education.

"None of us has ever been arrested, divorced or beaten by his mate. Each of my brothers served his time in the service of this country. And whom do we have to blame for the terrible way we turned out? You're right, our mean mother. Look at all the things we missed. We never got to march in a protest parade, nor to take part in a riot, burn draft cards and a million and one other things that our friends did. She forced us to grow up into God-fearing, educated, honest adults . . .

"I am filled with pride when my children call me mean . . . Because, you see, I thank God He gave me the meanest mother in the world."

---Mrs. Bobbie Pingaro

"TO A JOB-HUNTING TEENAGER"

Dear Kid:

Today you asked me for a job. From the look of your shoulders as you walked out, I suspect you've been turned down before, and maybe you believe by now that kids out of high school can't find work.

But I hired a teenager today. You saw him. He was the one with polished shoes and a necktie. What was so special about him? Not experience; neither of you had any. It was his attitude that put him on the payroll instead of you. Attitude, son. A-T-T-I-T-U-D-E !!! He wanted that job badly enough to chuck the leather jacket, get a haircut, and look in the phone book to find out what this company makes. He did his best to impress me. That's where he edged you out.

You see, kid, people who hire people aren't "with" a lot of things. We know more about Bing than about Ringo, and we have some stone-age ideas about who owes whom a living. Maybe that makes us pre-historic, but there's nothing wrong with the checks we sign, and if you want one you'd better tune to our wave length.

Ever hear of "empathy?" It's the trick of seeing the other fellow's side of things. I couldn't have cared less that you're behind in your car payments. That's your problem and President Nixon's. What I needed was someone who'd go out in the plant, keep his eyes open, and work for me like he'd work for himself. If you have even the vaguest idea of what I'm trying to say, let it show the next time you ask for a job: you'll be head and shoulders over the rest.

Look, kid, the only time jobs grew on trees was while most of the manpower was wearing G.I.'s and pulling K.P. For all the rest of history you've had to get a job like you get a girl. "Case" the situation, wear a clean shirt, and try to appear reasonably willing.

Maybe jobs aren't as plentiful right now, but a lot of us can remember when master craftsmen walked the streets. By comparison you don't know the meaning of "scarce."

You may not believe it, but all around you employers are looking for young men smart enough to go after a job in the old fashioned way. When they find one, they can't wait to unload some of their worries on him.

For both our sakes, GET EAGER, will you?

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APPENDIX J

PAY, SALARY, DEDUCTIONS, AND FRINGE BENEFITS

Purpose and Introduction

To acquaint students with an ordinary and usual policies practiced by companies relative to pay and fringe benefits. Also to acquaint them with the typical and usual salary deductions that one might reasonably expect either as required by law or as a result of employee choice or company policy. To expose them to computing one's gross pay from a given situation.

I. Pay

A. Hourly rate
   1. straight time
   2. time and a half
   3. double time

B. Weekly rate

C. Annual contract or salary

D. Net as opposed to gross pay

II. Salary Deduction

A. By Law
   1. Federal income tax (withholding)
   2. State gross tax
   3. Social Security

B. Employee choice or company policy
   1. Retirement
   2. Life insurance
   3. Credit union
   4. Dues
   5. Savings Bonds

III. Fringe Benefits

A. Paid vacation

B. Free insurance

C. Sick days or leave

D. Paid holidays

E. Opportunity for employee to invest in the company

F. Employee saving plans

IV. Computing gross pay

A. Pay policy of company
   1. straight time $3.00 per hour
   2. straight time for first 40 hrs. (8 hr. daily, 5 days a week)
   3. holidays and Sundays - double time

B. Week of July 3, 1967
   1. Monday 8 hours
   2. Tuesday 8.5 hours
   3. Wednesday 9 hours
   4. Thursday 9 hours
   5. Friday 8 hours
   6. Saturday 6 hours
   7. Sunday 4 hours
   8. Ans - What is the gross pay earned during the week? - $207.00

V. Glossary

Base pay
Straight time
Time and a half
Double time
Overtime
Social Security
Federal Income Tax
State (gross) income tax
Garnishees
Union dues
Hospitalization
Life, sick and accident insurance deduction
Withholding
Fringe benefits
Sick days
Paid vacations
Wash or clean up time
Gross
Net
Credit Union

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PERSONNEL APPLICATION FOR EMPLOYMENT

Name (Last, First, Middle Initial	Maiden Name	Social Security Number	Birthdate (Mo-Day-Yr)	Present Date
Address (Number, Street, City, State, Zip Code)		Years at present address	Home Phone No.	Work Phone No.

Height	Weight	U.S. Citizen?	single ___	married ___	widowed ___	divorced ___	separated ___	If married is spouse employed? Yes ___ No ___	What Company

No. of minor children	Ages of minor children	rent home___ own home___ Living with relatives___	Father's or Guardians occupation	Are you a former employee of this Company? Yes___ No___

Are you presently employed? Yes___ No___	Amount of termination notice required by your present employer	Commuting distance in miles to this location 0-5 ___ 6-10 ___ 11-20 ___ 21-30 ___ 31-40 ___ over 40 ___	Do you have a driver's license Yes___ No___

Military Service Record_____	Dates of U.S. Military Service	Branch	Rank at Discharge	Type of Discharge	Selective service Classification

Type of work desired:
1.
2.

Salary required

If you are directly related to an employee of this company give name, position or occupation, and relationship:

Do you have any physical condition that might prevent you from passing a physical examination, or that should be considered in your placement? Yes___ No___ If yes, explain:

Have you ever been arrested or convicted of a crime (other than traffic violations)? Yes___ No___ If yes explain:

EDUCATIONAL INSTITUTION	LOCATION (CITY, STATE)	DATES ATTENDED from Mo. Yr.	DATES ATTENDED to Mo. Yr.	DIPLOMA, DEGREE, OR CREDITS EARNED	CLASS STANDING (CHK QUARTER) 1	2	3	4	MAJOR SUBJECTS STUDIED
Grade School									
High School									
College									
Other									

APPENDIX K

C A R E E R D A Y

SCHOOL 101

November 29, 1972

I N T R O D U C T I O N

What does the future hold for you - success or failure? You have not yet chosen your life's work. This is an important decision because it will affect your whole life. It needs to be given serious thought and consideration. That is why we are here today.

It is not an easy task to select a job for the future. This must be done slowly and deliberately. Think about your abilities, amount of education, and what you would enjoy doing the next forty-five years. This is a long time - be careful in your planning.

FACULTY

Principal . . . . . Dr. Owen Keene
Vice-Principal . . . . . Mrs. Velma Berchekas
Vice-Principal . . . . . Dr. Roscoe Polin
Social Worker . . . . . Mrs. Susan Pleasant
Social Worker . . . . . Mrs. Rosa Tootle
Guidance Counselor . . . . . Mr. Carl G. Potenza

* *

JUNIOR HIGH SOCIAL STUDIES TEACHERS

Mr. Robert Berry
Mrs. Priscilla Bethel
Mr. Davis Dyar
Miss Mary Macmillan
Mrs. Andrea Marshall
Mrs. Carol Stum
Mrs. M. O. Witteveld

Supervisor of Guidance . . . . . Mr. Clarence Brown
Project Director . . . . . Mr. Raymond Winegard

REPRESENTATIVES

Mrs. Brenda Allen, Practical Nurse, Indianapolis Public Schools

Mr. James Bethel, Data Processing Director, Indianapolis Public Schools

Mr. Raymond Browne, Sign Painting, Stage and Craft Arts, Teacher, Arsenal Technical High School

Mrs. Betty Crowe, Guidance Counselor, Indianapolis Public Schools

Officer Gary Darland, Indianapolis Police Department

Mr. Charles Durrell, Training Manager, Citizens Gas

Mr. Charles Ellis, Training Assistant, Citizens Gas

Mrs. Virginia Jackson, Business Education, Arsenal Technical High School

Mr. Dennis Jenson, Industrial Relations Manager, Uniroyal, Inc.

Mr. Tom King, Director of Civic Affairs, Chamber of Commerce, Indianapolis

Mrs. Linda McMahon, Employment Counselor, School Activities, Indiana Bell Telephone Company

Mrs. Patricia Pearson, Public Health Nurse, Indianapolis Public Schools

Mr. William Pearson, Attorney

Mrs. Susan Pleasant, School Social Worker, Indianapolis Public Schools

Mrs. Larry Songer, Employee Developmental Specialist, U.S. Naval Avionics

Mr. Larry Stephen, Instructor, Supervisor, Chevrolet Division of General Motors

Mr. Steward Stiller, Personnel Manager, William H. Block Company

Mrs. Rosa Tootle, School Social Worker, Indianapolis Public Schools

Mr. Audrey Ward, Supervisory Personnel, U.S. Naval Avionics

Mr. Norris Woods, Career Center, Indianapolis Public Schools

APPENDIX L

3687

THE INNOVATOR

Jr. High Guidance Counselor Vol. II No. 2 November 1972

PEOPLE ARE OUR BUSINESS. . . . . OUR ONLY BUSINESS

AT THANKSGIVING TIME. . . . . .

Although many years have passed since the first Thanksgiving, it is traditional that we pause at this time to give thanks for the countless blessings that we have received.

As this Thanksgiving season approaches, I would like to take this opportunity to thank each one of you for your friendship and the enthusiastic support that you have given our guidance program.

Happy Thanksgiving!

/s/ Millie Wilson
Counselor

* *

CAREER GUIDANCE PROGRAM------FOR 8th GRADERS

Students have gained career information and learned about vocational opportunities in the Indianapolis area through field trips to many businesses and industries. Field trips have been made to the Eli Lilly Center, Indiana Bell Telephone Company, Indianapolis Star & News, Colonial Baking Company, and the Citizens Gas Company. Our schedule of Career Guidance Tours will include trips to other companies as the year progresses.

In addition, we have had guest speaker presentations from Sears, Roebuck & Co. as well as the Indianapolis Police Department.

* *

SPECIAL ATTENTION!

Individual get-acquainted conferences are being held with all 7th grade students in an attempt to (1) apprise them of services available to them by the counselor and (2) discover any personal problems that the counselor might provide assistance in seeking solutions or alternative types of behavior.

* *

TEACHING AIDS

Guidance supplementary teaching aids are available to teachers upon request.

* *

REFLECTIONS.....

PEACE
must be built
it must be built up
everyday
by works of
PEACE

KEEP SMILING.....
It makes people wonder
what you've been up to.

BLACK IS BEAUTIFUL;
BUT ONE DOES NOT HAVE TO BE BLACK TO BE BEAUTIFUL.

Courtesy of Mrs. Flora DeFrantz
School #86

* *

Well, that's all for now. Enjoy your turkey and have a nice Thanksgiving vacation.

APPENDIX M

Date_____

OCCUPATIONAL ORIENTATION

Guidance Information Sheet

1. Name_____ School_____

2. Address_____ Phone No._____

3. Date of Birth_____ Present Grade_____
Month Day Year

4. Present Age_____ Number of people living with you_____

5. What school did you attend last semester?_____

6. What subjects do you like best?_____

7. What subjects do you like least?_____

8. What subjects do you make the best grades in?_____

9. What high school do you plan to attend?

_____A.T.H.S. _____E.M.H.S. _____H.E.W.H.S.

_____C.A.H.S. _____G.W.H.S. _____OTHER

10. I plan to graduate from high school _____Yes _____No

11. If your answer to #10 is "No," briefly explain what you plan to do when you leave school_____

_____

12. What kind of work is done by those people you are living with?_____

_____

13. Have you ever held a job? (mowing yards, paper route, etc.) _____Yes

_____No. If "Yes," explain what kind of work you have done_____

_____

14. If you could be anything you wanted to, what occupation would you choose?

_____

15. Name any special interests or hobbies you have._____

_____

APPENDIX N

GUIDANCE RECORD

SCH NO 1-4	STUD CD 5-13	NEW ☒ STATUS				
LAST NAME 14-28	FIRST NAME MI 29-42	43-46	47-49	BIRTH MO / DA / YR 50-55		
SEX 56 M ☐ F ☐	RACE 57 W ☐ N ☐ O ☐	58	59	GRD LEV 60-61 09	ELEM SCH 62-65	CD 70 N ☒	ENTRY MO / DA / YR 71-76 09 / 04 / 73	R 1
SSN 14-22	E T R 23-24 G R	25-27 I Q	28-30 G E	40-43 C D	SCH LAST ATTENDED 44-63	PHONE 64-70	R 2
PARENT OR GUARDIAN NAME 14-41	PARENT OR GUARDIAN STREET 42-62						
CITY 63-72	ZIP 73-77	R 3					
PAR CD 14	REL CD 15	BLK 16-21	TRANS INFO	ATT CRS 22-24	ACH CRS 25-27	HNR PTS 28-30	GPA 31-34
IQ ID 35-37	DATE MO / YR 38-41	SCORE 42-45	IQ ID 46-48	DATE MO / YR 49-52	SCORE 53-56	09	TRAN 77 C ☐ I ☐	R 4

OCCUPATION OF FATHER: _____ OCCUPATION OF MOTHER: _____

YOUR OCCUPATIONAL CHOICE: _____ INTERESTS: 1) _____ 2) _____ 3) _____ COLLEGE: YES __ NO __

OTIS-LENNON: _____ OTIS: _____ Date: ____

METROPOLITAN ACHIEVEMENT: _____ _____ Date: ____

Word Know _____

Reading _____

Language _____

Spelling _____

Math. Comp. _____

Math. Conc. _____

Math. Prob. _____

Science _____

Soc. St. _____

Total _____

Grades:	7th	6th
Eng.	____	____
Soc. St.	____	____
Math.	____	____
Science	____	____
____	____	____
____	____	____
____	____	____

Summer School:

_____

_____

FIRST SEMESTER PROGRAM

English _____

_____ Math or Algebra _____

_____

_____

_____

_____

Physical Education _____

Assigned High School: ____ ____

Transfer Approved To Attend: _____ H.S.

Reason For Transfer: _____ (#____)

APPENDIX O

3692

1972

HIGH SCHOOL COUNSELORS	June 13-16	June 19-23	June 26-30	July 3-7	July 10-14	July 17-21
Arwilda Burton	I.U. Medical Center 9:00 a.m.	Hook Drug Co. 9:30 a.m.	Ft. Harrison 9:00 a.m.	Sears, Roebuck Co., 9:30 a.m.	Indiana Bell Telephone Co. 8:00 a.m.	Indianapolis Star 9:00 a.m.
Margaret Benson	I.U. Medical Center 9:00 a.m.	U.S. Post Office 9:00 a.m.	Merchants National Bank 8:30 a.m.	Wm. H. Block & Co. 9:30 a.m.	Wm. H. Block & Co. 9:30 a.m.	Eli Lilly & Co. 8:00 a.m.
Gloria Williams	I.U. Medical Center 9:00 a.m.	The Indiana National Bank 9:00 a.m.	WFBM 10:00 a.m.	Wm. H. Block & Co. 9:30 a.m.	Wm. H. Block & Co. 9:30 a.m.	Burger Chef 9:00 a.m.
Fred Jones	I.U. Medical Center 9:00 a.m.	Hatfield Ford 9:00 a.m.	Chevrolet Div. GMC 8:00 a.m.	Summit Laboratories 9:30 a.m.	Western Electric Co. 8:30 a.m.	Bryant Mfg. Co. 8:30 a.m.
Charles Harry	I.U. Medical Center 9:00 a.m.	Allison Div. GMC 8:30 a.m.	Ford Motor Co. 9:00 a.m.	P. R. Mallory & Co. 8:30 a.m.	U.S. Naval Avionics 7:30 a.m.	U.S. Naval Avionics 7:30 a.m.
Pierce Cody	I.U. Medical Center 9:00 a.m.	Banquet Ice Cream & Milk Co. 9:00 a.m.	United Parcel Service 9:00 a.m.	National Starch Co. 9:30 a.m.	Indpls. Power & Light Co. 8:30 a.m.	Lilly Industrial Coating 9:30 a.m.
Vernes Collins	I.U. Medical Center 9:00 a.m.	Coca-Cola Co. 8:30 a.m.	Colonial Baking Co. 8:00 a.m.	Uniroyal, Inc. 8:30 a.m.	Peerless Pump Co. 8:30 a.m.	Citizens Gas 8:00 a.m.
Steve Stanton	I.U. Medical Center 9:00 a.m.	U.S. Naval Avionics 7:30 a.m.	U.S. Naval Avionics 7:30 a.m.	Penn Central Railroad 8:00 a.m.	City-County Building 8:30 a.m.	Citizens Gas 8:00 a.m.
Tom Brethauer	I.U. Medical Center 9:00 a.m.	Stouffer's Inn 10:00 a.m.	TWA 8:30 a.m.	Ford Motor Co. 9:00 a.m.	Indiana Bell Telephone Co. 8:00 a.m.	Eli Lilly & Co. 8:00 a.m.
John Morgan	I.U. Medical Center 9:00 a.m.	Herff-Jones Co. 7:30 a.m.	Mechanical Contractors 8:00 a.m.	Mechanical Contractors 8:00 a.m.	RCA 9:00 a.m.	Chrysler Corp. 9:00 a.m.

APPENDIX P

Nature of work

Age grouping of employees

Number of full time employees

Number of part time employees

Number in racial groups

Education requirement

Wage or salary scale

Minimum age for employment

Maximum age for employing a new worker

Most desirable age for a new employee

Time to learn job

Supply of qualified workers

Union membership requirement

Is the work seasonal

The following are applicable

How is applicant's background verified

JOB DESCRIPTION

JOB _____

DESCRIPTION OF JOB _____

_____

_____

TOOLS USED _____

EDUCATION REQUIRED _____

TRAINING REQUIRED _____

TRAINING PROVIDED BY COMPANY _____

_____

PHYSICAL REQUIREMENTS _____

_____

WORKING CONDITIONS _____

SKILLS OR ABILITIES _____

_____

STARTING WAGE OR SALARY _____

TOP WAGE OR SALARY _____

ADVANCEMENT POTENTIAL _____

NEED FOR THIS TYPE OF WORKER _____

OTHER COMMENTS: _____

_____

_____

_____

_____

_____

_____

APPENDIX Q

3696

To Parents or Guardians:

The Indianapolis Public School System is offering a summer school program for students who will enter the 8th grade in the fall of 1972. The program will be held at Arsenal Technical High School where we can utilize the excellent facilities that are available. The students will be exposed to a variety of vocational activities which will acquaint them with many of the various vocational opportunities available in high school. This summer experience should help each student develop a background of information that will provide tremendous assistance in selecting high school courses when they are enrolled for high school during their eighth grade school year.

No grade will be given for this summer school. This program is for their own interest, experience and enjoyment, and to help them in making appropriate high school course selections.

The following is a tentative program for summer school:

1. Pupils will be presented introductory lessons each day in formal classroom activities by the counselors, with such lessons being designed to provide vocational information to the pupils. Information will include the various levels of a particular vocation, e.g., machinist, draftsman, tool and die maker, engineer, the benefits to be derived from that vocation and the advantages and disadvantages of the vocation. In addition, guest speakers and visual aids will be utilized to provide information to the students. The classroom lessons will be about 30-40 minutes in length each day.

2. After the classroom session, the class will be taken to a vocationally oriented classroom where they will be given practical experience and information in a particular vocation. The classes will be divided into two groups of fifteen students each which will allow a group small enough to be supervised adequately by the teacher.

3. At least four field trips to a local business or industry employing persons possessing the skills to which the pupils have been exposed, will be planned.

Summer school will begin June 12, 1972 and end July 21, 1972.

A bus schedule will be made to pick up students and take them to Arsenal Technical High School and back again.

No fees or charges will be made for summer school.

Please list in order your choice of vocational sequence areas on the attached sheet. (For example, No. 1, 2, 3 or 4 etc.)

Raymond Winegard
Project Director

RW/ah
April 1972

2097

							Order of Preference
1.	Build Tr.	Elec. Tr.	Graph Art	Drafting	Bus. Ed.	Home Ec.	_____
2.	Elec. Tr.	Metal Tr.	Auto Tr.	Drafting	Home Ec.	Comm. Art.	_____
3.	Build Tr.	Elec. Tr.	Auto Tr.	Graph Art	Bus. Ed.	Home Ec.	_____
4.	Elec. Tr.	Metal Tr.	Auto Tr.	Graph Art	Drafting	Bus. Ed.	_____
5.	Build Tr.	Metal Tr.	Auto Tr.	Graph Art	Drafting	Comm. Art	_____
6.	Elec. Tr.	Auto Tr.	Graph Art	Drafting	Home Ec.	Comm. Art	_____
7.	Build Tr.	Metal Tr.	Graph Art	Drafting	Bus. Ed.	Comm. Art	_____
8.	Build Tr.	Elec. Tr.	Metal Tr.	Bus. Ed.	Home Ec.	Comm. Art	_____
9.	Build Tr.	Metal Tr.	Auto Tr.	Bus. Ed.	Home Ec.	Comm. Art	_____

I give my permission for _____ to take the above
(Name of Child)
vocational sequence areas during summer school.

_____
Date

_____
Signature of Parent or Guardian

_____
Home Address

_____
Telephone Number

Counselors	B.T.	E.T.	M.T.	A.T.	G.A.	D.F.	B.N.	H.E.	C.A.
Speers 1	1	5			2	3	6	4	
Volpatti 2		1	2	3		4		5	6
S. Smith 3	2	6		1	4		5	3	
Easter 4		2	3	6	1	5	4		
Mason 5	3		5	4	6	2			1
Craive 6		3		2	5	1		6	4
Potenza 7	4		1		3	6	2		5
Moseman 8	5	4	6				3	1	2
Driscoll 9	6		4	5			1	2	3

450-students = 25 per counselor

572

Group I 8:00 - 10:30 A.M = 170

Group II 10:30 A.M - 1:00 P.M = 302

Certificate of Completion

This Is To Certify That

_____

Has Completed The 1972 7th Grade
Summer School Vocational Exploratory Program

_____ SUPERINTENDENT

_____ PROJECT DIRECTOR

_____ COUNSELOR

APPENDIX R

3701

	1	2	3	4	5	6	
MOSEMAN	15 June	Naval Avionics	25 June	Summit Lab.	8 July	Eli Lilly	
POTENZA	16 June	Colonial Baking Co.	28 June	Naval Avionics	9 July	Indiana Bell	
CROWE	17 June	Coca-Cola	29 June	Summit Lab.	12 July	Indiana National Bank	
WHITE	18 June	Colonial Baking Co.	30 June	Citizens Gas	13 July	Indiana Bell	Group I
EASTER		21 June	Pepsi-Cola	1 July	Naval Avionics	14 July	8:00-10:30
SMITH		22 June	Eli Lilly	2 July	Indiana Bell	15 July	
GRISSOM		23 June	Indiana National Bank	6 July	Naval Avionics	16 July	
KOCHER		24 June	Hatfield Ford	7 July	Colonial Baking Co.	19 July	
MOSEMAN		21 June	Coca-Cola	1 July	Indiana Bell	14 July	
POTENZA		22 June	Post Office	2 July	Chevrolet	15 July	
CROWE		23 June	Citizens Gas	6 July	Naval Avionics	16 July	
WHITE		24 June	Naval Avionics	7 July	Chevrolet	19 July	Group II 10:30-1:00
EASTER	15 June	Eli Lilly	25 June	Chevrolet	8 July	Indiana Bell	
SMITH	16 June	Continental Baking Co.	28 June	Methodist Hospital	9 July	School of Practical Nursing	
GRISSOM	17 June	Pepsi-Cola	29 June	Typographical Services	12 July	Colonial Baking Co.	
KOCHER	18 June	Pepsi-Cola	30 June	Johnson Chevrolet	13 July	Chevrolet	

June 28-29 - All counselors visited Mallory Technical Institute

48 Field Trips

Form: LE #2

REQUEST FOR SCHOOL BUS SERVICE
FOR LEARNING EXCURSIONS

School No._____requests a school bus/buses to take_____children of
(number)

grade_____to_____at_____.

Beginning at_____o'clock and ending at_____o'clock
(arrival at school) (departure time)

on_____.
(Date)

2nd choice of date and hours_____

3rd choice of date and hours_____

4th choice of date and hours_____

Date_____ Teacher's signature_____

School telephone number_____Principal's signature_____

Approved by:_____
(Education Center Use Only)

Copies of the request form may be secured in the principal's office. Bus service MUST BE SCHEDULED with the Division of Curriculum and Supervision, Education Center, 120 E. Walnut Street, Room 501-H at least two weeks in advance of the time service is required. Tentative dates of visitation should be obtained before bus service is requested.

DO NOT USE THIS FORM FOR PLANETARIUM, MUSEUM OF ART, OR CHILDREN'S MUSEUM PROGRAMS

APPENDIX S

3704

DIRECTIONS: Check the line after each question that applies.

	TRUE	FALSE
1. You should take a friend with you when you go for a job interview.	____	____
2. A machinist should always wear a necktie to enhance his personal appearance.	____	____
3. A seventeen year old boy who does not attend school does not need a work permit.	____	____
4. You may obtain a work permit at the Central School Office.	____	____
5. Social security is important to a person only if he reaches 65 years old and retires.	____	____
6. An Indiana state law requires that safety glasses or goggles be worn by all students in any class where grinding materials are being used.	____	____
7. A boy may learn to be a brick layer in the Indianapolis school system.	____	____
8. Most apprentice programs are four years long.	____	____
9. Clear goggles provide adequate eye protection while welding.	____	____
10. Gloves may be worn while operating moving machinery.	____	____
11. A boy may operate a machine in a factory when he is 17 years old.	____	____
12. A person may have a social security card anytime after he is born.	____	____
13. A power tool may be safely operated by two people working together.	____	____
14. A chisel should not be used to open a paint can.	____	____
15. Pliers are made to remove or install machine bolts.	____	____
16. All persons need a high school education before they can get a job.	____	____

	TRUE	FALSE
17. Certain students in high school may work part time and receive pay and school credit for the work.	____	____
18. One of the gastest growing areas of employment is data processing.	____	____
19. Your record in school is not important after you finish school.	____	____
20. Abilities and interests mean the same thing.	____	____
21. Five years after a student graduates from high school, his school records are destroyed to make room for new records.	____	____
22. If your boss tells you your salary will be $80 a week you can expect to take home $80 per week.	____	____
23. Fringe benefits refer to vacation with pay, insurance paid by company, bonus, etc.	____	____
24. Social security tax is deducted from your pay check to help finance the payroll department.	____	____
25. An unskilled worker usually makes less money than a skilled worker.	____	____
26. The pressure in a pressure cooker must be down before removing the lid.	____	____
27. Vocational education prepares a student for a specific job after graduation from high school.	____	____
28. The cost of labor involved in repairing a minor problem in a piece of machinery may be high in relation to the cost of the parts needed.	____	____
29. Cars are usually painted with a paint brush.	____	____
30. Filling out a job application properly is important in getting a job.	____	____
31. A pattern is usually used in making a dress.	____	____
32. Most good chefs use a recipe.	____	____

	TRUE	FALSE
33. You should know what product a company makes before seeking a job with that company	____	____
34. A patternmaker makes the pattern which is used in a foundry to make an object.	____	____
35. Small objects should be held in a drill vise while drilling a hole.	____	____
36. Gross pay is the same as take home pay.	____	____
37. Architects design buildings.	____	____
38. All companies have the same fringe benefits	____	____
39. A cartographer makes carts.	____	____
40. Red, blue, yellow, and black are the colors used in the 4-color printing process.	____	____
41. Red, blue and green are used to produce color in a TV set.	____	____
42. A boy or girl can learn to be an electrician in the Indianapolis school system.	____	____
43. There are over 23,000 different occupations to choose over.	____	____
44. An understanding of basic math is needed in most occupations.	____	____
45. Being on time everyday to school is important to future success.	____	____
46. Artificial respiration may be needed if a person receives a bad electrical shock.	____	____
47. Hairnets may be required to be worn by persons with long hair while operating rotating machinery..	____	____
48. An apprentice receives pay while training for a job.	____	____
49. Hands should not be used to brush away chips from any machine.	____	____

	TRUE	FALSE
50. All labor laws pertaining to working teen-agers are the same in all states.	____	____
51. You should never have more than one social security number.	____	____
52. Collective bargaining means that a union has sent some of its men to talk with an employee.	____	____
53. Hot steel looks like cold steel.	____	____
54. Girls can enter most trades.	____	____
55. A vocational certificate may be earned with a diploma.	____	____
56. A passing grade on a state test must be made before a person can be licensed as a barber, beauty operator, or TV serviceman.	____	____
57. Accuracy is more important than speed in typing.	____	____
58. A secretary should be a good speller.	____	____
59. Professional and technical occupations are not expected to grow rapidly during the next few years.	____	____
60. The work of carpenters cannot be divided into two general classes - rough and finish	____	____
61. Business skills are not in demand and they are not likely to continue.	____	____
62. A successful business career requires sound knowledge of fundamentals and principles.	____	____
63. Many high school graduates find beginning employment in clerical work.	____	____
64. A refrigeration-air conditioning mechanic must like to work on complicated mechanical equipment with tools and test equipment.	____	____
65. Almost all job applications are a history of the applicant - his education, work experience, and his personality traits.	____	____

		TRUE	FALSE
66.	The drop-out is the first to be hired and the last to be fired.	____	____
67.	Carpentry is a building trade.	____	____
68.	The five areas of metal trades are foundry, machine shop, sheet metal, patternmaking, welding.	____	____
69.	Employers do not hire on a basis of attitude, appearance and personal traits but only on school records.	____	____
70.	There is little opportunity for a girl to become an accountant	____	____
71.	For the next 20 to 30 years, there will be a shortage of administrators.	____	____
72.	There are male secretaries.	____	____
73.	It is important for men to know how to type.	____	____
74.	Employers are not interested in your school records.	____	____
75.	All persons should go to college if they expect to get a good job.	____	____
76.	Most new employees are hired in an entry level job.	____	____
77.	The stenographer is engaged only in stenographic duties.	____	____
78.	The engineer is much more important than the clean-up man.	____	____
79.	Stenographers play an important role in almost all businesses.	____	____
80.	Men should know how to cook.		
81.	Printing is not an important occupation in today's society.	____	____

	TRUE	FALSE
83. You can expect to put in forty to fifty years of your life on a job.	____	____
84. Proper selection of high school courses is not important.	____	____
85. Home economics is only for girls who are going to be housewives.	____	____
86. More women are employed outside the home than ever before.	____	____
87. There are more workers in manufacturing than in any other field of work.	____	____
88. Personal references are a part of an application form.	____	____
89. There are more farmers today than there were 40 years ago.	____	____
90. Your past work record is not important when applying for another job.	____	____
91. White collar jobs always pay more than blue collar jobs.	____	____
92. One out of every three employees is a woman.	____	____
93. Reading the Help-Wanted Ads in a newspaper is a good way to find a job.	____	____
94. When a girl marries, she won't have to work.	____	____
95. People who work with their hands make up more than half the U.S. labor force.	____	____
96. The armed forces offers many good life-time careers.	____	____
97. A person should not consider his own abilities and interests when preparing for a job.	____	____
98. When you have a problem, you should not tell anyone about it.	____	____

	TRUE	FALSE
99. A girl may learn to be a beautician while she is a high school student in Indianapolis.	____	____
100. Your success in life depends mostly upon how hard you want to work to achieve success.	____	____

8711

APPENDIX T

3712

SUMMER SCHOOL
7th-8th GRADE VOCATIONAL EXPLORATORY PROGRAM
AT
ARSENAL TECHNICAL HIGH SCHOOL

	Yes	No
1. Were shop areas interesting?		
2. Did you find the areas you were in helpful?		
3. Did you enjoy the summer program?		
4. With what you know now, if you had it to do over, would you sign up for summer school?		
5. Would you recommend this program for 7th graders next year?		
6. When you make your high school program out next year, will you take some vocational classes?		
7. Were the guidance classes helpful and interesting?		
8. Did you enjoy the field trips?		
9. Were the field trips interesting and helpful?		
10. Were the guidance classes too long?		
11. Were the guidance classes too short?		
12. Were the vocational classes too long?		
13. Were the vocational classes too short?		
14. Did you enjoy working on the various projects?		

APPENDIX U

7th Grade Vocational Exploratory Program

1. What did you think of the program?_____

2. What did your child think of the program?_____

3. Which class or classes do you think were the most meaningful?_____

4. Which class or classes were not so meaningful?_____

5. What do you think could or should be changed next year to better the program?_____

Other Comments_____

I hope to hear from you soon. Please return this questionnaire to Mr. Raymond Winegard, SCIPS Building, Room 206, 901 N. Carrollton Avenue, Indianapolis, Indiana 46204. Thank you for your help.

APPENDIX V

3715

GUIDANCE

OBJECTIVES

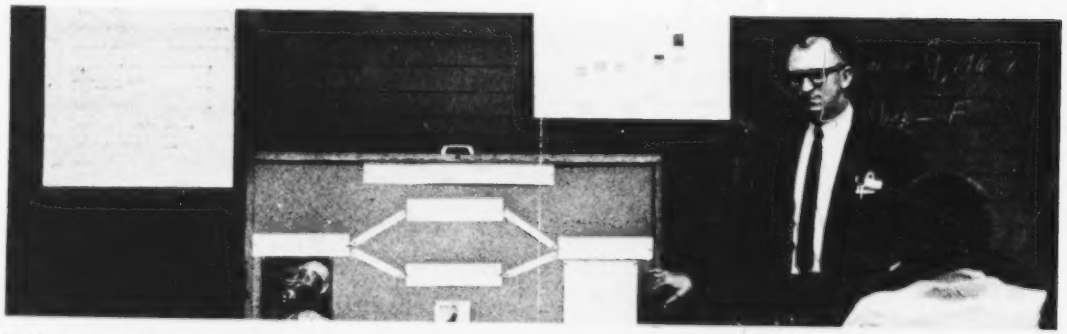
1. To help meet the physical, social, emotional and educational needs of all children.
2. To develop an awareness and orient the administrative staff, teachers, and parents of the role of the guidance counselor.
3. To provide guidance services for both individuals and groups.
4. To assist pupils to broaden their understanding of their natural curiosity in the world of work.
5. To work in close cooperation with the community and other social agencies to help with individual needs.
6. To encourage pupils to develop good habits of attendance, punctuality, neatness, and study skills.
7. To work in close cooperation with the classroom teacher to better understand the individual child.
8. To involve teachers, parents, administrators, social workers, and psychologists through individual and group conferences to provide a better understanding of problems confronting the individual child.
9. To help the student understand and accept his personal and civic responsibilities.

ELEMENTARY GUIDANCE K-6 or K-8

Guidance counselors help students to become aware of the world of work by:

A. Scheduling guest speakers from business and industry to talk to classes;
B. Taking Classes on field trips to business and industry;
C. Having individual conferances;
D. Having group conferences;
E. Having conferences with parents, teachers, psychologists, social workers, nurses, and other available specialists;
F. Showing films and filmstrips;
G. Helping in testing program;
H. Programing 8th grade students for high school;
I. Obtaining literature about vocations at students' level of understanding;
J. Helping teachers with materials for teaching the world of work;
K. Some counselors use the Character Education Project materials from San Antonio.

JUNIOR HIGH GUIDANCE 7-8 GRADES



Guidance counselors are helping students explore the world of work by:

1. Using current literature about the world of work;
2. Using the S.R.A. kits on jobs;
3. Scheduling guest speakers from business and industry;
4. Taking field trips to business and industry;
5. Showing films and filmstrips about the world of work;
6. Programming 8th grade students for high school;
7. Having individual counseling;
8. Having group counseling;
9. Helping teachers with materials about the world of work;
10. Having conferences with parents, teachers, and students;
11. Taking field trips to the high schools;
12. Helping test students;
13. Helping students with transfers;
14. Getting students (7th grade) for summer program.

SUMMER VOCATIONAL EXPLORATORY PROGRAM 7th GRADE

The 7th grade summer program is designed to acquaint the potential high school student with the varied areas of vocational subjects which will be available to him/her as a freshman. By having this exposure to vocational subjects prior to the time when he/she will plan their 9th grade program, they will be more familiar with the subjects and hopefully will make a wiser choice.

During the summer each child spends one week in each of the following vocational subjects: (They choose 6 areas out of the 9)

- Building trades
- Electrical trades
- Metal trades
- Drafting
- Graphic Arts
- Business Education
- Home Economics
- Commercial Art
- Auto trades

SUMMER HIGH SCHOOL GUIDANCE COUNSELORS PROGRAM

Ten high school counselors representing most of the high schools spend six weeks during the summer visiting fifty-two different businesses and industries in our community. This is to help counselors gain knowledge about the world of work in our community, so that they may better counsel with high school students about job opportunities in our community, as well as trends in other parts of the country.

OCCUPATIONAL PREPARATION PROGRAM (ARSENAL TECHNICAL HIGH SCHOOL)

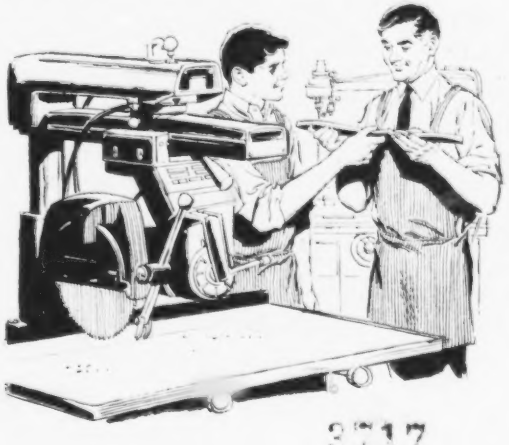
This program is designed to interest potential drop-outs at the ninth and tenth grade level. The objective is to encourage these students to continue their formal education or to prepare them to be useful employees if they do decide to quit school.

This program is operated as a corporation including the following areas:

1. Manufacturing
2. Business and Merchandising
3. Engraving
4. Small engines and appliances
5. Woodworking
6. Management

Students are also required to go to other regular school classes which usually are those required for graduation, i.e., English, mathematics, physical education, etc.

A student may begin taking regular high school classes when he/she desires, or leave school as they choose.



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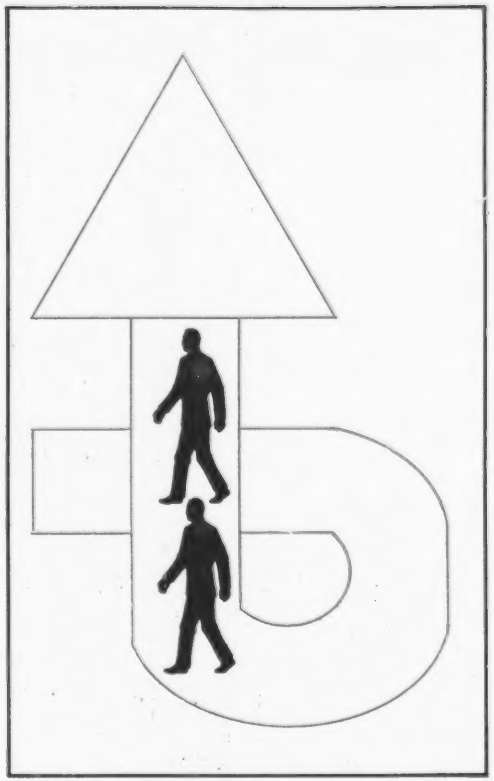

Indianapolis Public Schools

COMPREHENSIVE VOCATIONAL GUIDANCE PROGRAM FOR MODEL CITIES

VT 020 626

GUIDED OCCUPATIONAL ORIENTATION PROGRAM. VOLUME I. INTERIM REPORT.

SYRACUSE CITY SCHOOL DISTRICT, N.Y.
BUREAU OF ADULT, VOCATIONAL, AND TECHNICAL EDUCATION (DHEW/OE), WASHINGTON, D.C.

MF AVAILABLE IN VT-ERIC SET.
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PUB DATE - FEB73 142P.

DESCRIPTORS - *PILOT PROJECTS; *VOCATIONAL EDUCATION; CAREER PLANNING; ELEMENTARY GRADES; SECONDARY GRADES; *CAREER EDUCATION; *PROGRAM EVALUATION; COMPREHENSIVE PROGRAMS; *DEVELOPMENTAL PROGRAMS
IDENTIFIERS - CAREER AWARENESS; *SYRACUSE CITY SCHOOL DISTRICT

ABSTRACT - THIS DOCUMENT IS THE 1973 REPORT ON AN EXEMPLARY PROGRAM DESIGNED TO PROVIDE MEANINGFUL OCCUPATIONAL EDUCATION AND CAREER PLANNING OPPORTUNITIES FOR STUDENTS AT THREE LEVELS: ELEMENTARY, JUNIOR HIGH SCHOOL, AND SENIOR HIGH SCHOOL. THIRTEEN OF THE PROCEDURES IDENTIFIED IN THE PROJECT ARE DESCRIBED IN DETAIL AS ARE THE RESULTS AND ACCOMPLISHMENTS OF VARIOUS PROGRAM COMPONENTS. THE EVALUATION OF THE PROJECT CONSISTS OF: A PROJECT MANAGEMENT APPRAISAL, INDICATING THE EFFECTIVENESS OF PROGRAM STAFF MEMBERS, (2) EVALUATION PROCEDURES FOR MEASURING STUDENT RESPONSES TO THE PROGRAM AT EACH INSTRUCTIONAL LEVEL, AND (3) AN EVALUATION BY A THIRD PARTY. OUTSTANDING CONCLUSIONS AND RECOMMENDATIONS ARE AS FOLLOWS: (1) SUPPORT AND TOTAL COMMITMENT OF ADMINISTRATIVE STAFF MEMBERS IS ESSENTIAL TO THE SUCCESS OF A CAREER EDUCATION PROJECT, (2) THE TEACHING STAFF MUST BE INVOLVED IN DEVELOPING THE INSTRUCTIONAL MATERIALS TO BE USED, (3) ALL SUBJECT AREAS MUST BE A PART OF THE TOTAL CAREER EDUCATION PROGRAM, AND (4) INVOLVEMENT OF THE ENTIRE COMMUNITY ADDS GREATLY TO THE PROGRAM'S SUCCESS. RELATED DOCUMENTS ARE AVAILABLE AS VT 017 152, VT 017 153, AND VT 020 627, IN THIS ISSUE, AND 017 154, IN ARM VOL. 6, NO. 2. (KH)

VT 020 626

Careers GUIDED OCCUPATIONAL ORIENTATION

SYRACUSE CITY SCHOOL DISTRICT

INTERIM REPORT
G.O.O.P.
PROJECT NO. 0-361-0143

VOLUME 1

VT020 626

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INTERIM REPORT

PROJECT NO. 0-361-0143
CONTRACT NO. OEG-0-71-1028 (361)

GUIDED OCCUPATIONAL ORIENTATION PROGRAM

EXEMPLARY PROJECT IN VOCATIONAL EDUCATION
CONDUCTED UNDER
PART D OF PUBLIC LAW 90-576

VOLUME 1

Mr. Hans Lang, Director
Syracuse City School District
409 West Genesee Street
Syracuse, New York 13202

February, 1973

8720

INTERIM REPORT

PROJECT NO. 0-361-0143
CONTRACT NO. OEG-0-71-1028 (361)

GUIDED OCCUPATIONAL ORIENTATION PROGRAM

EXEMPLARY PROJECT IN VOCATIONAL EDUCATION
CONDUCTED UNDER
PART D OF PUBLIC LAW 90-576

The project reported herein was performed pursuant to a grant with the Bureau of Adult, Vocational, and Technical Education, Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

VOLUME 1

Mr. Hans Lang, Director
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Syracuse, New York 13202

February, 1973

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5. SUMMARY OF THE REPORT

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5. SUMMARY OF THE REPORT

(a) Time period covered by this report -

February 1, 1972 - January 31, 1973

(b) Goals and objectives of the project -

1. To present to youths in an understandable way, the world of work and career planning.
2. To encourage youth to realistically aspire to job careers and job goals commensurate with their potential.
3. To establish inservice education programs for educators to present occupational information to students in a systematic procedure.
4. To adequately prepare low socio-economic disadvantaged and academically deprived youth for success in our complex social and economic society.
5. To provide greater understanding and information to educators, parents, students, employers of the dignity, worth, the satisfactions derived, the opportunities available and the contributions that can be made from all levels of occupations.
6. To develop a plan of cooperation between public education and manpower agencies to the end that both share responsibility for job preparation of all students.
7. To encourage and guide students to continue their secondary education - general and occupational.
8. To identify through school records and attract through elicitation in-school and out-of-school youth who need occupational education and successful on-the-job training.
9. To find meaningful job placements where a student will have an environment in which he can succeed and develop self respect and dignity through cooperative efforts of the school district, New York State Employment Service, and the community at large.
10. To provide occupational orientation and continuing information for career planning and advancement.

(c) Procedures followed -

The project is composed of three (3) components - elementary, junior high school and senior high school. There were 40 procedures followed in implementing the project. Procedures 1-27 were reported on and described in detail in the Interim Report dated February 1, 1972.

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(c) Procedures followed - continued

This report deals with Procedures 28-40. Certain common procedures were employed to make the project operational at all three levels. Among these were:

1. Appointment of Project Coordinator and centralization of staff.
2. Development of a project flow chart to identify emphasis by grade level.
3. Passage by the Syracuse City School District of a resolution declaring this current year to be the "Year of Career Awareness".
4. Direction of the project during the third year of the grant with the goal that Career Education be viewed by the City School District in relation to its continuance.

Procedure 29 - the involvement of schools and staffs not previously identified with the program - involved the elementary and junior high school components solely.

Another Procedure, 32 - expansion of community-school cooperation at the secondary level - was applicable to the junior and senior high school components, but not the elementary level.

Still other procedures were employed for only one level. Procedure 37 - world of work unit for fifth grade students - was unique to the elementary level, while Procedure 35 - development of Junior High School Career Education Resource Curriculum Kits was unique to the junior high school level. In addition, Procedure 31 - Pilot Program for Twelfth Grade Students - was employed solely at the senior high level.

In all, thirteen distinct procedures have been identified during this report period. A breakdown of the thirteen procedures indicate that

4 were common to all three levels
1 was common to the elementary and junior high school level
1 was common to the junior and senior high level
4 were unique to the elementary level
4 were unique to the junior high level
1 was unique to the senior high level

(c) Procedures followed - continued

An important conclusion that is to be drawn from this is that different methods, materials, and implementation activities are needed when attempting such a wide program.

(d) Results, accomplishments -

It is safe to say that the Guided Occupational Orientation Program continues to have a major impact on the curriculum program of the Syracuse School System. The program has managed to have elementary children become aware of the fact that career choices exist; 2456 fifth grade students participated in 36 schools; 76 teachers from 36 schools are participating in curriculum revision workshops to integrate Career Education concepts into the existing K-6 curriculum; it has provided resources, activities, and support personnel to over 6048 junior high students in orientation programs, career study lessons, and field trips designed to make the world of work a reality; it has enabled staff members to conduct 20 workshops for school staffs not previously serviced by the program; 60 curriculum resource units were developed for the students in our nine junior high schools.

(e) Evaluation

The evaluation of the project has three distinct parts

- evaluation of project management
- evaluation of components of the three levels in the program
- evaluation performed by third party evaluator

Evaluation of Project Management

The Syracuse City School District has a system for performing the appraisal of its staff members. The Director of the Guided Occupational Programs employs this system with the staff of the program. This appraisal indicates how well the staff member has complied with the duties listed in his job description and how well he has carried out the objectives of the program.

Evaluation of the Components of the Three Levels in the Program

(e) Evaluation - continued

Each level (elementary, junior high, senior high) of the program consists of components. Each component is evaluated with various techniques. The elementary level student is evaluated by pre and post testing of (a) level of awareness of the world of work, (b) attitudes concerning the world of work and occupations, (c) awareness of skills used in occupations, and (d) level of actual experience with tasks and tools used in the occupational world.

The junior high level student is evaluated by pre and post testing of his awareness of (a) alternative career choices, (b) resources available for vocational guidance and career planning, (c) ability to plan future education necessary for a career, and (d) attitudes towards necessity for career planning.

Specific instruments have not been developed for the senior high level students in regard to the project per se. Each of the components of the senior high program is designed with its own built-in evaluation, e.g., the Occupational Learning Center keeps track of the number of days a student is absent relative to the number of possible days of attendance.

Additional evaluation instruments are used to appraise teachers, business and industry, and parental involvement in the program.

Evaluation Performed by Third Party Evaluator

A third party evaluator is mandated by the guidelines of the Office of Education, Exemplary Programs and Service Branch. Our third party evaluator is Educational Services Incorporated of Waco, Texas. Their services included: 1. structuring the objectives of the proposal in such a way that they could be evaluated, 2. aided and assisted in the development of the evaluation instruments, and 3. made suggestions and recommendations in regard to program management.

(f) Conclusions and Recommendations

After one year's experience with the Guided Occupational Orientation Program we have come to a number of conclusions and as a result of these conclusions, we are able to make a number of recommendations which may be of value to others who do not wish to "re-invent the wheel".

(f) Conclusions and Recommendations - continued

Some of the most outstanding conclusions and recommendations are as follows:

CONCLUSIONS	RECOMMENDATIONS
The success of a career education project depends largely upon the total commitment of the administrative staff of the district and participating schools.	Secure support of the district administrative staff and of the administrators of the participating schools prior to implementation of a project.
The teaching staff must be involved in the planning and development of any materials or programs which affect the total curriculum.	Involve the teaching staff in all the planning and development tasks related to preparing materials and programs.
A career education project must involve all the areas of study in which the child has the opportunity to participate.	In structuring a career education program equal emphasis should be given to every subject area.
Career education is the responsibility of the entire community - schools, parents, business, industry, and government.	All planning, implementation, and evaluation of career education projects should be designed to incorporate participation of representatives of the total community.

6.(a) PROBLEM AREA TOWARD WHICH THE PROJECT WAS DIRECTED

8729

PROBLEM AREA

1. The school district recognizes that many youth, particularly those from the low socio-economic and academically disadvantaged groups, aspire unrealistically in terms of their own potential to job careers and job goals. They view life as offering two alternatives: a welfare existence or a plush world resulting from a college education. They are unaware of the fact that one can have a good life even if he does not attend college; that the bulk of available job opportunities lies in the semi-skilled and skilled job areas.

2. All too often, academic failure and resulting frustration to the student lead him to believe that future achievement in life is as unattainable to him as his success in his present role - that of a student in a college oriented curriculum.

This "failure pattern" is well in evidence by the intermediate (grades 4-6) years in school. Many children by that time are several years below grade level in the academic skill areas necessary in today's curriculum. This is the seed bed for the future drop out, the behavioral misfit - planted by academic failure in the primary grades.

By junior high age then, the child has patterned himself into the life of a non-achiever; the pattern of his future life. If steps are to be taken to adequately prepare this youngster for life, they must be taken early. This is a preventive program, aimed at developing an in-depth awareness of requirements, training and responsibilities necessary for success in the world of work. Beginning with the 6th grade and intensifying through the 9th grade, the curriculum will be modified to include occupational information and skill attainment as inseparable parts of the learning process.

The Guided Occupational Orientation Program seeks to help students make realistic plans and decisions about future career preparation, largely by exposing them to extensive study of careers and prerequisites for careers. Statistics point up that less than 15% of the students currently enrolled in high school will graduate from 4-year colleges, while Syracuse's high schools have approximately 70% of their students enrolled in general academic, college preparatory curricula; these statistics point up a need for intensive counseling and study of realistic career alternatives. Secondly, given the interest of students in employment, such interest can be tapped and channeled into basic skill areas by approaching science, social studies, English and matnematics through career exploration.

6.(b) GOALS AND OBJECTIVES OF THE PROJECT

3731

SPECIFIC OBJECTIVES FOR 5TH AND 6TH GRADES	SPECIFIC METHODS OF EVALUATING OBJECTIVES
1. Given an array of career choices (via Career Center Class Room presentations) students will select vocations to study in depth.	1. Checklist of Careers studies, checklist of instructional methods used by each student and Career Study Achievement Test. (See Appendix II-1, See Feb. '72 Report)
2. Upon selection of vocations to study, students will participate in interviews for information regarding job opportunities, training needed, remuneration, opportunities for advancement and desirable personal characteristics.	2. The teacher will maintain a checklist regarding the kinds and number of interviews the student has participated in.
3. Given opportunities to conduct interviews, students will take notes and organize data derived from interviews, as well as learning about the occupation itself.	3. Students will use Standard Interview Sheets during the conduct of each interview. The sheets are turned over to the teacher for checking. (See Appendix II-2, See Feb. '72 Report)
4. Given identity of students interested in similar vocations, students will join groups in quest for and sharing of information, allowing for group participation, as well as occupational career information.	4. Teacher observation to ensure that children are grouped by career interest.
5. Given printed and non-printed resource material, students will gather additional information, allowing for individual learning and self-motivation.	5. Completion of student Individualized Career Study (ICS) packet. Completion of the packet indicates that the student has used printed and non-printed materials. (See Appendix

6. Given general outline for career information quest, student or students in groups will organize scrapbook of data collected, to be used as a reference source for himself and other students.	6. The completion of scrapbook according to teacher designed standards.
7. Given opportunity to collect background information, students will be able to discuss merits of one career as compared with another in group situations (based on information rather than emotion or off-the-cuff opinion) to provide better knowledge re careers.	7. Teacher observation and teacher checklist of student activities.
8. Given task of making some career options, student will consult resource people to get additional information and to help him make some tentative decisions.	8. Record will be maintained of completed interview sheets, field trips and school visits by resource people.
9. Given exhibits to view and opportunities to take field trips, students will ask questions other than those suggested in the ICS.	9. Teacher observation.

10. Given opportunities to take field trips, student will help in planning the trip, i.e. deciding what information he needs, which people or department upon which he might concentrate.	10. Completion of teacher checklist of student activities.
11. Given opportunities for field trip or interview, student will prepare a report to share information received.	11. Completion of teacher checklist of student activities.
12. Given set of basic questions relating to various careers, students can answer questions regarding three career choices.	12. Pre and post test.
13. Given a choice of seven (7) skill-experience labs the student will select and participate in three (3) skill-experience labs. (NOTE: A skill-experienced lab is a small area wherein materials and equipment relating to a specific occupation are located. The labs are housed within a Skill Trainer Van, which is a mobile occupational center which travels from school to school.)	13. Completion of three (3) Student Skill Activity Packets. These packets include a pre-test, "hands-on" activities (e.g., operating an adding machine), and a post-test.
14. The teacher will increase the level of individualized instruction in the classroom.	14. The mean level of Individualized Career Study Packets per child will be at least 2.0.

15. Business and Industry will become involved in the elementary program in a designed and measurable fashion.

15. The percentage of business and industry contacted which:
    (a) developed or participated in one or more of the 17 Career Center Exhibit Booths available.
    (b) Carried out school room visits.
    (c) Allowed field trips by students where allowable by law will be recorded.

16. The parents will increase their level of interest and amount of participation in classrooms, as a result of the program.

16. Number of classroom visits per parent, listing of contributions, and percent of parents visiting per classroom as part of the project will be recorded and reported by classroom teachers.

Following are the objectives which were included in the original proposal for the junior high school program:

17. Provided with the total junior high school occupational orientation, the student will show a desire and be able to make a tentative selection of career education that he will pursue in senior high school.

18. Given the opportunity to learn about and discuss occupational information in all classes, student will become inquisitive and develop the habit of asking questions and seeking more assistance in making career decisions.

19. Provided with introductory occupational experiences, the student will approach the related occupational simulation in the classroom with increased attention and proficiency.

20. Provided with individual and group counseling, the student will better understand himself and how he can prepare for the world of work in line with his interests and abilities.

21. Given related occupational education in each subject area (English, Social Studies, Science and Mathematics), the student will show improvement especially in communication, computation and citizenship.

22. Provided with integrated occupational learning (fusion of occupational instruction with general academics), student will become involved in doing reports, projects and other activities that are meaningful for career planning.

23. Provided with school occupational orientation - parents will encourage and support their children's involvement in the program.

NOTE: Please consult Volume III for the Junior High School Integrated Curriculum.

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After consultation with the third party evaluator (Education Services Incorporated, Waco, Texas) it was decided that the following specific objectives based on foregoing proposed objectives would be used to evaluate the seventh (7th) grade program.

OBJECTIVES FOR 7TH GRADE	EVALUATION
24. Students will be aware of more alternative career choices.	NOTE: - See evaluation design and instruments - Appendix
25. Students will be aware of more resources for vocational guidance and career planning.	
26. Students will demonstrate improved attitudes toward school and toward necessity for career planning.	
27. Teachers will increase offerings in individualized instruction, small-group instruction, pupil-teacher planning.	
28. Teachers will demonstrate increased cooperation in school curriculum-planning.	
29. Teachers will become knowledgeable about the role of the City School District in preparing its students for vocational goals.	
30. Parent-school communications relative to students' vocational planning will increase.	
31. Community and business will become directly involved in the role of the Syracuse School District in preparing its students for vocational goals.	

SENIOR HIGH SCHOOL OBJECTIVES	EVALUATION
32. At least 75 percent of the contracted students will have at least 80 percent attendance per month.	32. The number of attendance days per month will be recorded for each student.
33. At least 80 percent of the employed students will report a satisfying work experience and at least 95 percent job attendance per student per month.	33. Counselor Interview - An instrument will be developed which will provide a rating of personal satisfaction with the job. Job attendance per month will be recorded.
34. Students will improve in academic achievement in at least three subject areas.	34. Pre and post test - Achievement scores will be compared to determine statistical significance.
35. Students will develop a positive self-concept.	35. A profile will be constructed for each student based on a self-concept inventory. Scores upon entry into the program will be compared to those at the end of the school year to determine statistical significance. Counselor Interview.
36. The vocational sophistication level of students will improve significantly.	36. The Vocational Interest and Sophistication Assessment (VISA) mean sophistication scores will be used to measure statistical significance.
37. Teachers' level of vocational interest and outlook will improve significantly.	37. The Vocational Interest from Teachers Assessment (VITA) will be used to determine statistical significance by comparing first of year and end of year scores.

38. The level of vocational interest for guidance counselors will improve significantly.

38. First of year and end of year scores on the VITA will be compared to determine statistical significance.

39. The level of vocational interest for high school administrators will improve significantly.

39. First and end of year scores on the VITA will be compared to determine statistical significance.

6.(c) DESCRIPTION OF THE GENERAL PROJECT DESIGN AND THE PROCEDURES FOLLOWED

3740

This project is designed to modify a school system so the resulting program will recognize occupational information and skill attainment as inseparable components of learning stages and exercises from pre-school and kindergarten through senior high.

This project is designed to begin in Grade 5. However, there is presently included in grades K through 4 an occupational orientation program.

On the kindergarten level, students engage in role playing, simulations and discussions about various workers. They learn about "helpers" in the neighborhood, people who work in the school, jobs their parents hold. Much of the equipment used in the kindergarten is geared for this program - trucks, wheelbarrows, traffic lights, toy stoves, toy stores, etc. Vocabulary developed in the reading readiness program is also related to a great extent to the world of vocations.

In the upper primary grades, an extensive social studies unit is used throughout the district revolving around Community Helpers; social studies books, files, filmstrips, tapes, trade and library books are used relating to this unit. Community resource people are utilized in the classroom - firemen, policemen, druggists, etc.

A portion of the 4th grade social studies curriculum includes a study of Syracuse from earliest days to the present. (A general overall view of the historical, industrial, and scenic phases of the community, with a brief exposure to such places as the newspaper office, a supermarket warehouse, the police department and the public utilities).

Now let's look at the child in the 5th and 6th grades - ages 10 and 11. For most children this seems to be a resting period before the beginning of the adolescent growth spurt which a few girls have already begun. Sex differences in interest and behavior become more noticeable. Sex antagonism is acute and feuds occur frequently. Boys show their affection by wrestling, punching, and shoving each other, girls by dancing and putting their arms around other girls. Children at this age are still self-centered and inconsiderate. It should be easy to appeal to their reason. These children are capable of and, therefore, need opportunities to develop skills of communication, of research and of problem solving. They need opportunities to work together and develop loyalty and responsibility.

Children at this age show great interest in science; they want to know what things are made of, how they work, and why. This indicates a need for units dealing with man's intellectual and technical control over his environment and his use of natural resources. Opportunities are needed to experiment, to construct, to find solutions to problems, to read widely and to observe in search of their many questions.

Group work is needed too, in order that children have opportunities to work and play with their peers so to develop an appreciation of them as persons as to their work and contributions.

Procedures 1-27 were reported on and described in detail on pages 15-59 of Interim Report dated February 1, 1972. The following is a continuation of the procedures followed to date.

PROCEDURE NO. 28 - APPOINTMENT OF PROJECT COORDINATOR AND CENTRALIZATION OF STAFF

Procedure No. 3, page 17, of the Interim Report dated February 1, 1972, describes the position of Elementary Coordinator. The original proposal did not identify an in-kind administrative position at the secondary level.

In response to recommendations by the third party evaluator, project staff and secondary school administrators, the position of the project coordinator was created. Mr. Richard Bannigan, who was the coordinator of the elementary component of the project, was appointed to the next level of administration and has assumed total program coordination responsibilities.

The Board of Education acted upon this administrative change, effective March 22, 1972, upon the recommendation of the Superintendent, Dr. John T. Gunning, and the project directors, Mr. Sidney Johnson and Mr. Hans Lang.

To facilitate the necessary changes at the junior and senior high school levels, the teacher assistant, described as helping teacher under Procedure No. 3, page 17, of the Interim Report dated February 1, 1972, Mrs. Virginia Lewis, at the elementary level was asked to assume the majority of the ongoing program responsibility. This, in turn, freed up the coordinator to devote the major part of his efforts to the secondary level. This involved the coordinator relocating his office in one of the participating junior high schools and locating the Occupation Resource Specialists in the same facilities. The coordinator still retained the ultimate responsibility for the activities at the elementary level which at this time are operational.

As a result of the administrative change noted above, the first action taken by the project coordinator was the centralization of the project staff.

Previous to this period, most of the elements of the project's staff were located in various buildings throughout the school district.

PERSONNEL/ACTIVITY	LOCATION
Occupational Resource Specialists (O.R.S.)	Special Projects Building
Program for Advancement of Career Education (P.A.C.E.)	Levy Junior High School

PERSONNEL/ACTIVITY	LOCATION
Occupational Learning Center (O.L.C.)	Central Technical Senior High School
Occupational Resource Teacher (O.R.T.)	Central Technical Senior High School
Elementary G.O.O.P. Staff	George Washington School
Project Administrator	George Washington School
Elementary Program Supply Storage	Central Technical Senior High School

Under the new centralization concept many of the elements of the project's staff have been re-located to provide better communication and service.

PERSONNEL/ACTIVITY	LOCATION
Occupational Resource Specialists (O.R.S.) and clerical assistant	Levy Junior High School (3rd floor)
Project Administrator and P.A.C.E. Administrator	Levy Junior High School (2nd floor shared office)
Elementary Program Supply and G.O.O.P. Staff	George Washington School (Project has been given equivalent of 1 1/2 rooms)
Occupational Learning Center and Occupational Resource Teacher	Central Technical Senior High School

The re-location of the staff has already brought about better communication and consistancy of effort among the various elements of the project.

Student Population - None

Instructional Staff Involved - Project Staff

Methods/Techniques - N/A

Materials - N/A

Instruments - Third party evaluator report

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PROCEDURE NO. 29 - THE INVOLVEMENT OF SCHOOLS AND STAFFS NOT PREVIOUSLY IDENTIFIED WITH THE PROGRAM

As a result of the success of the program in the seventeen (17) schools identified with the project, we have had requests from six (6) more elementary schools as well as five (5) junior high school special education classes for Career Education services. The services requested included teacher workshops, materials, field trips to the Career Center, and consultant help.

A one-half day workshop was held for twenty teacher aides in the Educational Professional Development Program concerning the Guided Occupational Orientation Program. The workshop was requested by the teacher aides as a result of the activities that had been observed in various schools involved in the program.

Career Education materials and resources at both the elementrary and secondary levels have been incorporated into the curriculum of the Adult Basic Education Program, located at Washington-Irving School.

At the sixth grade level, the project now serves a total of 1950 students from 64 classrooms, located in 21 public schools and five non-public schools.

At the fifth grade level, the project now serves a total of 2700 students from 88 classrooms located in 31 public and five non-public schools.

Student Population - Additional 2900 students

Instructional Staff Involved - Project Staff, Elementary Principals, and additional elementary teachers.

Methods/Techniques - Workshop, field trips, consultant services

Materials - Teacher guides, unit workbooks, filmstrips

Instruments - Pre and post tests, data sheets

PROCEDURE NO. 30 - ESTABLISHMENT OF CAREER EDUCATION CENTERS IN JUNIOR HIGH LIBRARIES

The junior high school librarians were encountering increasing demands by students for career oriented materials. Librarians found that much of what they had to offer was either outdated or in short supply.

In response to questions raised by the library services, a meeting was held with the project director and the assistant for libraries to discuss the problem and develop recommendations.

The results of this meeting were:

1. Each school library would establish a section under the heading of Career Information Materials.

2. The librarians would accept the responsibility for distribution and inventory control of all materials purchased by G.O.O.P. and placed within the individual school.

3. Each school librarian would inventory the available Career Education materials within her library and highlight the appropriate cards in the catalog for student identification.

4. Future purchasing of materials related to occupations would be done on the cluster approach to the exploration of occupation rather than to the individual occupational approach.

5. It was recommended that junior high school libraries work together on the ordering of free materials concerning occupation so that duplication will be minimized.

6. Guided Occupational Orientation Program would supply the librarians with a list of materials that G.O.O.P. had purchased to avoid duplicate purchasing by the librarians.

7. Our school district has established a teacher resource library containing "ERIC" readers and printers. In cooperation with the project staff, the library department is updating its "ERIC" files with all the available "Career Education" reference materials.

The above recommendations have all been implemented.

PROCEDURE NO. 30 - (continued)

In addition to the resources available in the libraries, a career education resource card file was developed and is in use at the present time. This card file contains over 250 resources available to teachers and to students. These resources include speakers, tours, field trips, resource personnel, and materials, such as films, filmstrips, and other printed information. Each item is cataloged and cross referenced in relationship to the 15 job clusters.

Student Population - Junior high school students and staff

Instructional Staff Involved - Project staff, librarians

Methods/Techniques - Standard library procedures

Materials - Films, books, filmstrips, pamphlets, and other audio-visual materials

Instruments - Standard library procedures

PROCEDURE NO. 31 - PILOT PROGRAM FOR TWELFTH GRADE STUDENTS

The emphasis of the G.O.O.P. at the secondary level has been in the junior high grades. The students presently in the 11th and 12th grades have had no opportunity to participate in career education exploratory activities.

A questionnaire was administered by our school district's guidance division to all graduating seniors in June, 1971. The results of this questionnaire indicate that the majority of the students leaving the school system lacked basic knowledge and skills necessary for seeking and procuring employment.

A pilot program was established and it was aimed primarily at graduating seniors who did not plan to continue their formal education. This pilot program operated in the Spring of 1972.

This pilot, involving fifteen to twenty students, met for the equivalent of ten class sessions and covered the necessities for entering the World of Work.

Topics for presentation and student activities involved the following:

- making out job application forms
- developing resumes
- interviewing techniques
- personal appearance and attitude
- realistic expectations
- employer and employee responsibilities
- employment benefits
- employment services

The evaluation of this pilot program was based on the reaction of students to materials and information presented. Their input regarding questions not covered by the instructor was also considered in the evaluation.

As a result of this pilot program, a committee was established under the direction of the Director of Occupational and Continuing Education, Mr. Hans Lang. This committee was charged with the responsibility of developing a similar program to be made available to all four (4) senior high schools in our district.

It is expected that the program will be in operation in all four (4) senior high schools this Spring (1973).

PROCEDURE NO. 31 - (continued)

Student Population - 15 to 20

Instructional Staff Involved - A consultant, Mr. Donald Schank, developed the pilot program

Methods/Techniques - Classroom participation

Materials - Films, visual aids, job applications, social security applications, medical questionnaires, etc.

Instruments - Pre and post testing of students

PROCEDURE NO. 32 - EXPANSION OF COMMUNITY-SCHOOL COOPERATIVE AT SECONDARY LEVEL

The continuing positive results of the Upstate Program (described in our Interim Report submitted February 1, 1972) resulted in increased demands for similar student experience opportunities. In response to this increased demand, the project staff at the secondary level (project administrator and O.R.S.'s) have initiated, formalized, and implemented three new programs which are now in operation. These programs are:

1. Western Electric Co-op Exposure Program (mentioned in last quarterly report; see page 4)

2. The Plaza-School Cooperative Program

3. The Transportation Club and Syracuse City School District Program

Descriptions of these three (3) programs follow:

1. Guided Occupational Orientation Program
   Western Electric Co-op Career Exposure Program

   Purpose:

   The Western Electric - Syracuse School District Career Exposure Program has been constructed through the initial planning of Mr. Peter D. Coquillette and Mr. Barney Block of Western Electric, and Mr. Richard Bannigan of the Syracuse School District. After an initial meeting at Western Electric, Mr. Robert Brown of the Occupational Resource Specialists contacted Mr. Block to make possible arrangements for the program. Mr. Brown and representatives of Western Electric met with Miss Gilligan of Upstate Medical Center on June 19, 1972.

   The purpose of the program is to give senior high students much needed exposure to jobs in the manufacturing and business careers area and to acquaint them with the work attitudes and expectations prevalent in a large commercial operation. This program provides a meaningful experience to both students and Western Electric employees. An exposure to a learning environment outside of the immediate school environment shows students involved that the learning experience is a continual and on-going process and is not limited to one specific setting or group of people.

PROCEDURE NO. 32 - continued

Goals:

There is a definite need in our schools for increased understanding of job alternatives available to high school graduates. This is coupled with a further need for an understanding of job qualifications and employer expectations. An exposure to jobs in the manufacturing and business area is a meaningful way of fulfilling these needs in a realistic work-oriented environment (Western Electric). This experience should give students involved a concrete advantage in the effectiveness of their career choice.

Objectives:

The program involving the Syracuse School District and the Western Electric Company has the following objectives:

a. To provide students in 11th and 12th grades with the opportunity to explore jobs within a particular area.

b. To acquaint students with the goals, purposes, and working philosophy of a manufacturing and business concern.

c. To allow students to participate and/or observe in depth the various job areas represented at Western Electric.

d. To increase job alternatives available to students within a specific area (Manufacturing, Business).

Student Population - 10 to 14 students per session.

Instructional Staff Involved - One ORS, one guidance counselor

Methods/Techniques - On-site exploration and identification

Materials - All available media

Instruments - Western Electric personnel records and procedures

2. Guided Occupational Orientation
The Plaza-School Cooperative Program

Purpose:

The Plaza-School Cooperative Program is being initiated through the cooperative planning of Mrs. Evelyn Naioti, Inservice Director at the Plaza (a facility for restorative and extended care services), and Mr. Richard Bannigan, the Project Director of the Guided Occupational Orientation Program. After the initial contact, Mrs. Frances Traynor of the Occupational Resource Specialists, continued making the arrangements with Mrs. Naioti for a cooperative pre-vocational program for students in the elementary, junior high, and senior high schools. The purposes for this program as identified by the Guided Occupational Orientation Program are to give students much needed exposure to the kinds of service occupations existing in an extended care and rehabilitation center, and to acquaint them with the general work philosophy and attitudes necessary for working with the disabled and the aged. The purposes identified by Mrs. Naioti and the administration of the Plaza in getting involved in this cooperative program are to expose the residents of this facility to young people in an attempt to get them more positively involved with the living, which is an integral part of the Plaza's philosophy.

a. For students involved in the Guided Occupational Orientation Program at the 5th and 6th grade levels, there will be tours of the Plaza facility arranged through Mrs. Naioti, whereby early exploration of jobs and job attitudes can be carried out. Such field trips to the Plaza will serve as a source of concrete occupational awareness and information for students in the elementary and early junior high phases of the Career Education Program.

b. For 9th grade students, and selected students from the senior high (grades 10 through 12), there will be a pre-vocational program at the Plaza which will be set up in the following manner: Students in groups of four per week will spend three half-days at the Plaza (probably Wednesday, Thursday, and Friday afternoons), at which time they will be thoroughly oriented to the philosophy and job roles representative of this rehabilitation facility, after which they will participate

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actively in many of these roles. Mrs. Naioti and her assistant will work very closely with each of four students weekly, on a one-to-one, or two-to-one basis At the end of this 3-day orientation, each student will be given option of continuing on a volunteer basis in whatever job area they are most interested at the Plaza. This could prove to be a very helpful long-term occupational experience for students who feel they might be interested in one of the career choices they observe at the Plaza. Students will be exposed to such occupations as nursing, health care aides, physical and occupational therapy, business and office work, maintenance, pharmacy, food service, and many others. Because of the uniqueness of the Plaza, each student has a special opportunity during his pre-vocational experience to gain understanding of occupational roles and a greater self-understanding regarding his own personal needs and career interests.

The following goals and objectives are to be accomplished by this program.

Goals:

There is a recognized need in our schools for increased student awareness of various career opportunities and for concrete experiences through which career interests and planning can be encouraged. Student involvement in a program of career exploration in an extended care facility where many health-related, business, and maintenance jobs are represented, and where a totally modern philosophy of rehabilitating the disabled and the aged exists, is a meaningful way of exposing students to realistic work possibilities which may help them in their own career choices.

Objectives:

The program planned by the Plaza Extended Care Facility and the Syracuse City School District will have the following objectives:

a. To provide students at the 6th and 8th grade levels with the opportunity of early exploration of the health related professions represented within this facility.

b. To acquaint 6th and 8th grade students with the general purposes and working philosophy of such a facility.

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PROCEDURE NO. 32 - continued

c. To provide students at the 9th through 12th grade levels with the opportunity to explore in depth and participate in the various job areas represented at the Plaza.

The final details necessary to begin the operation of this program are presently being worked out. It is expected that the students will begin participation in this program within the next sixty (60) days. (April 1, 1973).

Student Population - 4 students per school week

Instructional Staff Involved - ORS, Hospital staff

Methods/Techniques - On-site exploration and identification

Materials - all available media

Instruments - Interest Surveys, preference check-lists

3. Guided Occupational Orientation
Transportation Club and Syracuse City School District

Purpose:

The Transportation Club of Syracuse expressed a desire to contribute their knowledge of the transportation field in order to provide students with a realistic understanding of the variety of job opportunities with this area. The membership in the Transportation Club represents all types of industries including railroads, trucking firms and airline companies. The Transportation Club would like to make students aware of the vast number and variety of jobs in transportation, and provide realistic knowledge of job qualifications and expectations. In keeping with our goal of increasing the student's awareness of the world of work through first hand exposure to various occupational areas, we readily accepted their offer.

Goals:

Considering the recognized need in our schools for more accurate and relevant occupational information, we feel that through personal contact with various individuals having varying job responsibilities in different industries within the transportation field the students will have the opportunity to increase their knowledge and

PROCEDURE NO. 32 - continued

understanding of the occupations offered within this area. Secondly, the students will be able to learn the means of obtaining a desired job objective. Members of the Transportation Club come from various levels of management and operations and have the ability to provide realistic information which includes their own personal experiences.

Objectives:

The program operated by the Transportation Club and the Syracuse City School District has the following objectives:

a. The students will gain an understanding of the broad employment possibilities offered in the transportation field.

b. The students will gain knowledge regarding the general job qualifications and employer expectations in this area.

c. The students will have an understanding of specific realistic job functions involving careers in transportation.

d. The students will, after a general orientation to the entire field, explore those specific job areas in which he expresses an interest with a representative from the transportation industry who is employed in this area.

e. The students will gain an understanding of the entry-level jobs available and the long range career possibilities.

The Transportation Club has approached one of the participating high schools with an offer to provide resources for the development of a course in transportation. This offer is under consideration and the support of the Project. The Project has expressed a willingness to assist in the costs of the development of the course curriculum. (See Appendix 2-IV)

Student Population - 20 to 25 students per session (2 class periods

Instructional Staff Involved - Guidance Counselor, Representatives of Transportation

PROCEDURE NO. 32 - continued

Methods/Techniques - Visual presentations, informational lectures, question and answer periods.

Materials - Selected industry oriented materials

Instruments - None identified at this time

PROCEDURE NO. 33 - DEVELOPMENT OF PILOT INDUSTRIAL ARTS PROGRAM FOR CAREER EDUCATION

Pilot Industrial Arts Program

The pilot Industrial Arts Program is intended to serve as a model for future cooperative programs involving the Industrial Arts Department and the Guided Occupational Orientation Program (G.O.O.P.). It is hopeful that the methods, materials and ideas developed and implemented in this program will be utilized in the other junior high schools in our district. Following is a description of the program:

Guided Occupational Orientation
Industrial Arts Program
Status: Pilot Program

Purpose:

The Guided Occupational Orientation Program, has throughout the school year 1971-72, seen the need to involve 9th grade Industrial Arts students in a concentrated career exposure program. The majority of these students are non-college bound and many are what could be termed "potential dropouts". In keeping with our goal of increasing career alternatives for junior and senior high students, it was felt that a coordinated approach to careers in the Industrial Arts arena would be needed. This Industrial Arts exposure should provide a meaningful tie-in with the regular junior high careers program.

Goals:

Considering the recognized need in our schools for more accurate and relevant occupational information, we feel that through personal contact with various individuals in multitudinous job areas students will develop a more complete understanding of the trade and industrial community. Secondly, students would apply, in a concrete way, those work tasks observed on forays into the community. This would be done through the use of Central Tech facilities and resources of the Guided Occupational Orientation Program.

Objectives:

a. An increased understanding of the opportunities available in the Syracuse community.

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PROCEDURE NO. 33 - continued

b. An interdisciplinary approach by the regular G.O.O.P. and Industrial Arts with the goal of finding out how to get jobs in these fields, filling out applications, requirements, skills needed, etc.

c. The students will have an understanding of realistic job opportunities after high school.

d. The students will make connections between English, Science, Social Studies, and Math skills to skills in the manipulative or Industrial Arts area.

e. The students will develop an understanding of entry-level job requirements in the trades, manufacturing and industrial arts.

f. The Industrial Arts discipline will, as a result of an inter-disciplinary approach, become more closely associated with the core subject areas in the student's perception.

Procedures:

In September 1972, approximately 16-18 Levy Junior High 9th graders were identified by their guidance counselor as having expressed an interest in the Industrial Arts Careers Exposure Program (CEP). The Industrial Arts teacher, Mr. Dittmann, meets with them for two class periods daily. The program includes field trips, classroom applications, speakers, outside projects, and hopefully, some work experience.

Student Population - 16 to 18 ninth graders

Instructional Staff Involved - Guidance Counselor, ORS, Industrial Arts Teacher

Methods/Techniques - Field trips, classroom application, outside projects, use of speakers

Materials - Films, filmstrips, project materials

Instruments - Pre and post testing, verbal feedback from students and teachers.

PROCEDURE NO. 34 - DEVELOPMENT OF A PROJECT FLOW CHART TO IDENTIFY EMPHASIS BY GRADE LEVEL

The third party evaluator, Educational Services Incorporated, recommended that a programmatic flow chart be designed. The project staff, in cooperation with Educational Services Incorporated, held a series of meetings regarding this task. The result of the meetings was the actual design of the flow chart.

Development of a Project Flow Chart (see following pages)

- This chart included the definition of the project mission broken down into levels, i.e., elementary, junior high, and senior high.

- The chart indicated the theme to be emphasized at each of the three levels, e.g., "Awareness" at the elementary level.

- The chart identified the major goal of each level, e.g., Increase the awareness of students of the World of Work and its composition.

- The chart further broke down the major goals of each level into grade level goals, e.g., Fifth grade - "What is the World of Work?"

- The next step in the charting procedure was to identify the variable at each grade level in relationship to the goals, e.g., Assessment of the awareness of the World of Work - Fifth grade.

- Prior to the development of the flow chart we evaluated by level, i.e., elementary, junior high, senior high. We are now attempting to evaluate by grade level.

Student Population - None

Instructional Staff Involved - Project staff in consultation with E.S.I. staff

Methods/Techniques - Series of meetings

Materials - Flow chart

Instruments - None

LEVEL I

Emphasis: "Awareness"

Goal: Increase the awareness of students of the World of Work and its composition

LEVEL II

Emphasis: "Orientation and Exploration"

Goal: Increase the orientation of junior high school students and begin exploration of work opportunities and necessary preparations

LEVEL III

Emphasis: "Career Training and Job Placement"

Goal: Enable individualized career preparation and implementation of career plan

VARIABLES BY LEVEL AND GOALS

Level I
Awareness of World of Work

Level I
a. Awareness of makeup of World of Work
b. Attitude about World of Work
c. Awareness of manipulative skills used in occupations

Level II
a. Exploration of self-interests, abilities, values and needs
b. Exploration of economic system
c. Exploration of opportunities in working world

Level II
a. Amount of exploration of career clusters
b. Exploration of components of career planning

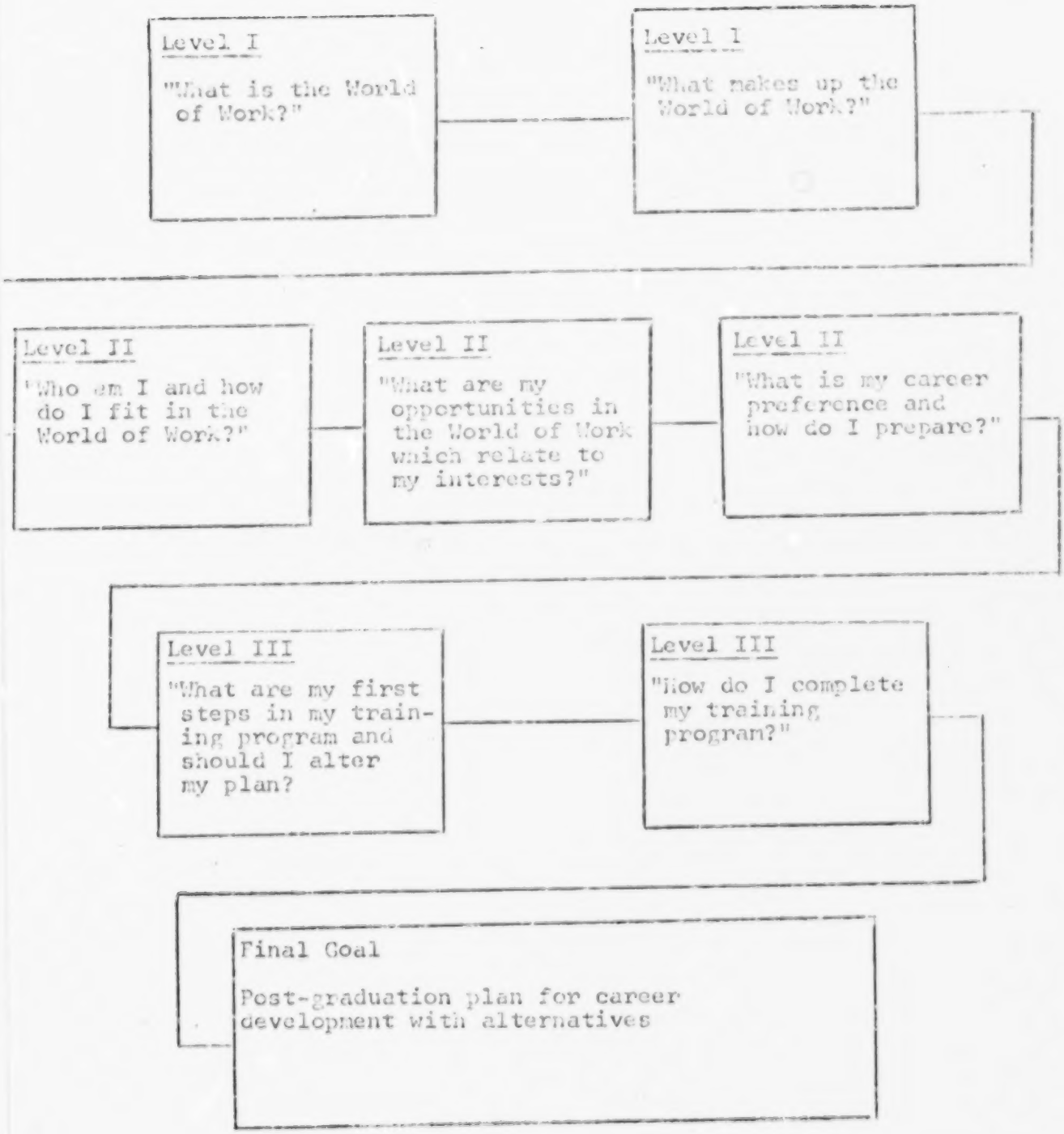
Level II
Completion of a career plan

Level III
a. Initial implementation of career plan
b. Mid-year reassessment
c. End of year direction

Level III
a. Definite decisions for two years of education
b. Continuation of career education plan

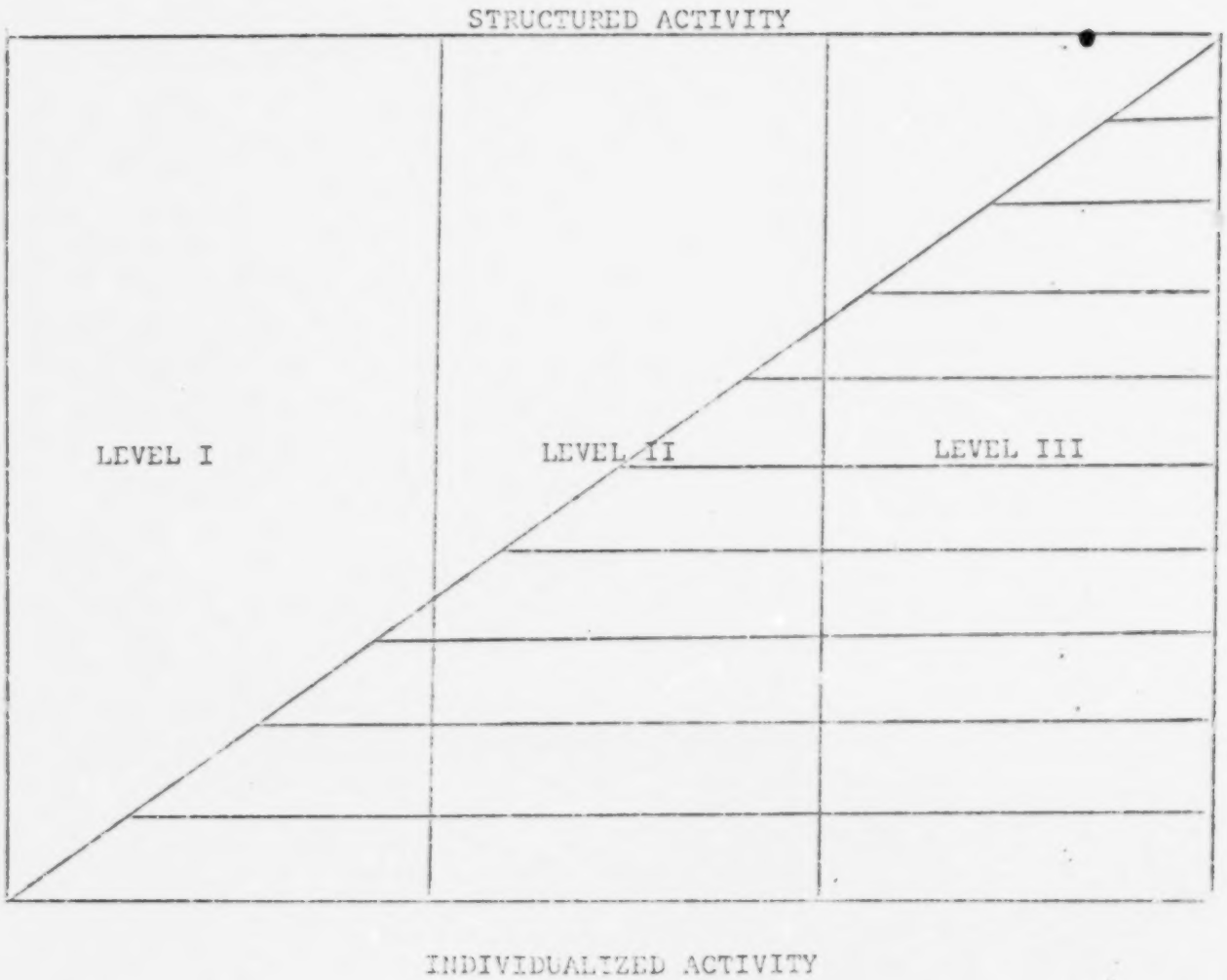
Level III
a. Development of final decisions about post-graduate action
b. Placement
c. Options for career as related to interest and skills

MATRICULATION SEQUENCE
(Student Goals)



INSTRUCTIONAL METHOD

JUNIOR HIGH SCHOOL



PROCEDURE NO. 35 - DEVELOPMENT OF JUNIOR HIGH SCHOOL CAREER EDUCATION RESOURCE CURRICULUM KITS

The junior high G.O.O.P. curriculum developed for use throughout the 1971-72 school year failed to receive substantial teacher acceptance. This problem was mainly due to methodology and not content.

This problem was identified by on-site evaluation by (1) the Occupational Resource Specialist concerning the use of the curriculum materials; (2) a teacher survey taken regarding a critical analysis of the materials, student reaction, and subject taught. The combination of the above two items, coupled with administrative involvement, were used as a basis for the curriculum revision. Actual revision work began in Spring of 1972 with the selection of a writing team.

Using the following inputs -

(1) Experience with materials used in the first year of the program.
(2) Compiled results of teacher survey. (See Appendix 2-V)
(3) The project flow chart. (See Procedure No. 34)
(4) Emphasis on teacher orientation and acceptance.
(5) Recommendations by the third party evaluator.

a junior high school curriculum writing team was selected. The writing team included the following personnel:

2 social studies teachers
2 English teachers
2 math teachers
2 science teachers
2 junior high school principals (P/T)
1 junior high school vice principal (P/T)
1 guidance counselor
3 Occupational Resource Specialists (P/T)
1 Central Office staff member (Instructional Supervisor)

Note: Each junior high school had at least one representative on the team.

The writing team was under the direction of a classroom teacher.

PROCEDURE NO. 35 - continued

The duties of specific elements of the writing team were as follows:

The two principals, the vice principal, the guidance representative and the Central Office staff representative assisted in the writing and acted as consultants in the areas of their particular competency and responsibility. They have a continuing role during this school year, 1972-73, of dissemination, orientation and cooperation among their counterparts on a district-wide basis.

The eight (8) teachers representing the four (4) major subject areas had the responsibility of the actual writing of the curriculum. Their continuing responsibilities included the orientation, dissemination and implementation of the materials produced during the workshop to the teachers within the schools they represent. They further act as sources of information to the project staff as to the problems encountered and indicated needs on a school by school basis.

The four (4) O.R.S. assisted the writing team in the identification of resources, evaluation of activities that pertain to the community and the validation of those proposed community activities. Their continuing responsibilities in relation to the writing team are to assist the members of the team in the orientation, dissemination and implementation of the materials produced during the workshop.

The Guidelines for the Curriculum Writing Team

One of the more difficult problems encountered during the implementation and use of the curriculum materials in the first year was the misunderstanding by the teachers of what career education was and how to incorporate it into the existing curriculum. For the most part, teachers tended to identify the objectives and activities of career education as another subject rather than as an integral part of the existing curriculum, e.g., social studies was taught four days out of the week, with the fifth day devoted to career education.

To provide the articulation needed between career information and subject matter, certain materials were developed. An example of the materials developed within the eighth grade social studies (which is American History) deals with the unit concerning "Communications". While the student is learning

about the topic of "Communications" in America by studying, for example, biographical data concerning Alexander Graham Bell or Marconi, he is given opportunities to explore the contributions of these inventors as they apply to the present world of work. He is able to explore the job opportunities available within the Bell Telephone System as they may relate to himself, thereby developing an articulation between historical data and student's present areas of interest and opportunity.

MAJOR ACTIVITIES AND ACCOMPLISHMENTS

A. Junior High School Curriculum Writing Team Activities

Examination of previous materials and evaluation of program:

The junior high school curriculum writing team evaluated the program as it involved them in their particular schools. The major discrepancies of the previous program were compared, using the teacher survey that was available to every junior high teacher involved in the Guided Occupational Orientation Program.

Recommendations of Third Party Evaluator:

The team researched the third party evaluator's ESI, guidelines which were written in the form of goals, and the team felt that the guidelines were applicable to most of the curriculum in the seventh (7th) and eighth (8th) grade areas which the team would cover, i.e., English, Math, Science, and Social Studies. Using the guidelines, the team made less general goals and objectives for the 7th grade program. These goals and objectives were designed to be an important part of the guidelines and could be performance tested.

Writing Team Designs Activities with Resources:

The purpose of the performance evaluated goals and objectives was to have teachers, either those on the writing team or teacher who would use the material in the future, design activities which could fit the needs of different classrooms. In addition to the many activities the teachers have already been using in the area of career orientation, the team added a variety of activities which would meet the individual styles of the students and the teachers, e.g., group sessions, individual projects, large group activities.

PROCEDURE NO. 35 - continued

Selection of Structure for the Program:

The team decided that the program should be flexible and always subject to change, especially in the area of learning activities. It was also felt that a method to organize materials was necessary but only if the method was easy to use.

The program with the goals, objectives, and activities was placed in kits. The goals were sub-divided into objectives which would meet a particular part of the goals.

The Eighth (8th) Grade Program

The seventh (7th) grade program was about 90% completed when the eighth (8th) grade program was begun. For consistency, the teams felt it should structure its eighth (8th) grade program similar to its seventh (7th) grade program. The structure was built around the general guideline goal of "What are my opportunities in the world of work which relate to my interests, abilities, and needs".

The Ninth (9th) Grade Program

Although the team was not charged with the responsibility of producing a ninth (9th) grade program, a program outline was developed which allows the ninth (9th) grade teachers at different schools to select a particular option within the program. The options were:

1. Using last year's (1971-72) materials.

2. Using parts of the eighth (8th) grade program (Goals 1A through 2D).

3. Individualizing the program and allowing the ninth (9th) grade teachers to act as advisors to a given number of 9th grade students.

4. To allow the school to design its own programs.

PROCEDURE NO. 35 - continued

Assembly of the Kits

The team spent two days assembling the kits, making structure changes, and reviewing the material in a completed form. (Pictures - See Appendix 2-VI)

Contact of Administrators

The writing team contacted all of the junior high school administrators who had not participated in the curriculum writing workshop and invited them to a brief orientation. This orientation dealt with all the activities and results of the workshop.

Student Population - None

Instructional Staff Involved - Entire writing team

Methods/Techniques - See activities and accomplishments

Materials - Curriculum Kits

Instruments - None

PROCEDURE NO. 36 - PILOTING AND IMPLEMENTATION OF JUNIOR HIGH SCHOOL CAREER EDUCATION RESOURCE CURRICULUM KITS

On September 8, 1972, the entire secondary G.O.O.P. staff conducted an orientation meeting with the staff of Levy Junior High School. Levy Junior High had been selected to be the pilot school for the new Integrated Junior High School Career Education Curriculum.

The Levy faculty was advised that the G.O.O.P. staff would be at Levy for approximately two weeks to:

- Evaluate teacher acceptance of the curriculum.
- Identify problems of implementation.
- Develop techniques for the orientation of the other eight (8) junior high school staffs.
- Assist teachers in the use of curriculum kits in relation to the teacher's subject areas.
- Assist the Librarian in establishing Curriculum Resource Center.

Following the orientation meeting, a four (4) hour workshop was conducted for the purpose of developing a plan for implementation and continuation of the program for school year 1972-73. Funds for this workshop, which was held on a Saturday morning, were provided by G.O.O.P. Following the workshop the principal filed with the assistant superintendent of secondary education the written work plan developed by the participants during the workshop.

On-site observation by the project staff during the pilot period indicated that the new program had gained the acceptance of the Levy staff and it was clearly indicated that the G.O.O.P. staff could now implement the program in the remaining eight (8) junior high schools.

Implementation of New Program at Eight (8) Other Junior High Schools

The orientation of the remaining eight (8) junior high schools was completed on October 18, 1972. These schools completed their individual implementation planning workshops on October 28, 1972. The goal of the G.O.O.P. staff was to complete both the orientation and implementation planning workshops by November 1, 1972, therefore, the goal was completed three days in advance of the deadline.

PROCEDURE NO. 36 - continued

A sample agenda of the orientation held at the remaining eight (8) junior high schools is as follows:

GUIDED OCCUPATIONAL ORIENTATION PROGRAM

Eastwood Junior High School
351 Nichols Avenue
Syracuse, New York

September 18, 1972

Introduction	Mr. Norman Koslofsky Principal
General Remarks	Mr. Richard Bannigan Project Administrator
Summary of Writing Team Activities	Mr. Ron Cocciole, ORS
Grading, Implementation Plan, Workshops, Administrative Role	Mr. Norman Koslofsky Principal
Counselor's and ORS's Roles In G.O.O.P. - Evaluation, Resources	Mrs. Marilee Fossaceca, ORS
Library Resources	Mrs. Lucille Ehling, Librarian
Role of Teachers, Structures and Use of Kits	Mr. Leo Sweeney, (Teacher & Writing Team Member)

Student Population - 552 at pilot school, 5496 at remaining eight (8) schools

Instructional Staff Involved - Total staff of the pilot school involved in orientation and implementation, total staffs of other junior high schools in orientation, and Occupational Resource Specialists

Methods/Techniques - Workshop and inservice

Materials - Curriculum kits and resources

Instruments -

PROCEDURE NO. 37 - WORLD OF WORK UNIT FOR FIFTH GRADE STUDENTS

A major accomplishment during this period has been obtaining a commitment to involve every fifth (5th) grade class in the district in project.

The involvement of the G.O.O.P. activities at the fifth (5th) grade level has resulted in the following activities:

1. The sixth (6th) grade two-week orientation unit was revised for use for fifth (5th) grade students as a two week social studies unit - "WORLD OF WORK".

2. Quadrant meetings were held involving every fifth (5th) grade teacher in the school district. During these meetings, the participants received instruction on how to use the "WORLD OF WORK" unit. Copies of the "WORLD OF WORK" unit printed during the summer were distributed to every school in the district in sufficient quantities so that every fifth grade student would have a copy.

The "World of Work" unit is now part of the regular fifth (5th) grade social studies curriculum. (See Appendix 2-VII)

Student Population - 2456 fifth grade students

Instructional Staff Involved - 93 teachers, 1 project staff member

Methods/Techniques - Orientation workshop

Materials - "World of Work" Unit, filmstrips

Instruments - Evaluation (pre and post testing)

PROCEDURE NO. 38 - THE SYRACUSE CITY SCHOOL DISTRICT PASSES "YEAR OF CAREER AWARENESS" RESOLUTION

Efforts on the part of the project staff, to receive district wide recognition and acceptance of career education, were rewarded on August 15, 1972. The following is a resolution passed by the Syracuse Board of Education, meeting in regular session, indicating their endorsement of the project's activities.

"YEAR OF CAREER AWARENESS"

Resolved: That the superintendent of schools be, and is hereby, authorized to designate the 1972-73 school year as the "Year of Career Awareness" in the City School District; and be it further

Resolved: That the superintendent and his staff shall make every effort to focus attention on the part of the total staff and community on the extensive efforts being undertaken and the interest being demonstrated both at the elementary and secondary levels in the way of programs in occupational and career areas.

The superintendent indicated, that, for this proposal, every effort would be made to develop an awareness among pupils in the district of the importance that career study and investigation have in terms of their futures as workers and producers either in the professions, business, or industry of the American economy.

Mr. Lyon moved for approval of the resolution, which was seconded by Mr. Munson, and unanimously approved by the Board of Education. (ITEM H OF AGENDA)

Student Population - None

Instructional Staff Involved - None

Methods/Techniques - None

Materials - None

Instruments - None

PROCEDURE NO. 39 - SYRACUSE SCHOOL DISTRICT APPLIES FOR AND RECEIVES FUNDS TO DEVELOP A LIFE CENTERED CURRICULUM FOR ELEMENTARY GRADES

During this interim period, a communication was received from the New York State Vocational Education Department soliciting proposals in the field of Career Education. Funding has been made available for planning curriculum revision and teacher orientation.

The Syracuse City School District, already dealing extensively with grades five (5) through twelve (12) within the Guided Occupational Orientation Program, submitted a proposal for a three (3) year grant. This proposal requested funding for the revision of the Kindergarten (K) through six (6) curriculum, the training of teachers in the use of the curriculum and the piloting of the new curriculum on a district-wide basis.

The G.O.O.P. staff, in cooperation with the Special Projects staff of the Syracuse City School District, prepared and submitted a proposal entitled, "A Life Centered Curriculum". A copy of this proposal was submitted with the August 1st, 1972 quarterly report.

Communication with the New York State Education Department indicated the proposal was the best of its kind that they had ever received. It ranked number one (1) of thirty-eight (38) proposals that had been submitted. The school district received a first year funding grant of $104,000 for the project.

Activities of this proposal began with a Project Planning Committee workshop and is proceeding according to the time schedule described in the proposal.

Student Population - None

Instructional Staff Involved - G.O.O.P. staff and Special Projects staff

Methods/Techniques - Work meetings to write proposal

Materials - Research materials, evaluation materials

Instruments - None

PROCEDURE NO. 40 - PROPOSED DIRECTIONS OF PROJECT FOR THIRD YEAR OF GRANT

The emphasis of the project during its first year was at the elementary level. During the second year, the emphasis was placed at the junior high school level. Continued emphasis during the third year (February 1, 1973 - January 31, 1974) will include the senior high school level. The basis for involvement at the senior high school will be through cooperative, long range planning activities with the Guidance Department of the school district. Planning will include the role of the Occupational Resource Specialist after federal funding expires and what elements of the project can and will be adopted as a part of the guidance function in the high schools. The goal of this action is to move the Career Education Program to a point at which the City School District will be in a position to view the entire project in relation to its continuance.

Student Population - None

Instructional Staff Involved - Does not apply

Methods/Techniques - Does not apply

Materials - Does not apply

Instruments - Does not apply

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6. (d) RESULTS AND ACCOMPLISHMENTS OF THE PROJECT

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6. (d) RESULTS AND ACCOMPLISHMENTS OF THE PROJECT

Following is a list of the major results and/or accomplishments of the project. They are listed by levels, i.e., Kindergarten through Sixth (6th) grade, Seventh (7th) through Ninth (9th) grade, and Senior High.

Kindergarten through Sixth (6th) Grade Level

Program Components To Meet Project Objectives	Major Results/ Accomplishments
1. Continuation of Sixth (6th) Grade Program	Sixth grade program as described in first year interim report has continued with little or no variation.
2. Implementation of Grade Five (5) Component to Project	2456 fifth grade students are participating in a two-week social studies unit entitled, "The World of Work". This unit is being used by 93 teachers on a district wide basis in 36 schools.
3. State Funded Life-Centered Curriculum Proposal (VEA-Part C)	76 teachers representing 31 public and 5 private non-profit schools are participating in the development of a revised K through 6 curriculum. The purpose of the new curriculum is to integrate Career Education concepts into the existing curriculum.
4. Involvement of Schools Not Previously Affected By the Program	As a result of requests made by the principals of schools not receiving direct services from the project, more than twenty workshops were held for teachers during the school year. Services and materials not including the Skill Trainer were made available to any teacher requesting.

Kindergarten through Sixth (6th) Grade Level - continued

Program Components To Meet Project Objectives	Major Results/ Accomplishments
5. Teacher Inservicing at the Fifth (5th) Grade Level	Quadrant workshops were held for all fifth (5th) grade teachers in the school district. The purpose of the workshops was to prepare the teachers to teach the two week "World of Work" unit. The school district authorized early dismissal in order that the workshops could be held during school hours.

Junior High Level (7th - 9th Grade)

Program Components To Meet Project Objectives	Major Results/ Accomplishments
1. Additional Community-School Cooperative Programs Established	In addition to the three new programs described in Procedure No. 32, pages of this report, the major accomplishment was a commitment from the Niagara Mohawk Power Corporation relative to the project - Quote from letter (See Appendix 2-VIII) "Niagara Mohawk will be happy to assume this role of leadership in the organization and implementation of this vital curriculum revision, and I will be working with Dick (Bannigan) and representatives of industry to ensure the success of this model program for Syracuse and New York State."

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Junior High Level (7th - 9th Grades) - continued

Program Components To Meet Project Objectives	Major Results/ Accomplishments
2. Integration of Career Education Into the Curriculum	Using the project flow chart described in Procedure No. 34, pages of this report, recommendations of the third party evaluator and reactions of the teachers to last year's curriculum materials, an integrated junior high school curriculum was developed. Sixty (60) curriculum resource kits were produced and distributed to all nine (9) junior high schools. Orientation and teacher workshops in the use and application of the contents of the kits were held in each school. Teachers of English, social studies, science, and mathematics in these schools are presently using the kits with their students on a daily basis.
3. Dissemination of Information to the State Education Department Regarding the Project	On September 14, 1972 representatives from various departments and bureaus of the New York State Education Department, who had an interest in career education, visited the program. The purpose of the visit was to observe what the Syracuse City School District is doing in the area of Career Education and how that can be incorporated into the total state plan. (See Appendix 2-IX)

Junior High Level (7th - 9th Grades) - continued

Program Components To Meet Project Objectives	Major Results/ Accomplishments
	The following persons were involved in the visitation: Chief Ruth E. Ostter, Bureau Health Occ. Ed.; Chief Lee A. Traver, Bureau Agricultural Ed.; Chief Arthur J. Dodley, Bureau Industrial Arts Ed.; Dir. Everett Lattin, Div. Occ. Ed. Supervision; Chief Doug Adamson, Bureau of Distributive Ed.; Assoc. Marian Potter, Bureau of Distributive Ed.; Chief Elizabeth A. Brown, Bureau Home Economics Ed.; Chief Carl Benevato, Bur. of Trade & Tech. Ed.; Chief Hobart Conover, Bureau Business Ed.; Dir. Robert H. Bielfield, Div. Occ. Ed. Supervision.
	Copies of all elementary and secondary project curriculum materials were taken back to Albany by members of the visitation team.
	Shortly after this visit, Mr. Sidney Johnson, Project Director, was contacted by Robert Bielfield, Director of Division of Occupational Education Supervision, requesting an additional set of junior high school kits.
	At the request of Mr. Bielfield, these kits were forwarded to the New York State Department of Correction for review in regard to their possible adaptation and use in prisons.

Junior High Level (7th - 9th Grades) - continued

Program Components To Meet Project Objectives	Major Results/ Accomplishments
4. Increase in Funding for a Community-School Cooperative Program	The Upstate Medical Center Occupational Orientation Program described in Procedure No. 18 of our Interim Report of February 1972, pages 40, 41, is funded separately under State Vocational Education funds. Because (1) the program evaluation proved so successful in its own right and (2) because the program served as a model for later programs, the funding for the program was increased by 100%. This additional funding enabled the school district to increase the number of children participating in the program from 100 to 200.
5. Increased Participation of Staff Members Relative to the Dissemination of Information About the Project	One of the responsibilities of a Part D - Exemplary Project is to be a model for the state. Our quarterly reports clearly indicate that the participation of staff members in statewide dissemination activities has increased greatly. More than 100 requests for information, curriculum materials, program procedures, and on-site visits were recorded during this interview period. (See Appendix 2-X)

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Junior High Level (7th - 9th Grades) - continued

Program Components To Meet Project Objectives	Major Results/ Accomplishments
6. On-site Visit by Mrs. Julie Nixon Eisenhower to the Project	One of the highlights of this interim period was the visitation by Mrs. Julie Nixon Eisenhower on October 30, 1972. At that time, Mrs. Eisenhower visited Levy Junior High School which had piloted the new junior high program. Her visit was to be restricted to one site. That being the case, elements of the total Guided Occupational Orientation Program were brought to the school to provide her with the greatest exposure to the different components of the Career Education Program, operating at the elementary, junior and senior high levels. Elements of the Career Center were brought to the school. This consisted of setting up two career booths and providing the appropriate G.O.O.P. curriculum materials for display. In addition, the Skill Trainer van, a mobile teaching unit, was placed on the grounds and was visited by Mrs. Eisenhower. The van was in operation at the time. (See Appendix 2-XI)

Senior High Level (10th - 12th Grades)

Program Components To Meet Project Objectives	Major Results/ Accomplishments
1. Senior High School Components Spell Out Objectives and Complete Evaluation Designs	Prior to this period, there has been a lack of positive articulation between the senior high school components and the activities occurring at the junior high and elementary levels. Following a series of meetings, specific objectives and evaluation designs have been developed for the three senior high components. These designs met with the approval of the third party evaluator, E.S.I. (See Appendix 2-XII)
2. Guidance Personnel Begin to Adopt Project Philosophy	The success of the activities developed by the project's Occupational Resource Specialists have influenced guidance personnel to the extent that they are actively participating in the project's activities, e.g., the senior high school guidance counselors have developed a set of job objectives based on the objectives of the Career Education Program.

General

Program Components To Meet Project Objectives	Major Results/ Accomplishments
1. District-Wide Identification With the Project	As a result of the Board of Education Resolution of August 15, 1972 declaring the school year 1972-73 as the Year of Career Awareness, there has been more identification of district staff members with the project. The concepts of Career Education are being considered in - 1. Policy making decisions 2. Allocation of resources 3. Development of mini-courses 4. Teacher inservice sessions 5. Long range planning
2. National Recognition of Project by the National Education Association (NEA) and its President, Mrs. Catherine Barrett	Dr. Walter A. Graves, Executive Editor, contacted our project's Career Center to discuss the possibility of featuring the C.O.O.P. in a forthcoming issue of Today's Education. The school district and project staff enthusiastically accepted the offer. At approximately the same time, Mrs. Catherine Barrett, President of the NEA indicated an interest in visiting the project. (See Appendix 2-XIII) Dr. Graves and a staff photographer spent Nov. 3, 1972 photographing the project and obtaining story information for the article to be featured in the February edition of Today's Education.

General - continued

Program Components To Meet Project Objectives	Major Results/ Accomplishments
	On Nov. 7, 1972, Mrs. Barrett visited the project. Photographs of her visit were forwarded to Dr. Graves for inclusion in the article. One of the results of Mrs. Barrett's visit was that she taped an address to the elementary teachers involved in the development of the Life Centered Curriculum. This address was also published in the Syracuse Teacher's Association newsletter. (See Appendix 2-XIV)

6. (e) EVALUATION OF THE PROJECT

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EVALUATION
OF THE

GUIDED OCCUPATIONAL ORIENTATION-TRAINING
AND JOB PLACEMENT PROJECT
SYRACUSE CITY SCHOOL DISTRICT

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Kaye L. Solomon

Educational Services, Inc.

Waco, Texas

February 1, 1973

Prepared for:

Syracuse City School District

Syracuse, New York

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Chapter I

Introduction

This report provides a summary of the independent, third-party evaluation conducted by Educational Services, Incorporated (ESI) for the 1972-73 funding year (ending January 31, 1973) of the Guided Occupational Orientation Project (GOOP) of the Syracuse City School District (SCSD).

ESI evaluation team members have approached this assignment with the conviction that evaluation is not only how to assess the impact of any specific objective of educational activity, but rather how evaluation can be utilized to create a robust and dynamic planning system.

Evaluation often has been perceived as a necessary evil required by a supervisory agency as a basis for continued and/or additional funding. Results of such evaluation often produce self-justification of programs; tedious summaries of quantitative data with little to no regard for qualitative data gathering or presentation; or opinionated and emotional observations.

Also, evaluation is often equated with research. The research paradigm of evaluation views the procedure as a fact finding mechanism to determine the worth of programs. A central weakness of the application of the formalized research techniques to evaluation rests in the problem of implementation of, or useful-

ness of, such data in making meaningful change in educational programs. While researchers are fascinated by such data, educators are unable to use research data in administration of specific programs.

Therefore, ESI has employed an alternative approach to evaluation which might be characterized as a systems approach, ESI views evaluation as a means to facilitate and to increase the flexibility of education so that teachers and project staff administration can participate directly in the process of evaluation.

The evaluation model designed by ESI recognizes the extensiveness of a particular educational project; that such a project contains many elements and parts; that complexities of relationships, linkages, and interconnections of parts occur often and rapidly; and that the dynamic nature of educational projects is subject to change and variances.

The systems approach to evaluation used by ESI is summarized in Figure I. The first step is the careful selection of the variables (behavior of students, teachers, parents, etc.) upon which change is to be effected. Usually, each identified variable categorizes a major project activity.

Each major activity of a project is considered a separate feedback loop and a goal is established to provide directions for the total system in terms of desired outcomes.

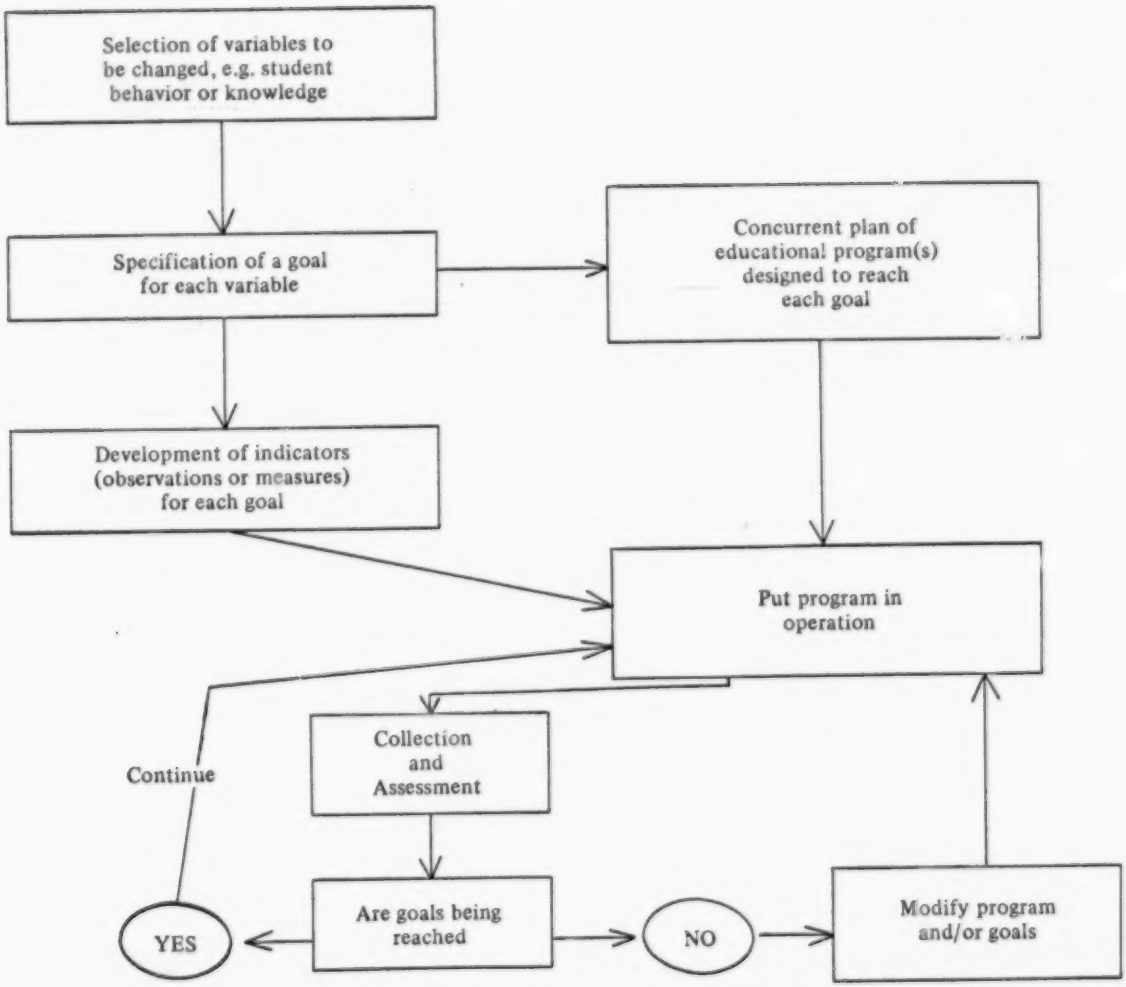
After identification of each goal, indicators and/or data gathering mechanisms which reflect upon the specified goal are selected.

FIGURE I

SYSTEMS APPROACH TO EVALUATION

Educational Services, Inc.

Waco, Texas



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As data and/or observations are gathered and matched against specific goals, the decision-makers of the project are able to clearly identify successes, lack of progress, or inability of the project to effect change on the specific variable. This serves to pinpoint areas of strength and weakness quickly and graphically. Thus, modifications can be made as necessary. The style of evaluation is concerned both with demonstrating overall, long-term program results as well as assisting educational administrators in improving the quality of programs over time without waiting until this final evaluation, when it is too late to modify.

The ESI evaluation scheme which serves these functions is based on the belief that administrators of educational programs must know the following: what the program is planning to accomplish; what will determine this accomplishment; and what techniques are necessary for this accomplishment.

The five major elements which compose the evaluation scheme are as follows:

A. Variable - that which is to be changed or altered by a program for the target population, whether students, teachers, parents. etc.

B. Variable Indicator - how to measure or describe the variable.

C. Goal - a statement of the desired change in a variable which a program is to affect.

D. Program Techniques - the activities to be carried out in order to accomplish a specific goal.

E. Technique Indicator - indication or evidence that the technique has been carried out but not an indicator that the goal has been accomplished.

An illustration of the use of these five evaluation elements is displayed in Chart I.

Evaluation must concentrate on the results of educational activities rather than on the activities themselves. The final success of any educational activity must be measured against the results it was designed to produce.

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EVALUATION SCHEME ILLUSTRATION

Variable	Variable Indicator	Goal	Program Technique(s)	Technique Indicator
Level of reading ability	Scores on a standarized reading test	Increase the reading abilities for 200 fourth grade students, who are identified as "slow readers" as indicated by improvements in reading scores	- carry out a special in-service training program for 10 selected fourth grade teachers in assisting "slow readers"	Number of teachers completing the program
			- carry out a 10-month program of individualized reading instruction for 200 fourth grade students	Number of students involved in an individualized reading program

Chapter II

History and Background

The Guided Occupational Orientation Project (GOOP) established by the Syracuse City School District (SCSD) of Syracuse, New York, is funded under Part D of PL-576 for Exemplary Projects in Vocational Education.

At the time of this report, the project has completed its second year under federal funding arrangments. Due to the fact that the federal funding cycle for this project is February 1 to January 31, two complete school years are not represented in this report.

In June, 1971, SCSD and Educational Services, Incorporated (ESI) of Waco, Texas, entered into a memorandum of arrangement whereby ESI agreed to provide an independent, third-party evaluation of GOOP as required by federal funding regulations.

Since that time, ESI has conducted interim evaluation studies in late June of 1971 and 1972 to study data representative of complete school years. Results of these interim evaluations have been shared with GOOP project administrators and have served as the basis for some redirection of various project activities in succeeding school years. Through these interim reports, GOOP project administrators have been afforded the opportunity to maximize utilization of evaluation in decision-making procedures.

GOOP as funded and operated, involves all three grade-group populations -- elementary, junior high school, and senior high school. The complexities of this project, involving large numbers of students and faculty members and affecting diverse areas of the total educational program of SCSD, became unwieldy and confusing both to GOOP administrators and administrators of other activities of SCSD. This resulted in the development of an overall Master Plan, an exercise in planning which involved ESI personnel working closely with various administrators and GOOP staff members.

The Master Plan is displayed in Chart II. It is the understanding of the evaluators that maximum utilization of this planning document has improved the understanding of the overall project design and flow for staff members, faculty members, and administrators.

In January of 1972 and 1973, ESI completed formal evaluation reports concerning assessment of all project activities through those dates.[1] Some early data, amassed prior to the association of ESI with the project, resulted from instruments and procedures developed by the project staff. Instruments and procedures utilized for data gathering during the 1971-72 and 1972-73 school years reflect cooperative planning by GOOP staff members and ESI personnel.

The task of preparing a formal evaluation report at mid-point of the school year has presented problems for the evaluators. This

[1] See Holder and Belcher, "Evaluation Report of the Guided Occupational Orientation Project", February 1, 1972.

report reflects complete pre and post data analysis for the 1971-72 school year but complete data for the 1972-73 school year will not be available until June, 1973.

The Master Plan displays the overall, long-range mission of GOOP: "Increase the occupational awareness and facilitate entrance into the world of work for students in the Syracuse City School District Grades 5-12". This mission is extended into the three major grade groupings with the following goals:

A. Elementary: Awareness - Increase the awareness of students of the world of work and its composition.

B. Junior High School: Orientation and Exploration - Increase the orientation of Junior High School students and begin exploration of the work opportunities and necessary preparation.

C. Senior High School: Job Training and Placement - Enable individualized career preparation and implementation of career plan.

Each group goal is then supported by separate grade level goals with appropriate variables to support each. These grade level goals are presented and discussed in Chapters III, IV and V of the report.

CHART II

MASTER PLAN

Guided Occupational Orientation Project

Mission: Increase the occupational awareness and facilitate entrance into world of work for students in Syracuse City School District Grade 5-12

Elementary

Awareness

Increase the awareness of students of the world of work and its composition.

5th Grade

"What is the World of Work"

Variable

Awarenesss of World of Work

6th Grade

"What makes up the World of Work"

Variables

(a) Awareness of make up of World of Work

(b) Attitude about World of Work

(c) Awareness of manipulative skills used in occupations

Junior High School

Orientation and Exploration

Increase the orientation of junior high school students and begin exploration of work opportunities and necessary preparations.

7th Grade

"Who am I and how do I fit in the World of Work"

Variables

(a) Exploration of interests, abilities, values, and needs.

(b) Exploration of economic system

(c) Exploration of opportunities in Working World

8th Grade

"What are my opportunities in the world of work which relate to my interests"

Variables

(a) Amount of exploration of career clusters

(b) Exploration of components of career planning

9th Grade

"What is my career preference and how do I prepare"

Variables

Completion of a career plan

Senior High School

Job Training and Placement

Enable individualized career preparation and implementation of career plan.

10th Grade

"What are first steps in training program?" and "Should I alter my plan?"

Variables

(a) Initial implementation

(b) Mid-year assessment

(c) End-of-year direction

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(b) Plac

(c) Opt care rela inte skill

CHART II

MASTER PLAN

Guided Occupational Orientation Project

Increase the occupational awareness and facilitate entrance into world of work for students in Syracuse City School District Grade 5-12

Junior High School

Orientation and Exploration

ncrease the orientation of junior high
hool students and begin exploration of
opportunities and necessary preparations.

8th Grade

"What are my opportunities in the world of work which relate to my interests"

Variables

(a) Amount of exploration of career clusters

(b) Exploration of components of career planning

9th Grade

"What is my career preference and how do I prepare"

Variables

Completion of a career plan

Senior High School

Job Training and Placement

Enable individualized career preparation and implementation of career plan.

10th Grade

"What are first steps in training program?" and "Should I alter my plan?"

Variables

(a) Initial implementation

(b) Mid-year assessment

(c) End-of-year direction

11th & 12th Grades

"How do I complete my training program"

Variables

(a) Development of final decisions about post-graduation action

(b) Placement

(c) Options for career as related to interest and skills

Final Goal

Post-graduation plan for career development with alternatives

Chapter III

Evaluation of the Elementary Program

The elementary segment of the Guided Occupational Orientation Project is operating under the general goal of awareness - "increasing the awareness of students of the world of work and its composition."

The fifth grade program phase was initiated in September, 1972 and deals with the specific goal of "What is the World of Work?" A special social studies unit, "The World of Work," was compiled from existing sixth grade material. This unit was introduced to all fifth grade teachers during special meetings and will be utilized in 94 classrooms in 34 elementary schools (31 public and 3 non-public) and involves 2,444 students during the 1972-73 school year.

The sixth grade program phase operates under the specific goal of "What Makes Up the World of Work?" and has been functional since November, 1970. Early stages of these sixth grade activities were not supported through federal funds. This support was initiated in February, 1971. Thus, the sixth grade program reflects the longest time span of experience in GOOP.

During the period from November, 1970 to June, 1971, 1,260 sixth grade students representing 17 schools participated in the program. From September, 1971 through June, 1972, 1,750 sixth grade students representing 23 schools (18 public and 5 non-public)

participated. It is projected that 1,794 students representing 29 schools (24 public and 5 non-public) will participate in the program during the 1972-73 school year.

The program basically includes the following components:

___ Two weeks orientation of the world of work (review of fifth grade materials in 1972-73 school year).

___ Two field trips to the Career Center located in the George Washington School to visit and use display booths explaining a variety of vocational and industrial areas.

___ Three weeks of individualized study of selected careers coupled with class activities.

___ Two days of a skill program to enable students to experience occupational tasks and role playing.

A. Goals for Fifth Grade Students

1. Increase the level of awareness of broad families of jobs, employment requirements, personal abilities and interests in relation to various occupations by higher mean scores on post-test for "An Introduction to the World of Work" as compared to the pre-test.

   a. Variable - level of awareness of broad families of occupations, requirements for employment, personal abilities and interests in relation to various occupations.

b. Indicator - pre and post test for program, "An Introduction to the World of Work."

This goal and the educational activities for fifth grade are the first steps into GOOP for elementary students.

Fifth grade students completed an instrument designed to measure general awareness of the world of work,* before participating in two weeks of classroom orientation and after completion of the orientation.

At the time of this report 282 fifth grade students have completed this orientation in the 1972-73 school year. A twenty percent systematic sample of these students was drawn for project evaluation. Pre and post test mean scores are shown in Table 1.

Table 1.

FIFTH GRADE ORIENTATION TEST SCORES

1972-73

	Pre Test	Post Test	Difference (Gain)
Means	15.98	19.37	3.39
Sample Size	53	53	

Pre and post test means for the 53 sampled students were 15.98 and 19.37, a positive gain of 3.39 positive points on the

* The instrument was designed and pilot tested during the 1972-73 school year. The maximum score possible is 27.

average per student. Student awareness of the "world of work" is increasing in the desired direction according to this test.

B. Goals for Teachers

1. Participating teachers will return class lists indicating involvement of 100 percent of their students and a minimum of ten class hours spent on the GOOP program.
   a. Variable - utilization of program and materials made available by the Career Center.
   b. Indicator - number of class lists indicating grades returned to Career Center and hours involved.

Fourteen fifth grade teachers had completed the program at the time of this report. All (100%) of the teachers returned class reports indicating that all students had participated. The average number of hours per classroom was 16.99.

C. Goals for Parents

1. Parents or guardians are to act as a resource person to be interviewed.
   a. Variable - level of interest and participation in classroom program.
   b. Indicator - completion of interview of parent or guardian, included in the world of work study.

All students in the program to date have completed an interview with parents or guardian.

Business and industry are not involved in fifth grade program.

Sixth Grade Students

During the 1971-72 school year, sixth grade students represented the primary elementary level target population for career education. For the 1972-73 school year, the same program with only minor modification has been continued.

The 1971-72 goal of increased awareness of the world of work has been expanded to two more specific goals in 1972-73. At the time of this report, 300 sixth grade students have completed a career education unit in the 1972-73 school year. Following are evaluation goals for 1971-72 only, and both school years.

1. Increase the awareness of sixth grade students concerning the world of work. (1971-72 only)
   a. Variable - level of work awareness
   b. Indicator - scores on "Awareness of World of Work" (Orientation) test.

This goal and variable reflect the first step into the complete GOOP for elementary students. For 1971-72 the only grade involved was sixth grade, the same grade involved in 1970-71. Students complete two weeks of classroom orientation in this phase. The test is designed to measure the student's general awareness of the world of work.

Pre and post test scores for an approximate ten percent random sample of students shown in Table 2 are 15.59 and 18.6. Student awareness appears to be increasing (as indicated by this test) as a result of the two week orientation. No statistical test of significance was calculated. Use of number of career areas identified by students was developed as an additional indicator because

of questions about validity of measurement even though this indicator was increased following the orientation phase.

Table 2

Career Orientation Test

1971-72

	Pre-Test	Post-Test
Means	15.59	18.6
Sample Size	171	146

As shown below, over ninety percent of sixth grade teachers rated this introductory phase as "valuable" or above.

Absolutely Essential	37%
Very Valuable	14.8%
Valuable	44.7%
Not Very Valuable	3.5%
Waste of Time	0%

2. Increase the level of awareness of the fundamental concepts and procedures related to the world of work as indicated by higher mean scores on Career Education Unit post-test as compared to scores on pre-test. (1972-73 only)
   a. Variable - level of awareness of the fundamental concepts and procedures related to the world of work.
   b. Indicator - pre-post test scores on unit, Career Education Grade Six.

A twenty percent systematic sample of sixth grade students were tested as part of their Career Education Unit as to their career concept understanding. Pre and post test mean scores as shown in Table 3 are 6.88 and 10.84. The gain (3.95) is in the desired direction and supports intended concept gain.

Table 3

Sixth Grade Scores on Career Concept Test

1972-73

	Pre Test	Post Test	Difference (Gain)
Mean Scores	6.88	10.84	3.95
Total Students	70	70	

3. Increase the student's knowledge of the career ladder concept in local business and industry as indicated by higher mean scores on a true-false post-test as compared to pre-test scores. (1972-73 only)
   a. Variable - knowledge of innumerable career opportunities and respective occupational ladder concepts in local business and industry.
   b. Indicator - true-false scores before and after visit to career center.

One question raised in ESI's previous evaluation was the inability to assess the specific impact of student use of career booths describing job families available to the Syracuse area. A true-false test with 10 questions was conducted by the Career Center and administered to all students participating in the two hour tour of the center including use of the booths. Pre and post test mean

scores, shown in Table 4 were 6.13 and 6.89, a gain of only .76 points.

The school year is only half over and all target sixth graders have not completed the program; consequently no conclusions can be drawn from this small difference. The difference may be resulting from inadequate measurement of change; non-representation of classrooms participating to date; and/or failure of career booths to produce the desired change in information. End of year data on this test will enable a more definite determination if there is a problem.

Table 4

Sixth Grade Career Ladder Concept Scores

1972-73

	Pre Test	Post Test	Difference (Gain)
Mean Scores	6.13	6.89	.76
Total Students	300	300	

4. Increase positive attitudes toward world of work (occupations and careers) as indicated by statistically significant mean scores on an attitude questionnaire. (1971-72 only)
   a. Variable - attitudes concerning world of work.
   b. Indicator - a composite attitude score based on five selected attitudes statements.

One assumption of the elementary program has been that students lack a positive attitude toward careers and occupations. An attitude composite score made up of responses to five statements was used with "0" as the most negative and "5" as most positive indicators of attitudes. Pre and post test scores are shown in Table 5 for an approximate ten percent sample. While scores do increase, the gain is only .33 overall.

Since mid-year, evaluations also indicate only slight gain in already positive attitudes. Two sixth grade classrooms completed seventh grade level attitude questionnaires to determine if less potential attitudes may be present on higher level career concepts. Composite scores (based on five selected statements) as shown in Table 6 are similar to previous findings even though the gain is less.

Table 5

Sixth Grade Composite Attitude Scores

1971-72

Sample Group	Pre Test		Post Test	
	Sample Size	Mean	Sample Size	Mean
Program participants using 6th grade questionnaire	171	3.75	146	4.08

Table 6

Sixth Grade Attitude Sample on Seventh Grade Questionnaire

1971-72

Sample Group	Pre Test Sample Size	Pre Test Mean	Post Test Sample Size	Post Test Mean
Participants using 7th grade questionnaire	13	3.77	15	3.87

In general it would appear that students do have a positive orientation toward the world of work at least as indicated by the statements used. The findings suggest that an assumption of lack of positive attitude is involved and should be revised. If this variable is important to the elementary program, then more specific student orientations should be measured or the variable dropped from consideration. We believe that the general positive orientation of American society to work (no specific careers or occupations) will be held by the young (certainly at this age) even though uninformed about the makeup or elements in the world of work. Attitude change at elementary level may be less important than more specific attention to increased awareness and in-depth exploration.*

5. Increase awareness of make-up of career areas for at least three occupations. (1971-72 and 1972-73)

   a. Variable - awareness of occupational areas.

* As a result of end of school year evaluation by ESI, this variable was dropped in 1972-73.

b. Indicator - number of correct identifications of characteristics of career areas on a standard test.

The pre and post test results for a sample of sixth grade students for 1971-72 and 1972-73 (to date) are shown in Table 7. Student awareness did increase for students in both school years with a gain of 2.28 and 1.93 points respectively. The program does affect the information level and understanding of the world of work held by sixth grade students as indicated by this test. These results are similar to those for the 1970-71 school year where 800 sampled sixth grade students had improved scores for the following:

(a) A career concept matching test (a reduction in near number of errors from 7.75 to 4.67) to determine ability to match concepts related to working with possible definition;

(b) A career ladder test (a reduction in mean number of errors from 2.83 to 1.58) to determine ability to match jobs with the level of education most often required. Career Study Achievement Test had an increase in mean scores from 7.35 to 8.67 for a random sample of 55 students who had completed the programs during the first half of the 1971-72 school year.

Table 7

Sixth Grade Student Awareness of the Makeup of the World of Work

	1971-72		1972-73 (To Date)	
	Pre Test	Post Test	Pre Test	Post Test
Mean	6.4	8.68	6.81	8.75
Sample Size	171	146	138	138

Consequently we have found agreement in all measures of student gains in occupational career awareness. The reliability of instruments is demonstrated by consistent production of similar results. No tests of statistical significant differences were conducted as resources were not available to carry out the data analysis but all test changes were in the desirable directions as expressed by goals.

6. Increase student awareness of the skills required for related occupations as indicated by statistically significant differences in pre and post tests of skill awareness as a result of working in the skill trainer van. (1971-72 and 1972-73)
   a. Variable - awareness of occupational skills.
   b. Indicator - scores on an occupational skill awareness test.

One phase of the elementary program has been two days of work in the skill trainer (a van equipped with tools, projects and equipment from a variety of occupational areas). Evaluation of this phase is based on increase in student awareness of skill requirements as well as teacher assessment.

Pre and post test mean scores for skill awareness shown in Table 8 for sixth grade students in 1971-72 were 5.36 and 11.3 and for the 1972-73 (to date) were 3.74 and 8.18. Student awareness of skills required for occupations has increased. Teacher evaluations for the skill trainer for 1971-72 are shown in Table 9. All teachers rated the experience as at least "valuable" or higher. Close to fifty percent rated the experience "absolutely essential". The van appears to provide important tactile and life simulating experiences for students where tools and equipment can be used to carry out a project. Students are able to touch, feel, and manipulate objects related to occupations, an important complement to verbal descriptions as written material.

Table 8

Skill Area Tests

	1971-72		1972-73	
	Pre Test	Post Test	Pre Test	Post Test
Mean	5.36	11.3	3.74	8.18
Sample Size	125	104	243	149

Table 9

Teacher Evaluation of Skill Trainer

Teacher Evaluations	1971-72
Absolutely Essential	42.4%
Very Valuable	34.6%
Valuable	23.0%
Not Very Valuable	0.0%
Waste of Time	0.0%

Sixth grade teachers were asked to assess changes in a random sample of their class during the program. In 1971-72 results of their assessment are shown in Table 10. The program is viewed as improving the motivation for 54% of the students and improving the workd habits of 48.5% of the students.

Table 10

Teacher Assessment of Sixth Grade Student Changes During Program

1971-72

Student Behavior	Improved	Stayed the same	Deteriorated
Motivation	54%	36%	10%
Work Habits	48.5%	44%	7.5%

Students Evaluated - 200

B. Goals for Teachers

1. Teachers will permit and encourage individualized career study in classrooms. Specifically the mean number of individual career study projects will be at least 2.0 per child.

   a. Variable - level of implementation of individualized instruction in classroom.

   b. Indicator - average number of individual career study packets per student completed.

Students are to study separate career areas on their own following their visit to the Career Center. According to program philosophy, this study both enables a student to pursue in-depth careers or

interest and to study on their own at their own rate, an important concern of the overall program. For the two previous complete school years and during 1972-73 to date, actual averages have exceeded the minimum as shown in Table 11 while likely not statistically significant differences are reflected. However, the mean number each year has fallen. Independent self-instruction may be decreasing.

Table 11

Individual Career Study Packets Completed

	1970-71	1971-72	1972-73 to date	Goal
Mean number per student	2.43	2.17	2.01	Minimum of 2.0
Sample Size	871 Students	171 Students	12 Classrooms	

This decrease may also correlate with teachers' preferences. Teachers, while rating the individual career studies as valuable, are not as enthusiastic about this part of the sixth grade program as other parts.

For the school year 1971-72, 17.3% consider this "absolutely essential" compared with 37% and 42.4% for the same rating for the orientation study and skill trainer. See Table 12.

Table 12

Teacher Ratings on Individual Career Studies

Teachers' Evaluations	Percentage
Absolutely Essential	17.3%
Very Valuable	34.5%
Valuable	44.7%
Not Very Valuable	3.5%
Waste of Time	0.0%

C. Goals for Business and Industry

1. Local business and industry will be involved in career orientation for elementary students. Specifically, those contacted will maintain at least 17 career exhibit booths or at least four career center representatives will visit each classroom or allow field visits for at least eighty percent of those capable of admitting young children to plants and offices.

   a. Variable - level of involvement of business and industry.

   b. Indicator - percentage of those contacted who had a career booth made classroom units; and/or allowed students to make field trips.

The seventeen career booths were maintained throughout the 1971-72 school year and continued in the 1972-73 year. On the average, the number of visits by career representatives for

1971-72 and 1972-73 (to date) was 3.9 and 4.46 per classroom. Elementary staff members observed that such visits are affected by limited time to initiate and make arrangements for such visits. Consequently, responsiblity for making arrangments was left to teachers who often did not follow through. Over eighty percent of the business and industries able to do so allowed field trips. The only area where student field trips were not encouraged was at local hospitals. The average number of field trips per classroom was 4.76 for the 13 sixth grade classrooms completing the program in 1972-73 at the time of this report.

D. Goals for Parents

1. At least ten percent of parents per classroom will participate in the program in some way.
   a. Variable - level of interest and amount of participation by parents.
   b. Indicator - number of classroom visits per parents, listings of parental contributions and percent of parents visiting classrooms.

Evidence obtained by elementary career program staff from teacher anecdotal reports in 1971-72 indicates that where parents visited the classroom, usually they visited only once. However, for 1972-73 over fifty percent of the parents visited classrooms. As a part of career orientation all parents were interviewed by students concerning their occupation. Parents served as resource personnel to describe their jobs to classes, assisted with supervision of field trips, and visited the career center. About seven percent visited the skill trainer, according to elementary staff members.

E. Elementary Summary

Chart III summarizes the variables for each target group -- students, teachers, parents and industry -- the corresponding desired effect for GOOP, and the actual effect to date, based on most current data.

The fifth grade program, to date, is realizing its goals and appears to be operating smoothly. This program, in ESI's judgement has benefited greatly by the experiences with sixth grade students in the prior two school years.

For the sixth grade, knowledge and awareness variables for students have increased as desired, with the exception of attitudes about world of work (which has subsequently been dropped) and knowledge of career opportunities based on a visit to the career booths. Individualized instruction is close to the minimum indicator and there is evidence of a decrease. Attention should be paid to increasing extent of individualized instruction if this variable is important to the program. Results for business and industry and parents are meeting expectations.

Chart III

Elementary Evaluation Summary

Variable	Desired Effect By GOOP	Actual Effect (Based on most current data)
I. Fifth grade Students Awareness of world of work	Increase	Increased
Fifth Grade Teachers Utilization of materials	100% of teachers	100%
Fifth Grade Parents Parental interviews	All students complete	All
II. Sixth Grade Students		
a. Awareness of world of work	Increase	Substantial Increase
b. Awareness of fundamental concepts	Increase	Increase
c. Knowledge of career opportunities	Increase	Very Small (To Date) Increase
d. Positive attitudes toward world of work	Increase	Shift Increase Variable Dropped 1972-73
e. Awareness of make-up of these career areas	Increase	Marked Increase
f. Awareness of career skills	Increase	Substantial Increase
III. Sixth Grade Teachers Level of individualized instruction permitted	Minimum of 2 individual projects for students	At least minimum for three years

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Variable	Desired Effect	Actual Effect
IV. Sixth Grade Business and Industry		
Level of involvement	Maintain career booths, visit classrooms, and permit field trips	Good involvement and support
V. Sixth Grade Parents		
Level of interest and participation	At least 10% participation	More than minimum participation

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Chapter IV

Evaluation of Junior High Program

The junior high school segment of the Guided Occupational Orientation Project is directed toward the achievement of the goal - "Increase the orientation of junior high school students and begin exploration of work opportunities and necessary preparation."

This general goal is individualized to seventh, eighth, and ninth grade activities.

The junior high school program segment was formally implemented in all junior high schools in the district in September, 1971. The program segment was dependent on curriculum units developed by writing teams the previous summer.

No curriculum materials were pilot-tested in the 1971-72 school year. Also, composition of first-year writing teams did not provide adequate checks and balances. Curriculum units were introduced on a mass basis into all junior high schools. Some material was not appropriate to grade levels, some suggested activities were not realistic, and some listed resources were not readily available. This served to intensify teachers' resistance to a new program.

However, these problems were flagged in January, 1972, during

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evaluation procedures. New curriculum units were designed by expanded and balanced writing teams during the summer of 1972. All units were pilot-tested and are being introduced into other junior high schools one at a time.

The program has benefited from one false start by the subsequent revision of techniques.

The junior high school program is directed by three Occupational Resource Specialists (ORS) whose tasks include introducing the program to administrators and faculty members of each school. They also assist individual teachers and serve as resource coordinators. The enthusiasm for the program evidenced by these three young educators has been very significant in overcoming early problems.

For the 1972-73 school year, 6,048 junior high school students distributed among nine schools are involved in the program.

Following are goals covering students, teachers, parents and business and industry spanning seventh, eighth, and ninth grades. For the 1971-72 school year, goals only related to students. All grade levels participated in the same career program, thus all had the same goals.

First, goals and results from 1971-72 are discussed, followed by 1972-73.

A. Goals for Students (1971-72 only)

1. Increase career choice awareness for seventh, eighth, and ninth grade students.

   a. Variable - awareness of career choices.

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b. Indicator - listing of alternative career choices.

One goal of the program is to increase the career choices of which students are aware. Students have impressions about possible careers or occupations, many of which are valid, while others (as indicated by pre program listings) do not exist or may describe nonexistent occupations. The mean number of career choices by grades are shown in Table 13. Only ninth grade students had a significant increase in alternatives identified, but a review of student questionnaires suggest that student choices become more serious and more informed while the number of choices may have stayed the same or slightly increased.

Table 13

Career Alternatives Identified by Junior High School Students

1971-72

	7th Grade	8th Grade	9th Grade
Fall Means	8.04	9.67	8.95
Spring Means	8.62	9.17	16.74

2. Increase resource awareness as to the types of resources with which students are familiar and have utilized.

   a. Variable - awareness of resources for vocational guidance and career planning.

   b. Indicator - listing of resources.

Career information sources used by a random sample of all junior high school students are shown in Chart 4. Generally, the

information sources which most consistently gain in cited use by students for career information are first, guidance counselors and second, interviews with employers.

Teachers, relatives, friends, libraries, ads and want ads, and field trips gain only in two of the three grade levels. The formal organizations representing employment or business such as labor unions, chamber of commerce, or civil service generally drop in cited use. Apparently, a result of the program was reduction in the total number of career information sources for students with increases in cited use of those sources students found most useful during the program. Guidance counselors were primary information contact and gains in cited usage reflect this.

3. Students will increase career awareness as a result of the program.
   a. Variable - level of career awareness
   b. Indicator - pre and post scores on a 12 item test of information about careers and career development.

Frequency of correct answers for the three grades are shown in Chart 5. Spring mean scores are substantially higher than fall scores for all grades. Career awareness, as indicated by this test markedly increased during the 1971-72 school year.

4. Students will increase positive attitudes toward career planning.
   a. Variable - level of positive attitudes toward career planning.

Chart 4

Career Information Sources Used by Junior High School Students

Percentage of Sample Indicating Use

Information Source	Fall 7th Grade	Spring 7th Grade	Fall 8th Grade	Spring 8th Grade	Fall 9th Grade	Spring 9th Grade
1. Guidance Counselors	18.8	37.5	44.1	66.1	57.1	62.7
2. Teachers	48.6	51.5	41.2	40.5	36.5	43.8
3. Relatives	55.6	54.4	52.2	59.5	65.9	69.3
4. Friends	64.6	55.9	54.4	67.8	73.0	78.8
5. Field Trips	33.3	41.2	25.7	33.9	30.2	28.8
6. Ads and Want Ads	30.6	42.6	42.6	45.5	50.0	50.0
7. Interviews with Employers	21.5	29.4	19.9	27.3	27.8	30.5
8. NY Employment Agency	12.5	12.5	23.5	17.4	22.2	16.9
9. Private Agencies	9.7	11.8	20.6	13.2	14.3	11.0
10. Chamber of Commerce	9.7	8.8	14.0	5.8	11.9	5.9
11. Civil Service	6.9	9.6	12.5	5.8	11.1	3.4
12. Labor Unions	9.0	10.3	12.5	4.1	13.5	6.8
13. Professional Societies	11.1	11.0	12.5	7.4	15.9	7.6
14. Colleges and Schools	23.6	19.1	21.3	20.7	27.0	16.9
15. Government Agencies	9.7	8.1	16.2	12.4	15.1	11.0
16. Libraries, Schools, Books, etc.	55.6	68.4	43.4	62.0	62.7	55.9
17. Military Recruiting	13.2	5.9	14.7	10.7	19.0	4.2
Total Students	144		136		126	

Chart 5

Distribution of Career Awareness Scores for Junior High Students

Total Correct Items	7th Grade Percentage		8th Grade Percentage		9th Grade Percentage	
	Fall	Spring	Fall	Spring	Fall	Spring
0	0	.7	0	.8	0	.0
1	.7	.7	0	.8	0	.0
2	2.8	.7	.7	.8	.8	.0
3	6.9	3.7	3.7	2.5	.8	3.4
4	5.6	7.4	5.1	5.8	3.2	1.7
5	9.7	15.4	12.5	9.9	7.1	5.9
6	20.8	12.5	17.6	9.9	23.8	12.7
7	22.2	19.9	22.1	20.7	21.4	16.9
8	18.1	19.9	17.6	16.5	21.4	22.0
9	10.4	16.2	14.7	24.0	13.5	22.0
10	2.1	1.5	5.9	7.4	5.6	14.4
11	.7	1.5	0	.8	1.6	.8
12	0	.0	0	.0	0	.0
Mean	3.3	7.0	3.4	7.4	3.53	7.8

b. Indicator - composite score on five representative questions reflecting facets of career planning.

Mean scores by grade level are shown in Table 14. The differences between fall and spring mean scores are insignificant, suggesting that either the questions composing the individual scores are not valid measures of attitudes or attitudes were not affected by the program. Since a score of 3.0 is the middle of the range, group mean scores around this point reflect neither strongly negative or strongly positive attitudes.

Table 14

Attitude Scores for Junior High School Students

1971-72

	7th Grade	8th Grade	9th Grade
Fall Mean Scores	3.48	3.50	3.60
Spring Mean Scores	3.38	3.59	3.69

Teacher assessment of the junior high school program is shown in Chart 6. Teachers were evenly divided in their beliefs about GOOP's fulfillment of student interest in career studies, but definately disapproved of the appropriateness of booklets for seventh grade students. They cited the need for revision of seventh grade materials and believed the time allotted insufficient for the material to be covered.

A majority of teachers said they felt career studies to be necessary except science teachers where only twenty eight percent

definitely were positive about career studies. However, only sixteen percent of the teachers said "most" of the students showed interest in career studies.

ESI's assessment is that teacher recommendations for changes in the seventh grade program have been carried out in materials for 1972-73.

B. Goals for Students (1972-73)

Mid year data for junior high school students was not available for student goals but will be reviewed in the end of school year evaluation. Goals for students are as follows:

1. All junior high students increase their positive attitudes toward career planning by a statistically significant difference between pre and post tests.
2. Increase resource awareness as indicated by a statistically significant difference reflecting resources with which students are familiar and/or have utilized.
3. Students complete seventh grade with awareness of and familiarity with career cluster concept as demonstrated by statistically significant differences on pre-post tests results.
4. Students increase awareness of job emphasis as reflected by scores on a twenty item data, people and things concept.
5. Eighth grade students, by end of year, select one career cluster for in-depth study during ninth grade.
6. At least eighty five percent of students will complete

a written future education plan by the end of the school year in ninth grade.

C. Goals for Teachers (1972-73)

1. Participating teachers, on the average, will make at least seven requests and/or library check-outs of resource materials.

   a. Variable - utilization of resource materials made available by GOOP.

   b. Indicator - compilation of requests and check-outs by ORS team members.

Number of reports by type by teachers is shown in Table 15 for 1972-73 at the time of this report.

Table 15

Teacher Requests for Help and Materials

1972-73 (to date)

Teacher Requests	Number
Field Trips	21
Speakers	10
Written Materials	4
Meetings (Spec. Problems)	8
Other	2
AV Material	25
Total	70

Chart 6

Teacher Evaluation of Junior High School Program

1971-72

I. Assessment of Materials

Do you feel:	% Yes	% No	%No Answer Not Sure
A. GOOP aided in fulfilling students interest in career studies?	36	39	25
B. The booklets used this year were appropriate for 7th grade?	18	73	9
C. The 7th grade program materials should be revised to provide more structure?	61	9	30
D. The content too extensive for 120 class hours?	45	25	30

II. Assessment of Career Study

	% Yes	% No	%No Answer Not Sure
1. All teachers	60	17	23
2. English	68	16	16
3. Social Studies	54	8	38
4. Math	80	20	0
5. Science	28	44	28

A. Do you as a teacher, feel career studies are necessary? (Above)

B. How many students showed interest in career studies?

% Most	%Some	%Very Few	%No Answer
16	56	25	3

Total Teachers Responding - 47

Other teacher goals for 1972-73 for which no data was available at the time of this report are as follows:

___ Every junior high classroom teacher of Math, Science, Social Studies, and English will participate in the program.

___ Integration of GOOP materials into standard curriculum offerings in all classrooms of participating junior high schools.

For this evaluation report, over eighty teachers from nine junior high schools were asked to assess the accessibility and utility of career education resource kits. This information will be valuable in altering material distribution and teacher motivation activities during the remainder of the school year and modifying materials for 1973-74. Results are shown in Chart 7.

Materials are generally perceived as available by teachers, but utility and helpfulness in teaching career education have lower ratings. Only twenty two percent of the teachers report that they use material very regularly or regularly. But almost seventy percent of those not now using materials plan to do so in the future.

D. Goals for Parents (1972-73)

1. Disseminate information on a continuing basis to parents.

   a. Variable - parent exposure to information about career education.

   b. Indicator - number of letters, pamphlets, PTA appearances, and media articles related to GOOP.

Total information output in 1972-73 under this goal is shown below:

11 PTA presentations

6 PTA handouts

6 Television news segments

10 Newspaper articles

1 Newspaper picture story (4 pages)

E. Goals for Business and Industry (1972-73)

1. At least seventy five percent of business and industry contacted by students, classes, and ORS staff react favorably to inquiry.

   a. Variable - extent of community openness to student inquiries.

   b. Indicator - number of acceptances of student or class inquiries by business and industry.

Number of requests and contacts in 1972-73 at time of this report are as follows:

30 Requests were favorable

3 Requests were unfavorable

26 New contacts made and added to resource file

Two schools requested and were granted one-half day in-service workshops funded by SCSD. Two additional schools plan to request in-service time for workshops.

F. Junior High Summary

Chart 8 summarizes the most recently available results for the junior high school program segment for students, teachers, parents

and business and industry. All student data is based on 1971-72 end-of-year data. Mid-year 1972-73 data was not available for this report. In general, two of the student goals were realized for the general junior high program (all grades receiving the same material 1971-72) and two were not. Career choice awareness and positive attitudes about career planning did not increase. Indications of teachers use of materials, parental exposure to GOOP information, and business and industry cooperation are positive.

It is significant to note that, although problems concerning curriculum units and teacher acceptance of career education have been encountered, GOOP administrators have made program and material adjustments and have benefitted from these encounters. Based upon incomplete data and observations, all three grade levels of the junior high program segment appear to be making reasonable progress toward stated goals.

Chart 7

Junior High School Teacher Assessment and Use of GOOP Materials

Percentages

	Definitely Yes 1	2	3	4	Definitely No 5	Total Responses
1. Do you have easy access to resource material kits?	67	21	6	2	3	84
2. If you are not now using the kits, do you plan to use them in the near future?	50	18	19	2	1	62
3. Do the kits provide an aid to the teaching of career education within your regular subject framework?	22	28	25	12	10	66
4. Do you find the kits helpful in teaching your regular subject material?	14	19	19	29	18	72
5. Do you feel you are well enough acquainted with kits to make sufficient use of them?	17	22	29	20	11	81
	Very Regularly				Not At All	
6. To what degree do you find yourself using the kits?	7	15	24	21	30	78

Chart 8

Summary of Junior High Program

Variable	Desired Effect By GOOP	Actual Effect (Based on most current data)
I. Students (7th, 8th, and 9th)		
A. Career choice awareness	Increase	7th Slight Increase 8th Slight Increase 9th Substantial Increase
B. Types of Vocational Information Sources	Seek more qualified sources	Less Dependency upon friends and relatives and more use of counselors and employees.
C. Level of career awareness	Increase	Marked Increase
D. Continue attitudes about career planning	Increase	7th Slight Decrease 8th Slight Increase 9th Slight Increase
II. Teachers		
Teacher use of career materials	Increase	Requests for GOOP help and assistance have increased
III. Parents		
Parental exposure to junior high program	Increase	Output of messages about GOOP has been significant
IV. Business and Industry		
Openness to student inquiry	High	Response to date, mainly favorable

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Chapter V

Evaluation of Senior High School Program

The Senior High School program segment of the Guided Occupational Orientation Training Project is directed toward the goal of job training and placement -- "Enable individualized career preparation and implementation of career plan".

To accomplish this goal, two complimentary program thrusts are employed. First, drop-outs, potential drop-outs and under achievers are considered a target population for individualized counselling, special instruction, and job placement where employment is desired.

Second, all senior high school students are a target population for increasing awareness for career opportunities. The Occupational Resource Specialists (ORS) described in Chapter IV of this report produce and publish a bi-monthly newsletter which is available to all senior high school students. The ORS team also assists senior high school guidance counselors to interpret results of the Ohio Vocational Interest Survey.

These activities are directed toward 5,470 senior high school students.

The target population of drop-outs, potential drop-outs, and under-achievers is being served through three program efforts. They are as follows:

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A. Occupational Learning Center (OLC) - Senior high school drop-outs and severe discipline problem students are served in specialized centers away from actual schools. This program provides an individualized approach that is occupationally-oriented rather than academic. This approach is combined with actual work experience and/or vocational training. In the 1971-72 school year, 82 students were served with only nine leaving the program. At the date of this report, 104 students are enrolled.

B. Occupational Resource Teachers (ORT) -- This program phase also serves drop-outs, potential drop-outs, and under-achievers. However, students are kept in the mainstream of the school but given work experience opportunities identified by ORT staff members. In the 1971-72 school year, 554 students were enrolled in this program phase. However, 177 did not complete activities.

C. Program for the Advancement of Career Education (PACE) -- The Syracuse City School District and Onondaga Community College are cooperating to offer PACE. Since its inception, the PACE program has emphasized distinctive features in furthering the goals of career awareness and skill level attainment among high school students. Means of achieving these goals are through an interdisciplinary approach that includes classroom projects and related field trips. Through PACE, under-achieving senior high school students are motivated to remain in school through graduation and then participate in an associate degree program at Onondaga

Community College. Approximately 375 students currently are participating in PACE.

Corresponding to design of the Senior High program, the evaluation will deal separately with the three projects.

PACE

PACE is a multi-facted project including four job-families: paramedical, engineering technology, retail business management, and executive secretarial.

The initial group of PACE students are now seniors and will be graduating in June, 1973.

As an initial step to evaluate PACE, ESI worked with PACE staff to develop tentative goals and indicators. A year-end evaluation will be complete in June, 1973.

A. Goals and Indicators for PACE

1. Goal - fifty percent of PACE students upon graduation will enter a one or two year associate degree program.
   a. Indicators- entrance percentage at June, 1973 number accepted as of December, 1972.
   b. PACE counselors will obtain data.
2. Goal - a high percentage of PACE students will improve achievement levels during school year. PACE students will demonstrate increases in motivation by remaining in school, and pursuing education.
   a. Indicators
      (1) - grade point averages June, 1972 to June, 1973. Sample of 1971-72 school year,

(2) Drop-out rate or school attendance, 1971-72 school year vs. 1972-73 school year.

(3) Responses to questionnaire statement, e.g., "How do you feel about school?", and "How much relation did your school work seem to have on your future?"

3. Goal - Increase PACE student awareness, particularly concerning job clusters,

a. Indicators

(1) Student assessment of PACE program at end of school year will be favorable (on the average)

(2) PACE students' self-confidence will increase comparing entrance measures with end of school year measures. (Instruments to be developed)

(3) Student responses to questionnaire statements, e.g. "On the whole how do the students who know about it seem to feel about the PACE program?","How do your parents feel about the PACE program?," "How much confidence do you have in yourself?" and "How good a student do you try to be?"

Occupational Resource Teachers

Only end of school data from 1971-72 was available for the Occupational Resource Teachers (ORT) at the time of this report. Formal goals for this program have not been set at this time, but behavorial areas to be affected by ORT staff activities and results

are described below. All data described below was provided by ORT staff members. ESI was not involved in specifying data to be collected or able to assess data reliability.

School attendance for the target group served by ORT staff members consistently below average, believed by staff members to be less than thirty percent. Administrators and teachers report that students in this program improved in attendance during the year. No data on attendances was compiled.

When asked to assess the program, eighty six percent of the students said it was "meaningful", four percent said it was "not meaningful", and ten percent did not respond.

Employers rated their student employees from the program as thirty seven percent excellent, forty six percent satisfactory, and seventeen percent needing improvement.

Of the 554 students enrolled in the program, 377 students obtained jobs and continued with them throughout the program.

Occupational Learning Centers

A. Goals for Students

1. Each student will increase his basic skill competency by one grade level in reading and math.

   a. Variable - reading and math grade levels.

   b. Indicator - metropolitan standardized test scores.

Entry and end of school year average grade levels for students are shown in Table 16, for vocabulary, reading comprehension, and computation (math). Both vocabulary and reading gained over one

grade level (1.13 and 1.43 level gains respectively) and math gained .91 grade level. The average enrollment length was 7.3 months. Staff members believed grade-level gain would be higher with larger average enrollment. The 1972-73 pre-test scores for reading and math are also shown.

Table 16

OLC Metropolitan Standardized Test (Grade-Levels)

1971-72

	Pre-Test at Entry	Post Test	Grade Level Gain	1972-73 Pre-test
Vocabulary	6.85	7.98	1.13	Not avail.
Reading Comprehension	6.52	7.95	1.43	6.46
Computation-math	7.03	7.94	.91	6.43

2. Students will have twenty five percent improvement in attendance.
   a. Variable - level of attendance.
   b. Attendance records in school and work before entering and during program.

Average attendance at the centers was 82.7 percent as compared to 65.4 percent before entering the OLC program, a 17.3 percent point gain (exceeding desired gain). Comparing attendance with previous attendance, 38 students improved, 34 remained the same, and two worsened.

For 1972-73, pre-center average attendance was 44.7 percent.

3. Each student will find significantly measurable success in employment or employment-related training.

   a. Variable - level of employment or related training success.

   b. Indicator - employer and counselor ratings.

Sixty-two students had jobs for the 1971-72 school year with 56 students maintaining employment continuously, six having state employment, and eight not able to or ready to hold a job during the year. For 1972-73, 50 students are employed, 20 are in training, and 34 are in vocational readiness.

Other indicators of success for 1971-72 are shown in Chart 9.

Other OLC goals for 1972-73 which relate to the end of the school year are as follows:

Students will gain in level of general information as indicated by individualized progress records.

___ Student level of career awareness will increase as indicated by activity achievement records.

___ Students will be able to develop and implement career plans as indicated by percentage completing career plans and vocational check list.

Chart 9

Employment and Related Training Success Indicators

1.	Supervisor's report on job performance - Excellent - 24 students Satisfactory - 18 students Needs Improvement - 17 students			
2.	Work attendance - percent in relation to possible: 90-100% - 39 students 80-89 % - 12 students 70-79 % - 5 students 60-69 % - 4 students 50-99 % - 3 students			
3.	Vocational Readiness	* U	* S	* E
	A. Positive attitude toward work	13	40	10
	B. Ability to accept responsibility	15	35	12
	C. Willingness to do an acceptable job	10	41	21
	D. Sufficient occupational information	20	37	6
	E. Choice of career area	27	25	10
4.	Preparation for a career			
	A. Training or in-depth study in career choice	27	30	5
	B. Acceptable job seeking skills	16	26	8
	C. Employer's evaluation	9	24	15
5.	Work Experience			
	A. Sheltered job (10-15 hrs. a week)	9	21	11
	B. Community job (20-40 hrs. a wk. paid by employer)	9	20	12
	C. Obtaining full-time job independently	4	15	4
	D. Plan for post graduate activity	1	6	2

* U-Unsatisfactory, S-Satisfactory,- E-Excellent

Chart 10

Summary of Senior High Programs

Variable	Desired Effect By GOOP	Actual Result
I. Occupational Resource Teachers		
A. Attendance	Improve	No data, but teacher assessment was "improvement"
B. Student assessment	Favorable	86% said program was "meaningful"
C. Employer assessment	Favorable	83% said student employees were "satisfactory" or "excellent"
D. Employment	Most students obtain jobs	68% obtained and maintained jobs
II. Occupational Learning Centers		
A. Academic skills	Improve	At least one grade level gain
B. Attendance	Improve	17.3% point gain
C. Employment or employment related training	Successful	All indications of success were positive

Senior High School Summary

Chart 10 summarizes results for ORT and OLC programs. All indications of student improvement in school and employment-related behavior were positive. No evaluation data for PACE was available.

In March, 1973, ESI evaluation team members are scheduled to meet with key staff members of PACE, OLC, and ORT. This meeting will be designed to assist in development of specific evaluation techniques. Also, it will be designed to help staff members understand the scope and complexity of all senior high school program phases operating under GOOP. This lack of understanding has resulted in some fragmentation of program efforts which must be corrected. Staff members must become aware of overall program goals as well as identified goals for their own program segment.

Strong efforts must be made by GOOP administrators to establish a "team spirit" among the three separate program components. Service to students in all three program segments appears to be achieving desired outcomes, but confusion and lack of communications are causing some undesirable conditions in program administrations. Currently, among staff members associated with the senior high school program components, there exists a lack of understanding of overall program thrusts and goals; some confusion concerning program segment relatedness to GOOP goals; and an inability to define roles of staff personnel.

ESI evaluation team members have met separately with staff members of each program segment on several occasions. However, these individualized meetings have not produced the broad desired results.

Possibly, the group meeting in March will alleviate problem areas. However, GOOP administrators must devote intensive effort to re-enforcing this effort and must make every possible effort to clarify roles to be assumed by all staff members.

Chapter VI

GOOP Administration

The administration of the Guided Occupational Orientation Project is sound and is making every effort to insure that project goals are achieved. Administrators have exhibited remarkable flexibility in restructuring various program activities in order to achieve more progress.

As Goop enters the third year, one grade level program segment is exhibiting weakness as related to project administration. The three senior high school program segments --PACE, OLC, and ORT -- represent an administrative problem centered around authority definition. Although all three program segments relate to GOOP, there exist no clear-cut lines of authority to GOOP administrators. This situation has resulted in confusion and complications which must be overcome in the immediate future. ESI evaluation team members recommend that GOOP administrators and staff members of PACE, OLC, and ORT work together to define areas of responsibility and authority. GOOP organizational linkage must be developed for the entire senior high school program segment.

The elementary program segment appears well-organized. The fifth grade career awareness program was initiated successfully. The sixth grade program segment modifications were introduced effectively and efficiently. ESI team members were impressed with the successful efforts of the elementary program staff members in simplifying var-

ious testing instruments and in reducing the amount of paper handling required for teachers and staff members.

It is most encouraging to observe the revisions in the junior high school program segments and materials. These revisions were made by GOOP administrators in response to ESI evaluation findings. Curriculum materials were revamped and revised; specific grade level goals were developed by GOOP staff members working with ESI evaluators; new curriculum materials were pilot-tested; and new materials were introduced methodically into one school at a time rather than on a mass basis as in the past.

In the senior high school program segment, the ORT program segment still does not have specific goals established. Goals for the PACE program segment are just beginning to emerge but a skeleton set of goals was devised during a brief meeting between PACE staff members and ESI evaluators in December, 1972. ESI staff members recommend that more specific long-term and short-term goals for these two program segments be developed. A meeting between ESI and senior high school program officers is scheduled for March, 1973, to accomplish this.

Staff members of the Occupational Learning Centers have established specific goals, are collecting data in a systematic and effective manner, and are responding to evaluation requirements.

ESI staff members have met with GOOP administrators concerning better utilization of the evaluation team's on-site man days in Syracuse. At the request of ESI staff, a conference with top GOOP administrators will be held at the beginning of each on-site visit as well as at the conclusion. These conferences will help flag problem areas in an orderly manner.

ESI also recommends that the project coordinator be given opportunities to visit other exemplary projects in the interest of professional growth and development. This recommendation is based on the provision that travel funds are available within the project budget.

Overall, the administration of GOOP is above average for comparable projects and displays all evidence of dedication to project goals and objectives.

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Chapter VII

Observations and Recommendations

The Guided Occupational Orientation Project will enter the third and final year of federal funding on February 1, 1973. This situation will create the necessity for administrative decision-making throughout the next 12 months and will create the need for effective planning.

ESI evaluation team members urge that GOOP administrators and key staff members begin intensive planning for program continuation after the conclusion of federal funding. Planning should include attention to continuation and plans for eventual replacement of materials and equipment; disposition of personnel; and the probability of continuing various program activities.

In this context, ESI recommends that an impact study of the elimination of federal funding of GOOP be completed by project administrators and staff no later than August 1, 1973.

Chapters V and VI of this report contain specific recommendations for improving the three program segments concerned with senior high school activities. In an overall sense, ESI recommends that GOOP administrators continue to seek improved understanding and cooperation among the program officers of the senior high school component. As previously stated, it is to be hoped that work sessions scheduled in March, 1973, between GOOP administrators, senior high school program officers, and ESI evaluators will alleviate the sit-

uation.

As the third and final year of GOOP progresses, ESI proposes to perform actual program auditing among elementary, junior high school, and senior high school teachers and students selected randomly. Information gathered during this program audit will be included in the final evaluation report.

Planning procedures have improved greatly since the inception of GOOP. It is significant to more increasing community awareness and support, the commitment of Niagra-Mohawk, as evidenced in correspondence to project administrators; the coverage afforded the project by Syracuse area mass media; the declaration of the "Year of Career Awareness" by the Syracuse Board of Education; and the attraction of visitors from the community, the state, and the nation are indications of project acceptance.

The dissemination of information concerning GOOP has been excellent. Project staff members have been willing to share information and materials. However, the number of requests for information seem to create an unnecessary work burden for staff members and must have an adverse effect on administrative costs. ESI recommends that some internal evaluation of dissemination activities be conducted promptly.

In assessing the overall impact of GOOP, it is obvious that career awareness is increasing generally for students in grades five through nine. However, attitudes are not being affected and it is recommended that attitudinal concepts be discarded in the future.

In grade ten through twelve, the Occupational Learning Centers

are having the desired impact on the target populations. The work activities of the centers are exemplary and should be replicated in other school districts. It is to be hoped that OLC activities can be broadened in Syracuse schools in the future.

ESI recommends that full attention be focused on existing program activities in the coming year. This should be simple to accomplish since staff members will be freed from the necessity of designing curriculum materials, developing resource lists, and introducing faculty members to program activities. The third year of GOOP should be the year when all program components operate smoothly and efficiently. Staff members should have more time available to deal with individual problems and concerns.

Also, ESI urges that members of the Board of Education of the Syracuse City School District be informed of the impact of GOOP and be urged to make every effort to continue program activities following the termination of federal funding.

As in the past, ESI must comment on the dedication of all GOOP staff members -- the dedication which has overcome many obstacles and has carried the entire project to the current state of general excellence. Particularly, we must remark on the leadership provided by Mr. Sidney Johnson, Mr. Hans Lang, and Mr. Richard J. Bannigan. It is impossible to detail the many instances when the leadership provided by these men has insured the success of the project.

6.(f) CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS FOR THE FUTURE

ACTIVITY	CONCLUSION	IMPLICATION	RECOMMENDATION
ELEMENTARY			
(A) Development of a project component at the 5th grade level.	(A) In order to make maximum utilization of the career awareness concept at the elementary level, the project must make a greater impact at all grade levels.	(A) If one accepts the concept that awareness should begin in the early stages of child development, the schools must provide continuous career education activities. These activities must begin as early in the child's educational program as time and money will allow.	(A) Evidence indicates that large numbers of students start dropping out of school at the junior high level. Therefore, to help alleviate this problem it is recommended that career education programs be put into the 5th and 6th grade first and then build the program downward.
(B) Development of a Life-Centered Curriculum for K through 6.	(B) In order to provide for career education in a non-graded, continuous progress school system, the concepts of career awareness must become an integral part of the total elementary curriculum. The Syracuse City School system is making a major effort to move in the direction of a continuous progress program through individualized instruction.	(B) If career awareness is not an integral part of a curriculum design, it is quite possible that career awareness will become an appendage to the curriculum, or taught in a haphazard fashion, or not taught at all.	(B) School districts involved in career education programs must not view career education as an "add on" but as the catalyst for a total curriculum revision.

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(C) Increasing demands on the part of elementary students, parents, and teachers for more "hands-on" activities, i.e., Skill Trainer Van activities.	(C) "Hands-on" activities are necessary to a successful career education program. These activities provide the children with - - success experience - application of basic skills for individual satisfaction - interest-centered group interaction for problem solving.	(C) A career education program lacking "hands-on" experiences does not fully provide for individual success experiences, e.g., it is not enough for a child to know that a secretary must use a typewriter, the child must be able to have "hands-on" activities with a typewriter.	(C) School districts involved in career education programs must provide for "hands-on" experiences for the students.
(D) The techniques for providing "hands-on" activities which take place in the Skill Trainer Van serves as a laboratory for methods of individualizing instruction.	(D) By providing a teacher with the opportunity to participate with her class in a program of individualized instruction, the teacher can quickly identify with individualized techniques and procedures.	(D) By providing teacher participation in "hands-on" individualized activities, the teachers are active participants in the process rather than passive observers.	(D) School districts implementing new programs should look for secondary effect in the activities provided in the program, e.g., the primary purpose of the "hands-on" experiences is to assist children with their skill, but a secondary purpose is serving as a "methods" laboratory.

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ACTIVITY	CONCLUSION	IMPLICATION	RECOMMENDATION
JUNIOR HIGH			
(A) Establishment of Career Education Resource Centers within each junior high school.	(A) Much of the success of Career Education activities depends upon the availability of Career Education resource materials.	(A) If resource materials for career education are not readily available within each school, teacher utilization of career education activities is significantly diminished.	(A) A Career Education Program must provide equal career education resources to each participating school.

JUNIOR HIGH - CONTINUED

(B) Development of a Project Flow Chart (design) (See Appendix	(B) The development of a project flow chart consisting of goals, objectives, and evaluation techniques for 1. Total project 2. Levels of career development a. Awareness b. Exploration c. Preparation 3. Grade level has a. Provided for easier administration of the project b. Provided for sequential curriculum development c. Provided a basis for articulation between various project components 4. Acted as a cohesive instrument for the integration of career education into the curriculum	(B) Teachers and administrators were quicker to identify their roles and responsibilities as participants in the development of career education when they were able to examine the project flow chart.	(B) Personnel involved in the development and implementation of career education activities should be provided with a project flow chart.

JUNIOR HIGH - CONTINUED

(C) Curriculum Design for flexibility, replication, subject focus of objectives, broad range of activities and supportive resources.

(C) Evidence indicated that curriculum guides which were bound or stapled in booklet form are not well received because -

- they lack flexibility
- are not easily edited
- allow little or no room for teacher input
- are easily lost or misplaced
- contents are difficult to reproduce
- do not provide teachers the opportunity to renew what is being done in other subjects.

Therefore, the teacher writing team developed an easily accessible curriculum guide and resource kit.

(C) Career Education curriculum materials that do not allow for flexibility, replication, subject focus of objectives, broad range of activities, and supportive resources are impractical.

(C) Career education materials should be developed in kit form. The kits should be organized in the following manner:

1. Index by objectives that meet grade level goals.
2. Organize similar materials using pocket folders, e.g., activity sheets are in one pocket and resource sheets are in other pocket.
3. Color Code by subject area, e.g., yellow for science, green for social studies, blue for English, pink for math.
4. State objective on every activity sheet and on every resource sheet.
5. Explain purpose of objective on every activity sheet.
6. Describe the focus of the subject in relation to the objective.
7. Indicate whether activities are large group, small group, or individual.
8. Every activity and resource sheet must be of suitable quality to be a master for replication and duplication.

JUNIOR HIGH -- CONTINUED

(D) The organization of identified and verified out of school resources.

(D) We had a great deal of difficulty in disseminating to all teachers new information regarding out of school resources, e.g., speakers, films, field trips. Simplest method to answer this problem was determined to be an indexed card file located in every junior high school library.
This card file was indexed and cross-indexed by
1. Career cluster identification
2. By subject relationship
3. Coding as to whether the card represented a business, industry, club, professional organization, or professional society.
(See Appendix

(D) If you plan to provide teachers with a list of resources that is inexpensive to maintain, is readily available, can be added to - or deleted from - and will be used - then develop a card file located in each school.

(D) Choose a card index system to identify resources rather than published, printed and stapled booklets.

JUNIOR HIGH - CONTINUED

(E) Career exploration at the junior high school level.	(E) As we increase career education activities, the need to have more flexible scheduling and the need for more transportation becomes apparent.	(E) Schools involved in career education must provide for more flexibility in student scheduling.	(E) School district should investigate all types of scheduling techniques so as to provide the flexibility necessary for career exploration activities.

ACTIVITY	CONCLUSION	IMPLICATION	RECOMMENDATION
SENIOR HIGH			
(A) Application of the Occupational Learning Center concept to the regular high school facility.	(A) The Occupational Learning Centers operate on an integrated school-work concept, have a shorter school day, and provide a career education program. The Occupational Learning Centers are located in facilities not connected to the high schools in the community. They have demonstrated significantly measurable success in retaining students who would normally fail to finish school.	(A) A major cause of students dropping out of school is the lack of identification on the part of the students with the traditional school concepts. Flexible concepts such as variation in school hours, application of subject matter to everyday work situations, continuous success experiences to motivate students, and part time employment, are necessary in retaining many students.	(A) School districts which are dedicated to providing a number of programs to meet the needs of students should institute and utilize Occupational Learning Centers. The district should further utilize the concepts of career education found in the operation of the Center to provide more flexible high school programs.

SENIOR HIGH - CONTINUED

(B) Coordinated School-Community activities.	(B) Experience has proven that a school district attempting to make "one on one" contact with business and industry cannot provide the quantative and qualitative experiences necessary to meet the needs of the students. The development of activities for senior high school students (both in-and-out of school) to provide direct contact with the world of work requires a centralized cooperative effort from within the community.	(B) The development of cooperative programs within the community for student exploratory activities requires acceptance and commitment from "top level" management.	(B) School District should identify a major business or industry such as a utility company and seek their commitment to act as the community coordinator. The coordination activities would include: 1. Establishment of a steering committee involving major businesses and industries. 2. Establish subcommittees involving smaller businesses and industries. 3. Seek cooperation from local Chamber of Commerce, Manufacturer's Association, Unions, etc. 4. Develop with the school district priorities for interaction in regard to curriculum and needs.

SENIOR HIGH - CONTINUED

(C) Integration of Career Education activities with senior high school academic subjects.	(C) Our experiences with the senior high school career education programs such as P.A.C.E. indicates that students want to participate in these programs once they have been exposed to such programs. Therefore, we conclude that a strong, solid, interesting career education program at the elementary and junior high school is necessary to create student-demand for such programs at the senior high level.	(C) A great deal of work needs to be done in order to integrate career education activities with the senior high academic subject areas. A demand on the part of the students and their parents for such activities will "speed" up the integration of these activities with the senior high academic subject areas.	(C) School districts should build a strong solid, interesting career education program at the elementary and junior high school levels before starting a high school program.

VT 020 627
GUIDED OCCUPATIONAL ORIENTATION PROGRAM.
VOLUME 2. INTERIM REPORT.

SYRACUSE CITY SCHOOL DISTRICT, N.Y.
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CITY SCHOOL DISTRICT

ABSTRACT - THE SECOND VOLUME OF A REPORT ON
AN OCCUPATIONAL EDUCATION PROGRAM, THIS
DOCUMENT CONTAINS EXAMPLES OF THE
INSTRUCTIONAL MATERIALS AND MTHODS USED. A
GRADE 7 TEACHER'S MANUAL IS FOLLOWED BY A
SERIES OF 7TH AND 8TH GRADE STUDENT ACTIVITY
SHEETS, COLOR-CODED BY SUBJECT AREA AND A
GRADE 9 PROGRAM OUTLINE. ALSO INCLUDED IN THE
REPORT ARE NEWS ARTICLES, LETTERS, AND
PICTURES RELEVANT TO THE DEVELOPMENT OF THE
PROGRAM. RELATED DOCUMENTS ARE AVAILABLE IN
THIS ISSUE AS VT 017 152 AND VT 017 153 AND
IN ARM VOL. 6, NO. 2 AS VT 017 154. (KH)

VT 020 627

Careers

GUIDED OCCUPATIONAL ORIENTATION

SYRACUSE CITY SCHOOL DISTRICT

INTERIM REPORT
G.O.O.P.
PROJECT NO. 0-361-0143

VOLUME 2

VT020627

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INTERIM REPORT

PROJECT NO. 0-361-0143
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GUIDED OCCUPATIONAL ORIENTATION PROGRAM

EXEMPLARY PROJECT IN VOCATIONAL EDUCATION
CONDUCTED UNDER
PART D OF PUBLIC LAW 90-576

VOLUME 2

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February, 1973

INTERIM REPORT

PROJECT NO. 0-361-0143
CONTRACT NO. OEG-0-71-1028 (361)

GUIDED OCCUPATIONAL ORIENTATION PROGRAM

EXEMPLARY PROJECT IN VOCATIONAL EDUCATION
CONDUCTED UNDER
PART D OF PUBLIC LAW 90-576

The project reported herein was performed pursuant to a grant with the Bureau of Adult, Vocational, and Technical Education, Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

VOLUME 2

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February, 1973

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INTRODUCING YOU TO 7th-8th GRADE G.O.P.

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To Junior High School Personnel:

This booklet is intended as an introduction to the new Guided Occupational Orientation Program for 7th and 8th Grades.

In the booklet are separate sections written for the principal, guidance counselor, junior high English, social studies, science, and mathematics teachers.

Reading through the booklet should provide the reader with a general understanding of the program's operation. Specific sections are intended to introduce the roles of the key individuals--counselors, teachers, and principals--in the program's operation.

Those of us who prepared materials for the kits firmly believe in and recognize the need for occupational education, and we sincerely hope that our colleagues throughout the District will share our feelings.

Hopefully, the materials prepared and presented will be helpful to the school staff. Importantly, they are all suggested--the results of our own classroom experience. Our major goal is to help Syracuse's students begin serious thinking and planning toward their eventual place in the world of work. Any instruction and help which furthers this goal has its place within the program.

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Guided Occupational Orientation Program

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KEY CONCEPTS IN CAREER EDUCATION

Fundamental to the Guided Occupational Orientation Program is the understanding of three key concepts-- career, career education, and occupational clusters.

A career is a personally satisfying succession of productive activities linked together over a lifetime and generally leading toward greater satisfaction and contribution. Therefore, career education is preparation for all meaningful and productive activity, at work or at leisure, whether paid or volunteer, as employer or employee, in private business or in the public sector, or in the family. The key words are "productivity and "achievement."

Central to the career education concept is recognition that success in working life involves good mental and physical health, human relations skills, a commitment to honest work as the source of income, and a willingness to accept the discipline of the work-place and to be motivated toward achievement in the work setting. It also requires all of the basic skills of communication and computation and a basic familiarity with the concepts of science and technology as well as a saleable skill in demand in the job market.

Career education is a total concept which should permeate all education, giving a new emphasis to the objective of successful preparation for and development of a lifelong, productive career. Yet it must in noway conflict with other important education objectives. Its beneficiaries can still become good citizens, parents, and cultivated and self-aware human beings because career success can augment all other sound education.

Career education should become part of the student's curriculum from the moment he enters school. It relates reading, writing, and arithmetic to the varied ways in which adults live and earn a living. As the student progresses through school, the skills, knowledge, and above all the attitudes necessary for every student are stressed. This stress is phased into every subject for every student, not just in separate classes designed for those who are "going to work."

Career education replaces the continued postponement of consideration of career goals with encouragement of the choice of tentative goals which can be changed whenever necessary but which serve both to motivate learning and to foster maturity of purpose. It denies to the school any monopoly as a learning environment, yet gives the school a key role in identifying the learning environments which can further the career goal.

"Career clusters," a concept developed by the U.S. Office of Education, has a very restricted meaning when clearly defined. Briefly, the cluster is the total collection of jobs or occupations which, working together, provide a major service needed by individuals, communities, or the nation. All the occupations and people needed to provide one function are grouped together into one cluster .

Example:

A sample cluster might be "transportation." Grouped into this heading are all those jobs and occupations which, together, provide the transportation network and functions of the nation. - The cluster would include traffic engineers, bus drivers, ticket agents, maintenance personnel, railroad engineers, shipping clerks, airlines pilots, stewardesses, and any office personnel working for transportaton firms.

Within the cluster are located individual jobs--the work performed by any one person within the cluster. A job, thus, is the individual's specialized work contributing to the cluster within which he works.

TO THE PRINCIPAL:

GUIDED OCCUPATIONAL ORIENTATION

The Guided Occupational Orientation Program now has materials prepared for all three junior high school grades--7,8, & 9--in all four academic areas, English Social Studies, Science, and Mathematics. Details on these parts of the program are located in separate sections of this packet. This introduction seeks to supply information you may need in coordinating your schoo
school's program.

CURRICULUM OVERVIEW

Materials have been prepared so that teachers may use them in many different ways. There is no single curriculum guide, but rather a set of activities, resources, and objectives which can be adapted by individual teachers in a variety of ways. Introductions written for English, social studies, science, and math teachers give more specific information.

CURRICULUM Kits

The materials prepared for classroom use are collected in kits, which have been distributed to schools. Though materials vary from subject to subject, they all follow a central format:

1. List of Objectives and goals for the program:
2. Suggested Activities for pursuing selected objectives
3. Resources to help teachers develop activities.

Replacements for materials in kits, additional copies of some items, are available through the project office, Levy School, (Ext. 353).

PROJECT PERSONNEL

Project Director - Richard Bannigan, Levy School, Ext. 353
Occupational Resource Specialists -

Robert Brown - Ext. 353
Ronald Cocciole - Ext. 353
Merilee Fossaceca - Ext. 353
Fran Traynor - Ext. 353

COUNSELOR'S ROLE

Counselors are in integral part of Guided Occupational Orientation. A detailed description of their roles is included in this packet. Generally, principals should encourage counselors to acquaint themselves with the program and to act as consultants to classroom teachers throughout.

TIME REQUIREMENTS

Materials have been provided each teacher for approximately 40 class periods during each school year. Time requirements, however, are flexible, and no-one expects to enforce them rigidly. Our aim is to give students a good program, whatever time that takes. In the seventh and eighth grades, all four academic teachers evenly contribute to the program. In the ninth grade, we are asking that one teacher be designated "advisor" to each student; this teacher will work most closely with the student and will be the individual responsible for granting credit. The advising teacher will also call on other teachers to work with certain students.

CREDIT

Grades 7 & 8 - No formal credit is granted, though teachers are asked to reflect the student's career education work in his last report period for the year. Details should be worked out in schools.

Grade 9 - Students may earn 1 unit credit for Guided Occupational Orientation. Credit will be granted by each student's "advising teacher," who may consult with other faculty members about particular students.

IMPLEMENTATION WORKSHOPS

Guided Occupational Orientation starts at a different date in each junior high school. Richard Bannigan, Project Director, will find suitable dates by consulting principals. While the principals are formally responsible for implementation of the program in schools, project personnel will conduct orientation sessions, necessary workshops, and will help principals in meeting with school faculties to start to operate the program.

WRITING TEAM

Each junior high school was represented by one faculty member ons the summer writing team project. This member will have some coordinating responsibilities and will be an invaluable aide to the principal in implementation of the program in the school.

To: The English Teacher
From: English Career Education: Guided Occupational Orientation Program

The aim of the English activities found in the Guided Occupational Orientation Program for 7th. and 8th. grades is not specifically to teach career education, but to teach career education as an integral part of the regular English curriculum for each grade.

Each objective has specific activities designed to carry out the objectives. The activities deal with utilization of the skills learned in English (reading, writing, speaking, and listening). Since different schools and teachers use a wide variety of textbooks, the individual teacher will have to browse through the school and decide which materials (stories, etc.) can be used in addition to what has been offered in the Guided Occupational Orientation Program kits.

The 7th. and 8th. grade kits contain a series of folders, one folder for each objective. Each subject areas had one activity sheet and related resource sheets for the objective covered. The English Activity and Resource sheets are color-coded (green). Additional activities and resources can be added by any teacher at any time during the year.

A possible way of using the kit in order to fulfill the goals covered would be for the teacher to read through the entire 7th. and 8th. grade English program of activities and then decide where he can best fit in the careers activities as he is covering the regular course curriculum.

The major difference in the 8th. grade program is the area of job clusters. There are 15 job clusters or families; English deals with only 5:

1. Fine Arts and Humanities
2. Recreation and Hospitality
3. Communications and Media
4. Consumer and Homemaking
5. Business and Office

Activities and worksheets are provided so that the individual student can explore these clusters and the English skils needed for jobs within them. This part of the Guided Occupational Orientation Program is individualized and the teacher merely acts as an advisor.

The ultimate aim of the completion of both 7th. and 8th. grade is that the student is aware of his potential and that the world of work offers him many opportunities which he can explore.

To: The Math Teacher

From: Math Career Education - Guided Occupational Orientation

Introduction:

The math writing team has tried to create a kit that would cover the careers program while utilizing the tools and skills available through a 7th. and 8th. grade math program. The kit has been organized to allow a math teacher to quickly analyze the activities available, thereby deciding where they best fit the curriculum and their personal preferences for covering the material. The material in the kits could be used to introduce new skills or as a culminating activity to reinforce skills that have been taught.

A chart of activities and specific math skills involved has been provided so that the teacher can more easily see how the careers program fits into the math curriculum.

In the 7th. grade program, a student should see how math skills are needed in life situations, and become aware of the specialized math skills that are required in the world of work.

The emphasis in the 8th. grade program is to analyze the world of work through job clusters. A list of the fifteen clusters covered is available in the kit. In the math section, we have emphasized three of the job clusters; construction, business and office, marketing and distribution. The kit makes an analysis of the three clusters and samples the math skills used by jobs within each cluster. The basic concepts of number operation and accuracy are constantly being stressed throughout the program.

The kits are designed to enable you to quickly identify the math materials (pink sheets). Each objective is clearly identified on a folder and a math focus has been written to point out specific development within the curriculum.

Objective:	Activity Sheets
Math Focus	
List of Activities	Tables
1.	
2.	Charts
3.	
4.	Graphs
General Resources	

The right hand side of the folder contains activity sheets, many of which were designed to help a teacher prepare a ditto-spirit

master to provide copies for an entire class.

The teachers are not expected to cover all the activities available, but rather to make a selection that would best meet the needs and abilities of their students. Use the kit as a guide: you may expand or delete material. The world of work must be explored in the classroom. We have a responsibilitity to prepare our students for their lives in the working world.

Next pages provide general curriculum outline.

7th Grade Mathematics
s

GUIDED OCCUPATIONAL ORIENTATION PROGRAM

Obj. 2A -	Activity 1	Sets
	Activity 2	Flow Charting
	Activity 3	Sets (Venn Diagram, Intersection)
	Activity 4	
	Activity 5	Computation (x), Logical Thinking
Obj. 2B	Activity 1	Sets (Venn Diagram)
	Activity 2	
Obj. 2C	Activity 1	History of Math, Logical Thinking
	Activity 2	Bar Graphing
	Activity 3	Circle Graphing, Percent, Logical Thinking
Obj. 2D	Activity 1	Computing (÷)
	Activity 2	Line Graphing
Obj. 3A	Activity 1	Logical Thinking)
	Activity 2	Logical Thinking) Relating math skills to
	Activity 3	Logical Thinking) different jobs
Obj. 3B	Activity 1	Logical Thinking) Relating out-of-class
	Activity 2	Logical Thinking) activities to math skills
Obj. 3C	Activity 1	Research
	Activity 2	Computation (+,-,X), measurement, geometry, logical thinking
Obj. 3D	Activity 1	Analysis of Syllabus
	Activity 2	Analysis of Syllabus
Obj. 3E	Activity 1	
	Activity 2	Aptitude Test
Obj. 3F	Activity 1	Computation, decimals
	Activity 2	
Obj. 4A	Activities refer to Guidance	
Obj. 4B	Activity 1	Ratio, computration, logical thinking
	Activity 2	Computation (+), Logical Thinking
	Activity 3	Decimals, percent, logical thinking
	Activity 4	Computation (+,-) logical thinking, decimals, budgeting
	Activity 5	Decimals, computation (+,-,x)
	Activity 6	Decimals, computation, percent, logical thinking
	Activity 7	Computation, measurement
Obj. 4C		Refer to Guidance
Obj. 5A	Activity 1	Circle graphs, percent, logical thinking
	Activity 2	Computation (+,-,x,÷)
	Activity 3	Circle Graphs
	Activity 4	Computation, fractions
Obj. 5B	Activity 1	Logical thinking
Obj. 5C	Activity 1	Percent, computation (x,-)
	Activity 2	Computation (+,-)
Obj. 5D	Activity 1	Computation (+,-,x), percent
	Activity 2	
	Activity 3	Computation (+,-,x)
	Activity 4	Computation (+,-,x,÷)
	Activity 5	Logical thinking, computation)
Obj. 6A	Activity 1	Computation

8th. Grade Math

GUIDED OCCUPATIONAL ORIENTATION PROGRAM

Obj. 1A		Refer to Guidance
Obj. 1B		Refer to Guidance
Obj. 1C		Sets (Venn Diagram)
Obj.11D	Activity 1	Computation (+,-,x,÷), Fractions, Decimals, Percent, ratio, proportion, perimeter, area.
Obj. 1E		Refer to English Department section
Obj. 2A	Activity 1	Logical Thinking
	Activity 2	Set Theory
Obj. 2B	Activity 1	Curriculum Study
	Activity 2	Computation (+,-,x,÷), volume, ratio
Obj. 2C	Activity 1	Logical Thinking
Obj. 3A	Activity 1	Logical Thinking
	Activity 2	Computation, fractions, decimals, ratio, area, volume, surface area, measurement
(Cons.)	Activity 3	Measurement
	Activity 4	Research
	Activity 5	Field Trip Suggestion
Bus. & Office)	Activity 1	Logical Thinking
	Activity 2	Computation, money, decimals, percent, time, fractions, bookkeeping
	Activity 3	Field Trip-Suggestions
(Marketing & Distribution)		
	Activity 1	Logical Thinking
	Activity 2	Computation (+,-,x,÷) mapreading, weight, graphing (bar, line, circle), fractions, decimals, percent

To: To the Science Teacher
From: Science Career Education - Guided Occupational Orientation Program.

Introduction:

It was difficult for us to cover both career education and our science curriculum last year. In view of this, we have tried to tie career education directly into the science curriculum. This appeared to be an impossible task at our 1st meeting in view of being allotted only 5 weeks to work on it. We have come up with what we think is a workable program. A good program requires more than 5 weeks and 2 people to write it. For this reason, we are eager to receive comments for improvement from you as you use the program.

A few of our city schools teach science in the 7th grade; therefore, our part of the 7th grade program is written with these schools in mind. We hope other disciplines will find it possible to pick up some of the material in schools where science is not taught in the 7th grade. Our materials in this program cover the science curriculum as it appears in book.

I. Principles of Science

As well as the career objectives, a chart is included which we hope will allow you to see how we approached the problem.

The 8th grade career study is written around a different set of career objectives that the 7th grade. We have also had to incorporate material from Book I and Book II Principles of Science. A chart similar to the 7th grade chart is included. The 8th grade career study is not only a follow-up of the 7th grade, but asks the students to study in depth job clusters as they relate to each discipline. The chart included should explain how we have identified units of study in science with particular job clusters. The material does overlap into other clusters, however, and you should point this out to your students.

The career program is designed to teach science as it relates to career choice. Both 7th and 8th grades are set up as follows:

Left Side of Folder

Each objective has at least one sheet of yellow paper idnetified by the objective number. This sheet also has the science focus on it. It is called an activity sheet because it presents a number of activities in a possible lesson plan form

- Introductory Activities
- Class Activities
- Independent Activities
- Culminating Activities

Right Side of Folder

Each objective may have a list of Audio-visual materials, field trips, speakers, etc.

Most of the suggested class activities are written-up for student use. These activities are designed for demonstration or group lab work and cover the science curriculum at the appropriate level.

It is not intended you use this exactly as we have written unles you desire to approach it this way. Any individual teacher should feel free to use his or her own prefered method of teaching. We have only tried to demonstrate how career education may become an integral part of our science curriculum. You may teach career education in a "one lump" approach if you wish or extend it throughout the year. We hope the program is flexible enough for all teachers and that no one will feel confined and/or restricted.

A career study in 9th grade may be accomplished by using the 8th grade program as written for BookII-Principles of science or following the outline we have set up for 9th grade career study.

G.O.O.P. 7th GRADE OBJECTIVE

	SCIENCE CURRICULUM						
	Discovery & Invention	Matter & Energy	Heat, Light & Sound	Magnetism, Electricity Nuclear Energy	Living Things	Living Things & Environment	
2-A	x						
2-B	x						Introductory
2-C	x						Materials to
2-D	x						Science and
3-A	x						GoOP
3-B	x						Curriculum
3-C	x						
3-d		x	x	x			
3-E	General						
3-F	Guidance						
4-A	General with Guidance						
4-B					x	x	Curriculum
4-C	x	x	x	x	x	x	Relates Career
5-A	x	x	x	x	x	x	Education to
5-B	x	x	x	x	x	x	Entire Science
5-C	Does Not Apply						Curriculum
5-D	Does Not Apply						
6-A	x	x	x	x	x	x	

RESOURCE ACTIVITIES - relating 8th grade G.O.O.P. to Science Curriculum.

Objective 1A. Interest Survey
Objective 1C. Job Listings: People,Date,Things
Objective 2A. Job listings in Clusters
Objective 2B. Career Investigation #1
Objective 2C. Fits best after objective 3A has been completed as a unit
Objective 4A. or as each cluster of study is completed (Your Choice)
Objective 4B.

CLUSTER STUDY

Objective 3A.

1. Environment Book II Activities 1-9 Astronomy Activities 10-13 Meteorology Activities 14-19 Conservation	Book I Activities - Select from Boo II as wanted "Living Things and Their Environment
2. Agri-Business and Natural Resources Activities 20-28 Geology	Book I - NONE
3. Manufacturing Activities 29-35 Chemistry	Book I - Activities 1-11 Matter & Energy
4. Health Activities 36-42 Human Biology	Activities 32-48 Living Things
5. Communication None in Book 2	Activities 12-23 Heat, Light & Sound
6. Public Service No Activities for Book 2	Activities 24-31 Magnetism,Electricity, Nucleur Energy

Objective 5A, 5B, and 5C - Career Investigation 32.
Same activity for both books
Culminating Activity for Careers.

To: The Social Studies Teacher
Re: Social Studies Career Education - Guided Occupational Orientation Program

Introduction

7th grade - The materials for the 7th grade Social Studies Segment of the Guided Occupational Orientation Program is organized in a manner that the teacher may incorporate career education directly into the curriculum.

Career education encompasses all of these prerequisites: attitudes, knowledge, and skills necessary to choose, prepare for, and pursue successful careers.

Career education should become part of the students' curriculum from the moment he enters school. As a student progresses through school, the skills, knowledge, and above all, the attitudes necessary for success in work is stressed.

The writing team suggests that this stress be phased into every subject for every student, not just in separate classes designed for those who are "going to work."

It is our view that an objectively-oriented, responsible and accountable education asks "What does the student want to be and how can he achieve this?"

In addition, we wish to emphasize that the manner in which we presented the materials, resources, and activity sheets is not an end-all nor a be-all. Any teacher may desire to "scrap" what has been presented and design his/her own program.

Furthermore, we wish to state that resources may be used interchangeably. This is especially true for objective 6A.

The social studies materials are the blue sheets, and they are organized by objectives, 2 through 6. (Objective 1, it is recommended, will be achieved through the guidance counselor in each school, though individual schools may decide otherwise). The social studies writing team believes that objective 1 should be a coordinatedeffort or a combined effort of the four disciplines, coordinated by the counselors and Occupational Resource Specialists--the jumping off point of Junior High Career Education.

8th Grade - The materials for the 8th grade social studies segment of G.O.O.P. is organized so that teachers may include it in their years-teaching in any of three ways:

1) as a separate unit--"Social Studies and Careers"--which could be taught at any time during the year.
2) integrated with the curriculum in a one-year, chronological course on American history.
3) integrated into a conceptual-units approach to American studies.

In general, the first approach involves social studies inquiry and

research into the occupation clusters taken up by social studies. The other two approaches center on eras of American history or major trends and themes in American studies, and the clusters are to be explored when they relate to the topic or era discussed.

Quickly look through the outlines attached, and see which approach fits your teaching style best. If none of the three seems appropriate, feel free to use the activities supplied within your own framework.

The major goal is to help students acquire career information and social studies education at the same time. Any curriculum design which meets this goal is welcome: don't hesitate to invent your own if you wish!

8th GRADE CURRICULUM

Social Studies Related Clusters	The New Nation	The National - Republican Period	Age of Jackson	Division & Reunion	Economic Expansion	U.S. A World Power	U.S. A World Leader	Fed. Gov't & Civic Responsibility
Transportation	X	X	X	X	X		X	X
Public Service	X	X	X	X	X	X	X	X
Manufacturing		X	X	X	X	X	X	X
Shared with Science Agri-Business and Natural Resources		X	X	X	X	X	X	X
Shared with English Communication and Media			X			X	X	X
Fine Arts - Humanities	X		X		X	X	X	X

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TO: The Guidance Counselor
FROM: Guided Occupational Orientation Program

Introduction

Because of the nature of his job, the guidance counselor is of major importance to the successful implementation of the Guided Occupational Orientation Program in the secondary schools. The counselor plays an integral role in the continuing process of career development. Through career orientation, the student gathers knowledge of the vast number of career opportunities available in our complex society. Decision-making skills, necessary for pursuing career objectives, are sharpened as he broadens his understanding of work attitudes, values, and requirements in the light of his own talents and interests.

A major role of the counselor within the framework of Guided Occupational Orientation is to help the student in the following ways:

1) Integrate all educational levels and experiences to build a storehouse of information, attitudes, and experiences on which the student will base future career decisions.

2) Help the student to broaden his insight into the general areas of the world of work by integrating the student's awareness and understanding with the exploration of career fields and specific job skills.

3) Help the student to gain the ability to chart a course for the realization of self-established career goals based on individual desires, needs, and opportunities.

4) Assist in the educational process in such a way that by the time the student terminates his junior-senior high school education, his attitudes toward the personal, psychological, social, and economic significance of work will have acquired positive form.

In view of the current high student-counselor ratio, it is difficult for the counselor to accomplish the above goals in career guidance through traditional one-to-one or small-group counseling sessions in the closeness of a private office. Many counselors have expressed the opinion that they can more efficiently assist in the career education process by making themselves more available to large groups of students especially by taking over classrooms for information-giving, rapping about career opportunities, discussing available educational programs, and teaching students the process of decision-making. It is desired that counselors adopt this method as much as possible.

The following are some specific suggestions for guidance counselor involvement in the junior High G.O.O.P.:

1) Help initiate the 7th grade program by handling objective number one - the orientation to the junior high segment of the program; it may be accomplished by working with classroom teachers and classes from the major discipline subjects.

2) Take over classrooms for purpose of information-giving discussing decision-making processes, explaining the educational, vocational,--and occupational--sequences of study available in high school and their ultimate consequences.

3) Use of small groups for re-inforcing career concepts.

4) Act as a liaison between teachers, students, and the occupational resource specialists.

5) Be available to teachers and their students in giving and explaining interest surveys found in the 7th and 8th grade programs.

6) Be available to students and teachers as a career guidance resource counselor.

7) Assist teachers and students in giving and explaining the Ohio Vocational Interest Survey in the 9th grade.

8) Assist teachers and their students with the completion of the student career planner in the 9th grade.

9) Integrate all available information and students' interests, needs, and skills for the completion of a high school course of study for each 9th grade student.

FIELD TRIP PROCEDURE

Eighth and ninth graders participating in Guided Occupational Orientation will be encouraged to go on field trips to gain first-hand information about the job areas in which they are interested. Teachers may choose from the Library file of community resources (see your school librarian) or suggest additional places of business or training for visitation. Given the file of previously established field trip sites, the teacher should follow the following steps in arranging the field trip:

1. Copy onto the ORS request form the name of the person to contact for a tour to the particular site and the phone number. This information is available on a card in the resource file. Indicate on the ORS request form a preferred date and two alternate dates for the field trip, as well as two different times of day convenient to you. Also indicate the number of students to go on the tour, taking into consideration any maximum number which has been suggested on library resource file card.

2. Secure a transportation (bus) request form from the principal's office and fill out all the information indicated. Notify the principal of field trip plans and be sure to have him sign the transportation request form. Send transportation request form with the ORS request form to GOOP office at Levy Jr. High School where a clerk will process them and make the necessary arrangements. You will be notified by phone and/or by mail of the finalized arrangements. Bus requests are so overwhelming in the transportation office that as much advance notice as possible is needed.

3. Arrange for any extra personnel you may need on the trip. The City School District regulations state that there should be one certificated staff member on each bus and one adult for each ten children.

4. See your principal and/or available teachers or other staff to arrange for coverage of classes missed in whole or in part on the day of the field trip.

5. Refer to the Teacher's Handbook for pre-planning ideas and further orientation to field trips.

If teachers select field trip site not on list, please use ORS request form and have ORS make the contact and set up this initial tour. It is of utmost importance for the student to know why he is going on the field trip and what he is supposed to find out. Through adequate preparation in the classroom, the student should have some knowledge about the type of place he is visiting for career information and be ready to ask job-related questions as he participates in the tour. As a part of this preparation, the teacher should emphasize to all students that they are representatives of their school and of junior high students in general and that their behavior will be noticed by the people on the field trip site. If behavior is loud, rowdy or obnoxious in any way, a report will be sent back

to the school and it is unlikely that these students will be allowed to go out of the school on a field trip for quite some time. In fact it is possible for really bad behavior on a field trip to be considered a reflection on the school by the people at the field trip site and for them to refuse other students from the same school following an unfavorable incident. Students should be made aware of these things in advance.

TEACHER ORIENTATION TO FIELD TRIPS

Field trips have been found to be an invaluable resource for detailed and realistic occupational information for students involved in Guided Occupational Orientation. What is learned about careers through field trip experiences tends to be more meaningful and motivating initially to the student than any other method of career exploration. However, successful field trips do not just happen accidentally; they are the result of careful planning and preparation in the classroom as well as accurate communication between the teacher and the person contacted for the field trip as to what kinds of information the students will benefit from. Therefore, before going on a field trip with your students, the following ideas should be considered and carried out as completely as possible:

1. Do not choose a field trip site at random; consider the occupational needs and interests of your students and give them a voice in selection of the site. For instance, if a whole house is going to participate in field trips, perhaps five or six field trip sites could be selected which represent the major interest areas of the class and students in the house could be given the opportunity to "sign up" for the one place he is most interested in visiting. Such student involvement and decision-making is one of the most important aspects of the Guided Occupational Orientation Program.

2. Try to get as much information as possible concerning the kind of business or industry it is and the different kinds of occupations represented there. Perhaps it would even be to the teacher's advantage to go to the field trip site in advance so that he knows what to expect and how to prepare the students.

3. Do not plan a field trip until the students have been involved in GOOP for at least two or three weeks and have had a chance to choose a career area to study in more depth.

LIBRARY RESOURCES FOR GOOP

Each junior high school library has been equipped with the following materials and equipment for use by teachers and students in the Guided Occupational Orientation Program:

1) Library Resource File - Card file containing a listing of professional societies to write to for career information, and local sources of speakers, field trips and other occupational materials. These resources contain names, addresses, telephone numbers and descriptive information and are filed under career cluster categories. All resources have been collected during the past year, so the information can be considered up-to-date and accurate. In addition, there will be a card catalog containing a list of all the written and audiovisual materials which are mentioned in (2); these will be updated and added to as the year progresses.

2) Books, Pamphlets, filmstrips, and records - These career information materials have been gathered by GOOP personnel for use in each school. Librarians have been instructed to locate these materials in a separate section of the library so that they may be easily accessible to teachers and students involved in GOOP.

3) Cassette recorders and Headphones for use with career audiovisuals.

4) Resources available through Occupational Resource Specialists (one-of-a-kind materials) - librarians have listing of one-of-a-kind resources available upon request from ORS's. These include career guidance cassettes, filmstrips (16mm and other), slides, books and pamphlets.

WHAT THE OCCUPATIONAL RESOURCE SPECIALIST IS AND DOES

Four Occupational Resource Specialists work throughout the city, one individual assigned to each of the junior high schools. In general, the ORS's fulfill these tasks:

1. Assist in the development of curriculum materials based on the interpretation of input by administrators, counselors, teachers, students, business and industry.

2. Research, preview and recommend for purchase of audio visual and printed materials appropriate for career education.

3. Act as a consultant to the writing team as to the feasability of suggested student activities that directly involve the community.

4. Act as a resource person in the implementation of the career education program at the junior high and senior high levels in the following manner:

   a. Act as a consultant in the dissemination of program philosphy.

   b. Act as a consultant in the dissemination and adaption of locally developed curriculum materials.

   c. Make available to all junior highs a list of career oriented resources, i.e. field trips, speakers, work experience opportunities, AV materials, out of school career exploration opportunities.

   d. Act as a consultant to guidance counselors and librarians in the updating of career guidance materials.

5. Act as a liaison between the school and the community in the development of cooperative activities relevant to career education.

   a. Dissemination of information concerning the career education program of the Syracuse City School District to the community as a whole.

   b. Establish commitments on the part of business and industry as to their contribution to career education i.e. field trips,speakers, written and audio visual materials, and formal cooperative programs.

   c. Supply feedback to the School District from the community regarding potential employment and training opportunities.

6. Develop and implement effective ways of publicizing occupational information to all students.

7. Act as a consultant to guidance counselors in implementing occupational guidance activities.

8. Develop and participate in career guidance activities.

EVALUATION OF JUNIOR HIGH PROGRAM

STUDENT OBJECTIVES

Grade	Variable	Instrument
1. All grades (7,8,9)	Attitudes toward necessity for career planning	Pre and Post test
2. a) 7th grade	Awareness of resources for vocational guidance	Pre and post test
b) 7th grade	Awareness of and familiarity with career cluster concept	Checklist added to pre and post test containing 30 word grouping, 15 which represent career clusters and 15 which do not. Student must properly select 15 clusters.
c) 7th grade	Awareness of primary emphasis in jobs based on concept of data, people, and things.	List of 20 jobs added to pre and post test; student is asked to indicate primary emphasis in relation to data, people and things.
3. 8th grade	Familiarity with and exploration of at least one third of 15 career clusters.	Question added to post test asking student to indicate which clusters he he has explored.
4. 9th grade	Ability to plan future education necessary for career choice, both vocational and general education	Number of written career plans developed by students and filed with guidance counselor. (ORS) will verify number filed at end of school year).

SYRACUSE CITY SCHOOL DISTRICT

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GUIDED OCCUPATIONAL ORIENTATION PROGRAM

Resource Request Form

- ☐ A-V Materials
- ☐ Speaker
- ☐ Field trip
- ☐ Written Materials
- ☐ Meeting or Visitation
- ☐ Other

ORS Name _____ Date _____

Initiator _____ School _____

Room No. _____ Free Period _____ Tel. No _____

A-V MATERIALS

Title _____

Date _____ Alternate Date _____

WRITTEN MATERIALS

Title _____

NO. _____ Date _____

MEETING

Date & Time _____ Place _____

Alternate Date & Time _____

Participants _____

Format & Topics To Be Covered:

FIELD TRIP

Place and/or Occup. Area _____

Address _____

Date & Times _____

Alternate Date & Times _____

No. Students _____ No Chaperones _____

Names of Chaperones _____

Goal or Objective _____

SPEAKER

Name or Occup. Area _____

Address _____

Date & Time _____ Grade _____

Alternate Date & Time _____ No. Students _____

Format & Topics To be Covered: _____

OTHER REQUEST OR FURTHER EXPLANATION

DISPOSITION/COMMENTS

Date _____

Signed _____

3892

Instructions for filling out this form appear on the back of part 3.

7TH GRADE - GUIDED OCCUPATIONAL ORIENTATION PROGRAM

Who am I and how do I fit into the world of work?

Who am I?

1. The student will participate in the Careers Program and the explanation of its purpose.
   A. The student will develop an understanding of the progression of G.O.O.P., grades 7-12.

2. The student will explore the concept of careers and why he should concern himself with it.
   A. The student will distinguish between the definition of "job" and "career."
   B. After making a class list of different types of jobs, the student will break these jobs down into three areas:
      1. working with people
      2. Working with things
      3. working with data.
   C. The student will forecast the job market for future years
   D. The student will identify choices that have to be made in career education.

3. The student will investigate, research, and examine the ways in which his education can prepare him for a career.
   A. The student will define the meaning of a "skill."
   B. The student will identify "skills" acquired in school, work, and community.
   C. The student will identify skills needed for given jobs.
   D. Given a course of study, the student will identify skills that he will be acquiring in the seventh grade.
   E. The student will identify skills that he needs to acquire for a given job.
   F. The student will recognize the necessity of having a saleable skill prior to leaving school.

4. The student will assess his interests, abilities, and needs.
   A. Given an instrument, the student will assess his interests
   B. Given an explanation of needs, the student will identify his needs.
   C. The student will develop an inventory of his skills, interests, and needs.

How might I fit into the world of work?

5. The student will demonstrate interest in the structure of the world of work and his personal involvement in it.
   A. The student will know the difference between the public and the private sector of employment.
   B. The student will understand the difference between an employee and employer.
   C. The student will identify characteristics of employers.
   D. The student will identify characteristics of employees.

6. The student will recognize that the world of work is made up of a series of job possibilities.
   A. The student will demonstrate how his interests, abilities, and needs relate to each or any of job possibilities.

SOCIAL STUDIES ACTIVITY SHEET

Objective 2A. The student will distinguish between the definition of a "job" and a "career".

Introduction to the Teacher: Many times, "job" and "career" are used interchangeably, but they mean very different things. With this objective, we are helping the student to see that one must plan for a career--the lifelong sequence of work any individual follows to earn a living. Within this career, he may hold many "jobs", but unless he focuses on his life long career, he may deprive himself of the advantages of sound planning.

Social Studies Focus: The student, by looking at various persons, will see that people can have jobs, or careers, or both.

Social Studies Activities:

(Group) 1. Have students view film strip "A Job That Goes Someplace" the show people involved in both jobs and careers. Through questions answered through oral discussion, students will recognize the differences between a job and career. (See resource sheet for suggested questions.)

(Small Group)
2. Break up in small groups and read short biographies of public figures and persons selected from the curriculum. Students will then discuss the biographies and determine whether the persons had jobs, careers, or both. (See resource sheet for biographies and suggested questions for students to answer in discussion.)

(Individual) 3. Have students go to library and look up biography of some person. The student will determine the jobs and or careers this person has had . (See resource sheet for suggested list of persons to look up and questions for students to use in analysis of biographies)

General Social Studies Resources.

1. People and Choices - Harcourt, Brace, Javanovich - ORS
   Career Folios - Stories of: Pearl Bailey, Gale Sayers, Ruby Harvey - Nurse.

2. Biographical Dictionary - Library
3. Lincoln Library - Library
4. Who's Who in America - Library
5. Dictionary of American Biography - Library
6. Who was Who in America - Library

Filmstrips -

1. Job Attitudes - A Job the Goes Someplace - Guidance Associates - Library
2. Choosing Your Career - Guidance Associates - Library
3. Jobs in the World of Work: A Good Place to Be - McGraw-Hill films(16MM) - ORS
4. Vocational Decisions - Society for Visual Education - ORS

SOCIAL STUDIES ACTIVITY SHEET

Discussion Guide for Filmstrip "Jobs the Go Someplace"

1. Could there be some value in staying in a job which demands little of you in order to gain experience and be "over-qualified" for the next job? Is there a danger that you might never find the "right time" to quit?

2. An ad for a job gives no information beyond name, telephone number, and "no experience necessary." If you desire to apply for it, what questions should you ask to find out if it is a dead-end or not?

3. Was Henry right to spot Mr. Green's job as a dead-end? What led him to this opinion, and what quality is Henry showing for the first time?

4. In your opinion, did the Narrator do Henry a favor by raising his sights? Could Henry have been just as happy in a reasonably comfortable job that made no demands on him but that led nowhere?

5. Wally's boss says it's easier to work with people who care about what they're doing, and the "voice" says interest in a job is sometimes the whole story. Do you think you can successfully fake this kind of interest, or must it be the real thing? If you do your work well, do people have a right to look for interest, too? Why do you think they do?

6. Wally is discouraged enough to want to quit after being at a desk for four months. What should he have done instead? What would you do in a similar situation?

7. Wally's impatience nearly cost him his career. Do you think this impatience is a common characteristic in young people? If so, why is this so? Can impatience sometimes work for you? When?

8. Deciding prematurely that a job is dead-end can be just as dangerous as failing to spot a dead-end in time and pulling out. How do you think you can guard against deciding to quickly and perhaps making a serious mistake?

9. Is it possible to convert what appears to be a dead-end job into something worthwhile? Have you ever had such an experience?

10. What does the "voice" mean by saying that when you quit a dead-end you move up?

Alternate Activities: After viewing films strips have class break in groups to do.

1. Tell if characters in filmstrip had a job that was just a job or a job that was the beginning of a career.

2. What characteristics did jobs have to have the possibility of turning into a career?

3. What do people in the filmstrip do, that helps turn a job into a career. What do some of characters do that makes their jobs dead-end?

SOCIAL STUDIES ACTIVITY SHEET

Objective 2B. After making a class list of different types of jobs, the student will break these jobs down into three areas: 1. working with people; 2. working with things; 3. working with data.

Introduction to the Teacher: Our major aim here is to introduce the student to the fact that different kinds of interests--an important fact in career planning. Later in the program, students will begin to connect these skill-area to specific jobs, by seeing that a person ought to choose a job depending on his interest in performing required skills.

Social Studies Focus: The Social Studies focus for this objective is to look at the social implications of job categories dealing with people, things, and data.

Social Studies Activities:

Group. 1. Students will view and participate in a series of role playing situations. From these situations the group will decide if jobs done in the situations are involved mainly with people, data, or things. (Jobs could be selected from those available in Syracuse firms.) See resource sheet for suggested job situations.

Small Group.

2. a. Divide class into groups. Each group must make a list of jobs available in Onondaga County that deal specificially with 1. people, 2. data, 3. things, 4. combination. The groups will report to class and class will make a composite list of the jobs available in each category.

b. Students will determine, as a group, what types of services are provided for a community by each category. (data, people, things)

Individual 3. Given Job occupational briefs listing jobs by categories, the student will determine one job from each category that belongs to the following career cluster.

1. Manufacturing
2. Communication and Media
3. Transportation
4. Business and Office

(See resource sheet for materials)
Suggested extension of activity--Student will look up in telephone book the names of firms that are involved in each of the jobs the students listed.

General Social Studies Resources

1. Chronicle Guidance File - Guidance Office or Library

2. Occupational Exploration Kit - SRA - Library

3. Directory of Manufacturers and Products - 1970 - Greater Syracuse Industry - Onondaga County, New York - Library

SOCIAL STUDIES ACTIVITY SHEET

Objective 2C. The student will forecast the job market for future years.

Introduction to the Teacher: With this objective, we hope to teach students that the job market is constantly changing and that sound career planning will take these changes into account.

Social Studies Activities:

Small Group or Individual:

1. Students will go individually or in small groups, investigating jobs with people, data or things, depending upon personal preferences; the student will forecast those jobs which will increase, decrease, or remain the same, working within the area of his personal choice. (This can be restricted to jobs in Onondaga County) See resource sheet for references.

a. Student will write up brief descriptions of 3 jobs or more.
b. Student will determine whether the opportunity for such jobs will increase or decrease by 1980 or remain the same.
c. Students will determine what training or education is needed to do each of the 3 jobs.
d. Students will explain why (or why not) they would be interested in each of the 3 jobs.
e. Students will explore the possible changes caused in the society by changes in the 3 jobs they have research.

General Social Studies Resources

1. Manpower Requirements (Statistic on Job Market)
Interim Projections New York State (1968 - 1980) - Dept. of Labor, Division of Research and Statistics - Library

2. Widening Occupational Roles Kit - SRA - Library

3. Occupational Exploration Kit - SRA - Library

4. Vocational Biographies

5. Encyclopedia of Careers and Vocational Guidance - Vol. I and II - J.G. Ferguson - Library

6. Occupational Outlook Handbook - Supt. of Documents - Library
1972-73 Edition - U.S. Dept. of Labor

7. Bureau of Labor Statistics - Bulletin 1700

Field Trip Possibilities:
1. Upstate Medical Center - contact Public Relations - 473-4410
2. Dairylea Cooperative Inc. Contact Mr. D. Race - 472-9511 (tour of lab facilities)
3. Public Safety Bldg. contact - Public Relations - 473-3220
4. New York Telephone Co. - contact Mr. L. Dulton - 471-6113

SOCIAL STUDIES ACTIVITY SHEET

Objective 2D. The student will identify choices that have to be made in career education.

Introduction to the Teacher: Students should be aware that they are making career decisions constantly throughout their lives--by courses they select in school, hobbies they pursue, interests they develop, and part time jobs they select. Students should be aware, too, that many important decisions lie in the future, and that sound career planning demands that each decision be carefully made.

Social Studies Focus: The Social STudies focus for this objective will be to identity choices from case histories. These case histories will give examples of choices individuals did or did not make and the individual or social consequences of these choices.

Social Studies Activities:

1. Have students read case studies--Answer questions in writing or orally as suggested. Have students list choices they may have to make in next few years.

2. Read through case studies break into groups. Have students discuss the stories. Make suggestions that tell how the people in case studies could have handled the situations differently. Do this as a group.

3. Individual--Have students read case studies and :

a. Draw a series of cartoons illustrating the choices of people in the histories

b. Have individual write his own case study.

c. Give students list of famous persons--have them write up a case study for one famous person.

SOCIAL STUDIES ACTIVITY SHEET

Objective 3A. The student will define the meaning of a 'skill'.

Introduction to the Teacher: The main aim of this objective is to help students see that skills...not people... are basically required to do a job or serve a working function. While some attention is given by employer to who a potential employee is, more attention is given to what necessary skills a person possesses.

Social Studies Focus: The social studies focus for this objective is looking at the social importance of skills, to help the students see that modern day urban living depends on many workers who possess skills for which they have been trained.

Social Studies Activities:

Whole Class: 1. Students will go over list of skills. Students will be asked to complete a list of twenty skills that a person could acquire in urban atmosphere.

Small Group: 2. Students will go over list of skills and draw up a list of skills learned and or needed in urban living.

Individual or Whole Class:
3. Students will go over lists of skills:

a. Student will select a specific job or career and research what skills are needed for that job--(in library--go talk to person on job, etc.)

b. From studies about the city of Syracuse student will list skills needed to maintain city services.

c. Select a person who works in city government. Interview the person and ask the person what skills they need to do their job.

d. A student will write a play showing what would happen in a city where services were attempting to be performed by people with no skills. (etc.)

4. Student will be given questionnaire and asked to interview one or more persons. The person could be a student, school personnel, person on street, person in government, industry, etc.

a. Class analyzes by category and draws up composite list of skills of people interviewed. And students will list skills most often identified as helpful to society.
b. Students work in small groups to draw up composite lists.
c. Individuals will summarize results of questionnaire and apply to themselves.

General Social Studies Resources
1. Activity 3A,B,C - See Public Service Section of Library Resource File for possible persons to interview.

2. Activity 4. See Library Resource file for other persons to interview, - ie. Manufacturing, Public Service, Personal Service, etc.

SOCIAL STUDIES ACTIVITY SHEET

Objective 3B. The student will identify "skills" acquired in school, work, and community.

Introduction to the Teacher: The main aim of this objective would be to show that skills are acquired in many areas of student's lifestyle. Many important skills are acquired in pursuits outside of school and it is important to relate the skills acquired in work and community programs with school learning situations.

Social Studies Focus: The student will be encouraged to become aware of skills he has acquired and to see the possible social relevance of these skills. The students will be encouraged to relate skills he has to the society and the demands society will place on him.

Social Studies Activities:

Whole Group:

1. Students will be asked to set up displays of skills learned out of class (examples: ham radio, dances, photography, musical skills, carpentry, magic, cards, etc.) Use skills available in schools.

Other students will be asked to write "Describe in an essay the skills of three of more persons exhibiting their skills". The essays should tell skills and where person learned skills, and if that skill is helpful to society.

2. Students will write letters to companies asking them to send information and representatives to set up displays of job training programs. These displays should show skills to be acquired by people in program. (Students would select companies based on interest, and companies with such programs in area)

Examples:
1. Chrysler--machine operator
2. Western Electric--assemblers
3. Carrier--assemblers--sales
4. Crucible Steel
5. N.Y. Telephone
6. Niagara Mohawk
7. Bristol Labs

3. Students would be encouraged to set up field trips for groups or individuals where appropriate. As a result of experiences students will list skills a person could acquire in school, on job, in community that could benefit individual and society.

4. Students will complete list of skills acquired from different sources - (See resource sheet)

General Social Studies Resources

Check library resource file for field trip possibilities - ie. New York Telephone Company -- contact Mr. F. Dalton - 471-6119.

Directory of Manufacturers and Products - 1970 - Greater Syracuse Industry - Onondaga County New York - Library

SOCIAL STUDIES ACTIVITY SHEET

Objective 3C. The student will identify skills needed for given jobs.

Introduction to the Teacher: There are definitely different skills that are necessary for different occupations--the students should generally come to the realization that what he is learning today--in and out of school--WILL prepare him for future jobs. You may try to relate this with the above interests areas--people, things, and data and show how some people develop skills to meet their interests.

Social Studies Focus: The social studies focus for this objective is to determine skills that people have had in work situations in the past and those skills needed to compete in today's technological world.

Social Studies Activities:

1. Given a list of roles for men, women and children in the Iroquois society (see p. 33-34 in Our Cultural Heritage) select one of those roles and list as many skills as you can think of that would be needed to fulfill the role well.

Group.
2. Or (resource 112-113) read It Was a Lovely Day and for people involved in the reading, make a list of jobs done by every person in the story and a list of skills needed for the job (age of Homespun). This could also be done for colonial times as well as for the age of the city.

Alternative
3. For suggested background films, in providing background for the modern technological society as a curriculum focus for this activity, see list of films on 291, 292 of Curriculum Guide for Seventh Grade.

Teachers have student select an area, transportation, social service, or others available in cities, have students research the area, select a job and list skills necessary in getting this job.

a. Keep a daily diary for a particular job and mention skills he would be utilizing (Pertains to those with part-time jobs)

b. Describe a person at a job with or without skills and what his day would be like.

General Social Studies Resources
1. Encyclopedia of Careers and Vocational Guidance - Ferguson Co. - Library
2. Occupational Out looks handbook - Supt. of Documents - Library
3. Occupational Exploration Kit - SRA - Library
4. Occupations of Federal Blue Collar Workers - Supt. of Documents - Library
5. Stenographer, Typist, Clerk, and Office Machine Operator - Supt. of Documents - Library

Filmstrips -
1. Cabbages to Kings and Various things (retailing) - Bowmar - ORS
2. Compassion for People (health) - Bowmar - ORS
3. The nation's Builders (Construction)- Bowmar - ORS

SOCIAL STUDIES ACTIVITY SHEET

Objective 3D. Given a course of study, the student will identify skills that he will be acquiring in the seventh grade.

Introduction to the Teacher: It might be important here to have the teacher outline his course of study with the student so that he will be able to see certain skills that might be important to him in his present situation and in the future. Also together the teacher and student might diagnose skills that will be necessary to him.

Social Studies Focus: The social studies focus for this objective is to have the student relate the skills he will be learning in the seventh grade to his future. He will develop an understanding that he will be acquiring skills that will be valuable to him as a person to society as a whole.

Social Studies Activities:

From a list of skills to be utilized in seventh grade, (See resource sheet for skills list), the student will determine if he has the skill or not

1. The student will make up an individual check list for himself which he will keep for the year. As he acquires these skills he checks them off.

2. If class works in groups--have groups determine check list.

3. If student has acquired most of skills already, individual conference with teacher is suggested to develop check for independent study.

SOCIAL STUDIES ACTIVITY SHEET

Objective 3E. The student will identify skills that he needs to acquire for a given job.

Introduction to the Teacher: The main aim of this objective is to develop within the student a process that will enable him to recognize the many skills people need for particular jobs. It is hoped that this will come early enough in his career selection so that he can give thought to the preparation that is necessary for a career.

Social Studies Focus: The Social Studies focus for this objective is to have the student become aware of his total life experience as a learning situation for development of personal and social skills.

Social Studies Activities:
Individual:

1. Student will select job.
2. Student will list his own skills and where he or she learned them.

3. Student will interview person on job or use readings to discover skills needed for job.
4. Student will determine what skills he would need to learn to perform that job well and where he or she would best learn those skills.

Group:

Teacher will use reading from Encyclopedia of Careers or Junior Occupational Briefs and group will determine skills needed by person performing that job.
Class will decide what skills a person would need to do job, or use filmstrips. (See resource sheet.)

1. Students will select well-known person from curriculum of seventh grade to investigate. Group will determine from readings (see resources for suggested references) what skills this person needed to be able to do the job well. Students will decide what they would have to learn to do that job and where they would likely learn those skills--in school, or job, in the community.

General Social STudies Resources
Filmstrips and Cassettes:

1. Cabbages to Kings and Various Things - Retailing) Bowmar - OPS
2. Vocational Decisions - Society for Visual Education - OPS
3. A Nation's Builders - Construction - Bowmar - OPS
4. Jobs for the New Generations - Bowmar - OPS
5. Compassion for People - Health - Bowmar - OPS

Western Electric Education filmstrips - Filmstrips and records

1. The Secretary
2. The Draftsman
3. The Toolmaker
4. The Key Punch Operator

All can be obtained from OPS.

An Overview of Technical Education - filmstrip and record - Guidance Associates - OPS
Preparing for Jobs of the 70's - filmstrips and records - Guidance Associates OPS
Set 3D. Career Opportunities I - filmstrips - Denoyer Geppert - Library
Reading SRA - Occupational Exploration Kit - Library

SOCIAL STUDIES ACTIVITY SHEET

Objective 3F. The student will recognize the necessity of having a saleable skill prior to leaving school.

Social Studies Focus: The student should be able to recognize the skills learned or reinforced on Social Studies which may help him find a job.

Social Studies Activities:

1. Using a copy of a Syracuse newspaper, the student will look through the want ads and list the skills needed for 10 or more different jobs.

2. The student will go to an employment center, public or private, and ask about entry skills in at least 3 different areas.

3. Using the filmstrip Overview of Technical Education, available through the OFS, the student will list 5 skills you have that an employer may find desirable. An alternate filmstrip is Preparing for the Jobs of the 70's which is also available through the OFS.

4. The student will read pages 7-15 Sra Series - What Employers Want and become familiar with the range of basic skills.

5. Complete form: Social Skills (See resource sheet)

General Social Studies Resources

Activity 1. For class sets of newspapers, call Mr. Ralph Borden or Mr Greg Horn at the Herald-Journal - 473-7531 - Pickup newspapers at Clinton St. entrance.

Activity 3. Overview of Technical Education - filmstrip and records - Guidance Associates - OFS
Preparing for the Jobs of the 70's - filmstrips and records - Guidance Associates - OFS

Activity 4. What Employers Want - SRA - Occupational Exploration Kit - Library

SOCIAL STUDIES ACTIVITY SHEET

Objective 4A. Given an instrument, the student will assess his interests.

Introduction to the Teacher: This objective aims to start the student on a general determination of his interests.

Social Studies Focus: Refer to the guidance resource sheet.

Social Studies Activities: Refer to results of Guidance inventory in completing the following:

1. Each student should complete the forms included in the resource section about interests. Student should list at least 10 interests.

2. Each student should write a paragraph explaining the ways in which their interests may change as they get older and their situation changes.

3. Using one of the kits on jobs, the student should pick out a different job that would match each of 10 interests they listed.

4. Students will determine if the jobs they listed in no. 3 are more oriented to people, things or ideas or data.

5. Students will refer to job forecasts and determine how many of the jobs selected are likely to be available in Syracuse in the future.

General Social Studies Resources

1. Your Personality and Your Job - SRA - Occupational Exploration Kit - Library
2. Choosing Your Career - SRA - Library
3. Discovering Your Real Interests - Occupational Exploration Kit - Library
4. What to Do After High School - SRA - Occupational Exploration Kit - Library

Filmstrips -
1. An overview of Technical Education - Guidance Associates - ORS
2. Vocational Decisions - Society for Visual Education ORS

Pertains to Activity 5 - Manpower Requirements Interium Projections - New York State - 1968-1980 - New York State Dept. of Labor

SOCIAL STUDIES ACTIVITY SHEET

Objective 5A. The student will know the difference between the public and the private sector of employment.

Introduction to the Teacher: The aim of this objective is to have students recognize that they may seek employment in either the public or private sector of the economy. The students should understand the ways each sector is organized and the purposes for which each exists. The students should know the different ways each sector employs people as well as the responsibilities of each sector to the community.

Social Studies Focus: This unit could be used as an introduction to Topic VI - in Our Cultural Heritage - pp. 294. State and Local Government and Civic Responsibility and unit on Urbanization and Industrialization. - pp. 248-261

Social Studies Activities:

It would seem appropriate to take a field trip and or have speakers-- Below are a few suggestions. See- Our Cultural Heritage pp. 307-308 for more details.

Public Works: Fire Department, Public Safety, Water Works, Post Office

Private: Bristol Lab p. 307; Vega Industries p. 307; Herald Journal

Given a list of public employees and appropriate list of readings in library, texts or supplementary material:

1. Each student will make a list of the possible and/or needed services that are or could be provided by each employee.

2. In small groups the students will survey the reading material and determine the services which would be provided in a Model City that they would imagine and also attempt to estimate costs.

3. Each student will be asked to keep a diary as he studies the unit on Local Government and write down as he studies each section, what services are or should be performed by each department and if possible estimate the cost of such service for any community or for Syracuse.

(See City Budget - Resource Sheet)

See Our Cultural Heritage pp. 248-261 - Urbanization and Industrialization

Given list of Industries and appropriate reading (page 253)

1. Student will select an industry and in a report determine the following:

a. The different jobs available in that industry

b. Determine type of ownership

c. Determine the methods of employing personnel in industries, emphasis on characteristic desired by company in their employees.

d. Determine the service provided for community and cost to member of community

e. Determine the profit margin and other financial concerns -

ie. tax inducements

bank financing

SOCIAL STUDIES ACTIVITY SHEET

Objective 5A. Continued

General Social Studies Resources

For field trip suggestions, See library resource file.

Examples:

Dept of Public Works - 473-4592
Syracuse Post Office - 473-2321
Public Safety Building - 473-3220
Syracuse Fire Dept - 473-5525
Bristol Labs - Mr. D. Ball - 470-2343
Vega Industries - Mr. LaGraffe - 478-5701
Herald Journal - Mr. Geerer - 473-7958

SOCIAL STUDIES ACTIVITY SHEET

Objective 5B. The student will understand the difference between an employee and employer.

Introduction to the Teacher: This aim is to have the student get through the many confusing aspects of employment and come up with something that will enable his to distinguish the roles of an employer and employees.

Social Studies Focus: To present the role of employee/employer in a simulated historical context and have students come to an understanding of the interaction of the roles.

Social Studies Activities:

Refer to English and previous activities in Social Studies. Activities for 1B,1C, and 1D should be coordinated with English; the only difference would be to differentiate between the private and the public sector of employment.

1. Simulation games -- Hard Rock Coal Mine Game. If possible, this game should be coordinated with the students' english classes. Based on this game, role playing and activities 1-5 in the english section for 1B will be much more meaningful to students.

2. Role Playing

General Social Studies Resources

1. Getting and Holding a Job - Frank Richards - Library
2. On the Job - Frank Richards - Library
3. Succeeding in the world of work - McKnight and McKnight - Library
4. What Employers Want - SRA - Occupational Exploration Kit - Library

Filmstrips -
1. Getting and Keeping Your First Job - Guidance Associates - Library
2. Trouble at Work - Guidance Associates - Library

Possible Speakers
1. Mrs. Blackall - N.Y. Telephone Co. - 422-8425
2. Mr. Sojda - Niagara Mohawk - 474-1511 - Ext. 1836
3. Mrs. Jean Phillips - Niagara Bank - 472-5561 Ext. 460

For further speakers, see suggestions in library resource file.

SOCIAL STUDIES ACTIVITY SHEET

Objective 8C. The student will identify characteristics of employers.

Introduction to the teacher: The aim of this objective is to enable the student to identify the many kinds of employers that there are and types of jobs they perform, particularly as they affect the benefits and working conditions of employees.

Social Studies Focus: To present the employer as a member of society interacting with that society. To consider that, the employer is both the creator of change and the recipient of change.

Social Studies Activities:

1. What was the employer like in 1890?
a. Write down as many characteristics as you can think of.
b. Write a short skit showing what an employer was like. What were some values and attitudes toward employee. (Suggest this as group activity)
c. Do a set of three or more sketches that show what an employer was like in 1890.

2. What is today's employer like? What changes are there in his attitude toward an employee and towards the general public? To what extent has unionization and technological changes created a change in employers? To what extent does competition from other companies affect the employer's attitude towards the employee and the general public? To what extent does the public attitudes affect the employer? (See resource sheet for readings)

Students can answer these questions directly from readings:
a. By interviewing an employer and a union representative
b. Taking a survey of public opinion.

General Social Studies Resources

See Library resource file for suggestions of people to interview:

example:
Mr. Nick Pontello - Syracuse Builders' Exchange
Union Representative - 437-9936

Mr. Ray Axelson - Tarason Construction Company
Employer Point of View - 463-9133

SOCIAL STUDIES ACTIVITY SHEET

Objective 5D. The student will identify characteristics of employees.

Introduction to the Teacher: The aim of this objective is to enable the students to identify many types of employees, and to see how the roles of employees differ a great deal from job to job.

Social Studies Focus: The emphasis of this objective is to see the characteristics of employers in a situation similar to the real world and to identify changes over time.

Social Studies Activities for students:

1. Describe an employee in 1880. List three characteristics you consider most important in this employee.

2. Read about or interview a present day employee. List three characteristics you consider most important in this employee.

3. Compare or contrast the 1880 and 1972 employee and from studies on industrialization and urbanization, list several reasons for these changes or consistencies. Has society's view of the employee changed? To what extent has unionization changed this view?
(See resource sheet 5C as well as 5D for speakers.)

4. Use filmstrip set "Getting and Keeping Your First Job." with students. From filmstrip, list characteristics of an employee which would help or hurt him in advancing on the job. (See also "Trouble at Work Filmstrip kit - for negative characteristics)

General Social Studies Resources

See Library Resource file for possible persons to interview. Call the person suggested to contact and ask for persons (employer, employees) who would be willing to be interviewed by students. Explain fully the purpose of your request.

SOCIAL STUDIES ACTIVITY SHEET

Objective 5D

WHAT IS AN EMPLOYER LIKE?

Date _____

Part A
Interview an adult--perhaps one of your parents or a neighbor--concerning his or her job. The questions on this record sheet may be used as an outline for the interview.

1. What is the name of your job? _____

2. What do you do in your job? _____

3. What educational skills do you need? _____

4. What physical skills do you need? _____

5. What social skills do you need? _____

6. What interests are involved? _____

7. How did you prepare for your job (education and training)? _____

8. What school subjects have been most useful to you? _____

9. What are some of your working conditions? _____

10. What are some things you like about your job? _____

What are some things you dislike about your job? _____

SOCIAL STUDIES ACTIVITY SHEET

Objective 5D

WHAT IS AN EMPLOYEE LIKE?

Part A. (Continued)

12. Other information _____

_____

_____

Part B. For student to answer
What skills would you need to learn to do this job well?

_____

_____

_____

_____

_____

_____

13. How would you describe yourself on the job?

_____

_____

_____

_____

14. What are some of the concerns you have about your job?

_____

_____

_____

_____

SOCIAL STUDIES ACTIVITY SHEET

Objective 6A. The student will demonstrate how his interests, abilities, and needs relate to job possibilities

Introduction to the Teacher: The aim of this objective is to tie together his interests, abilities, and needs with actual work situations.

Social Studies Focus: The social studies focus for this objective is to have the student demonstrate how his interests, abilities, and needs relate to job possibilities within each or any of the social studies clusters. (The job clusters which are the prime responsibilities of the social studies are Transportation, Public Service, and Manufacturing. In addition, it is suggested that the Social Studies and Science share Agri-Business and Natural Resources; also, English and Social Studies should share communication and Media)

Social Studies Activities:

1. The teacher needs to discuss with the students what a cluster is and how hundreds of jobs may fit into a single cluster.

a. Present to the class a social studies cluster and brainstorm to explore all of the jobs involved in this cluster.

b. Take a particular job---such as a secretary and help students discover how many different clusters this job could fit into (use all clusters).

c. Have each student list all the ways his family depends on services provided by one particular cluster.

d. Pick a particular cluster and have students list all of the services provided by this cluster.

e. The student will match what he knows about his interests, abilities, and needs to jobs within job clusters.

Objective 1A The student will develop an understanding of the progression of the G.O.O.P., grades 7-12.

Introduction to the Teacher: The idea of this objective is to have the students become familiar with the Careers Program offered in grades 7 through 12. This orientation will allow the student to foresee various programs and general aims and how he will benefit from them. He also should see how activities have been developed to help him reach the overall goals of the program.

It would be ideal for the Guidance Counselor or CRS to be involved in these activities in conjunction with either of the four major subject areas.

1. The student will participate in a discussion with the Guidance Counselor (and/or the teacher) on the Flow Chart for career education.

2. A. The student will participate in a class discussion linking his major subjects to the career program objectives (with Guidance Counselor and/or teacher)

   B. The student will explore, with the teacher or counselor, high school courses available which lend themselves to occupational skill developments. (a saleable skill before he leaves school)

   ex. College prep
   General 9th
   Business

   Business
   Tech
   PACE, etc. 10th
   Work-study Programs

   C. Student will come to an awareness that the high school diploma represents skill development and is not an end in itself.
   ex. various graduation requirements (need for saleable skills)

   D. Student will participate in a discussion of careers related to people, data, and things.

MATH ACTIVITY SHEET

Objective 2A. The student will distinguish between the definition of a "job" and a "career".

Introduction to the Teacher: Many times, "job" and "career" are used interchangeably, but they mean very different things. With this objective, we are helping the student to see that one must plan for a career--the lifelong pattern of work any individual follows to earn a living. Within this career, he may hold many "jobs", but unless he focuses on his life long career, he may deprive himself of the advantages of sound planning.

Math Focus: The mathematics focus for this objective is to organize job opportunities within a career choice, and to analyze these jobs with respect to income provided and mathematics required for successful progression within the career choice.

Math activities:

1. The whole class can brainstorm with the teacher to develop a list of "jobs". Several "help wanted" sections of the local newspaper might help stimulate class participation. Using "set description" the class might classify a collection of jobs with similar characteristics. With very little refinement the major description would be that of a career and the specific jobs subsets of a career.

2. A small group might focus its attention on a particular career and construct a flow chart of the progression of jobs to a desired goal within a career.

3. Each individual could select two or more careers and their related jobs. By constructing a simplified Venn diagram it should be evident that a particular job activity might lead to more than one career choice (set intersection)

4. The whole class, using the newspaper help-wanted section as a resource, can organize jobs into career areas. An analysis of these groupings can be made with respect to: salary provided; progression within a career choice as experience and education increase.

5. A small group of students might chart the progression of a person within his career choice, correlating the many jobs held, salaries at each job level, education required for advancement, cost of education.

General Math Resources

Activity 1:
Herald Journal - for class sets of newspapers contact Mr. Ralph Sorden or Mr. Greg Horn in the Circulation Dept. - 473-7888. Pick up at Herald Journal on Clinton Street. entrance.

MATH ACTIVITY SHEET

Objective 23. After making a class list of different types of jobs, the student will break these jobs down into three areas: 1. working with people; 2. working with things; 3. working with data.

Introduction to the Teacher: Our major aim here is to introduce the student to the fact that different kinds of jobs require different kinds of skills--an important fact in career planning. Since in the previous group one will begin to narrow down to specific jobs, it is reasonable that a person ought to choose a job depending on his interest in performing required skills.

Math Focus: The mathematics focus for this objective is to have the student break down the specific jobs into the three interest areas and surveying these interest areas with respect to mathematics required to progress within an interest area.

Math Activities:

1. The whole class could categorize each job into one or more of the interest areas and organize this information in a Venn diagram, the Universal set being the list of jobs, and the three major sets being the interest areas.

2. A small group might choose one of the career choices and break it down with respect to jobs available in each of the three interest areas. The necessity of the study of math for each job could be listed. The amount of mathematics needed for a particular job is not always evident in the surface analysis of a job. The group might lead a class discussion on how a particular job uses math or why a particular job requires math.

MATH ACTIVITY SHEET

Objective 2C. The student will forecast the job market for future years.

Introduction to the Teacher: With this objective, it is hope to reach students that the job market is constantly changing, and that sound career planning will take these changes into account.

Math Focus: The mathematical focus for this objective is to have the students look at the achievements in mathematics that job markets created, and the job markets created by these achievements.

Math Activities:

1. A small group might organize their thoughts and do some reasearch to prepare a debate such as: "Increased technology has evolved many machines that can perform all the basic mathematical computation; thus the study of mathematics has been outdated and job markets in the math field should be on a steady decline."

2. An individual student might explore the changing job market relating by graph the number of jobs available in a market to time. The purpose would be to establish the job trends and to project those trends for future years. Steep climbs or drops in the job market and their possible causes can be analyzed.

3. A small group given a specific job, would determine the job classifications, past and present, that would be called on to complete the task. The increase of job opportunities because of our increased knowledge, increased skills and increased needs should be seen.

Activity 1 and 2:
Filmstrip - Preparing for the Jobs of the 70's - Guidance Associates - OTS

Activity 3:
Manpower Requirements Interim Projections 1968-80 (Job Forecasts) Dept. of Labor - Library

Activity 4:
Our World of Work - booklet - SRA (Occupational Exploration Kit) - Library
Occupational Outlooks Handbook - Supt. of Documents - Library

MATH ACTIVITY SHEET

Objective 7B. The student will identify choices that have to be made in career selection.

Introduction to the Teacher. Students should be aware that they are making career decisions currently throughout their lives--by courses they select in school, hobbies they pursue, interests they develop, and part time jobs they select. Students should be aware, too, that many important decisions lie in the future and that social career planning demands that each decision be carefully made.

Math Focus: The main focus for this objective is to help the student realize the difference in variety which are available to a person with a math background. The focus will concern itself with the economics of the job and the education required.

Math Activities:

1. The whole class (or a small group) will choose a career and analyze jobs in that career as to the math required.

a. What jobs could they handle with their present math skills?
b. What new math skills are required for job advancement?
c. Compute the cost of obtaining these new skills.
d. Compare the cost of obtaining these skills with the increased income and benefits derived from the job advancement.

2. A small group could compare the income of two different approaches to career selection.
ie. Person A determined his career interest early and gradually progressed towards his goal.

Person B chose a job without concern to career interest and worked in many interest areas before making a specific choice.

3. An individual student can estimate the cost of education for preparing for certain jobs by:

a. choosing various vocations such as teaching, medical, secretarial, etc. and figuring out cost for preparation.
b. Writing to various colleges for cost of tuition, room and board, etc.
c. Making at least four jobs for which apprenticeships are available. What is an apprenticeship? How much does an apprenticeship cost the apprentice?
d. Exploring the apprenticeship program of Central Tech High School. What benefits do these programs give? Make a report on your findings.

Activity 1.
Job Family Series - "Make in Math" - SRA - Occupational Exploration Kit - Library
School Subjects and Jobs - SRA - Occupational Exploration Kit - Library

MATH ACTIVITY SHEET

Objective 3A The student will define the meaning of a skill.

Introduction to the Teacher: The main aim of this objective is to help students see that skills...not people...are basically required to do a job or serve a working function. While some attention is given by employer to who a potential employee is, more attention is given to what necessary skills a person possesses.

Math Focus: The mathematics focus for this objective is to have the student realize that mathematics is a skill, and that certain jobs require this skill.

Math Activities:

1. Given a list of math skills the whole class will determine jobs available using individual skills or combinations of these skills. (Refer to Resource Sheet)

2. The whole class, given job titles, will discuss the possibility of one person qualifying for this job if this person was lacking computational skills. If you were an employer would you hire a person to do the job and another person to do the computations? How would this affect the salary provided?

3. A small group could derive a list of jobs requiring no computational skills.

   A. How do these jobs compare to jobs requiring computational skills incomewise?

   B. Does this person need any computational skills off the job?

General Math Resources:

Activity 1 and 2:

Job Family Series ("Jobs in Math") - SRA - Occupational Exploration Kit - Library

Occupational Outlooks Handbook - Supt. of Documents - Library

Encyclopedia of Careers and Vocational Guidance - Ferguson Co. - Library

Activity 3:

Getting Ready For Payday - Lienards Co. - Library

MATH ACTIVITY GUIDE

Objective 3B: The student will identify skills acquired in school, work, and community.

Introduction to the Teacher: The main aim of this objective would be to show that skills are acquired in many areas of student's lifestyle. Many important skills are acquired in pursuits outside of school and it is important to relate the skills acquired in work and community programs with school learning situations.

Math Focus: The math focus for this objective is to show that a student's proficiency in a math skill is expanded by their daily life experiences.

Math Activities:

1. The whole class might list the out of school activities they are involved in using math. Using this list of: part-time jobs, sports, small purchasing, sewing, cooking, building, etc.: the student will analyze which math skills are being refined.

2. The whole class might list the math skills that are being refined in their subject areas (Science, Home Economics, Social) and in school activities (school store, band, track team...)

General Math Resources:

Activity 2:

School Subjects and Jobs - Occupational Exploration Kit - SRA - Library

MATH ACTIVITY SHEET

Objective 3C The student will identify skills needed for given jobs.

Introduction to the Teacher: There are definitely different skills that are necessary for different occupations--the students should generally come to the realization that what he is learning today--in and out of school--will prepare him for future jobs. You may try to relate this with the above interests areas--people, things, and data and show how some people develop skills to meet their interests.

Math Focus: The math focus for this objective is to have the student analyze math skills which are required for certain jobs.

Math Activities:

1. The whole class might brainstorm to construct a list of jobs. Individual students will select a job and research the mathematics involved in that job.

2. An individual or small group given an activity:

   A. Students will role play the contractor and compute his material costs, connected to building a house.

   B. Given the needs of a family, design a floor plan for their home.

   C. Given the cost of an object, determine its selling price considering overhead, advertisement, wages, and profit.

General Math Resources:

Activity 1:

Occupational Exploration Kit - SRA - Library

MATH ACTIVITY SHEET

Objective 3D Given a course of study, the student will identify skills that he will be acquiring in the seventh grade.

Introduction to the Teacher: It might be important here to have the teacher outline his course of study with the class so that he will be able to see certain skills that might be important to him in his present situation and in the future. Also together the teacher and student might diagnose skills that will be necessary to him.

Math Focus: The math focus for this objective is to have the student see the math skills available to him through grades seven through twelve.

Math Activities:

1. The whole class, given the syllabus for the seventh grade, will identify the skills they will be acquiring.

2. The whole class, given the syllabus for grades seven through twelve, including both academic and non-academic courses of study, will identify the skills they will be acquiring.

MATH ACTIVITY SHEET:

Objective 3F: The student will identify skills that he needs to acquire for a given job.

Introduction to the Teacher: The main aim of this objective is to develop within the student a process that will enable him to recognize the many skills people need for particular jobs. It is hoped that this will come early enough in his career selection so that he can give thought to the preparation that is necessary for a career.

Math Focus: The Math focus for this objective is to have the student realize his own potential in Math and the math skills he will need for future success.

Math Activities:

1. An individual student will select a particular job and determine the math skills required. He will then make an analysis of the skills he has already acquired for this job and those he needs yet to acquire.

2. The whole class will take an individual company's Math Aptitude Test and determine the jobs presently available to them.

General Math Resources:

Activity 1:

School Subjects and Jobs - SRA - Occupational Exploration Kit - Library

Job Family Series - "Jobs in Math" -OEK - Library

MATH ACTIVITY SHEET

Objective 4A Given an instrument, the student will assess his interests.

Introduction to the Teacher: This objective aims to start the student on a general determination of his interests.

*Math Focus: Refer to Guidance Resource Sheet

MATH ACTIVITY SHEET

Objective 6A. The student will know the difference between the public and the private sector of employment.

Introduction to the Teacher: The aim of this objective is to have students recognize that they may seek employment in either the public or private sector of the economy. The students should understand the ways each sector is organized and the purpose for which each exists. The students should know the different ways each sector employs people as well as the responsibilities of each sector to the community.

Math Focus: The math focus for this objective is to have the student analyze the different sources, expenditures, and responsibilities of the public and private sectors of employment.

Math Activities:

1. The whole class could construct a list of public sectors of employment. This could lead to a discussion of where the funds for operating these sectors of employment come from.

Many of the services could not be bought by individuals. Only through some such co-operative idea as taxation can these services be made available. The students should become aware of the varying forms of taxation the government uses to obtain the income necessary to provide the services, and the services provided. Small groups could take certain forms of taxation (sales tax, auto and other licenses, gasoline tax, etc.) and see the income provided from a sample families' expenditures.

2. The whole class could construct a list of private sectors of employment. Given a company budget the students could determine the company's expenditures and income. How do these companies obtain their income? The main objective of the private sector of employment is to make a profit. Therefore much consideration is necessary when a company determines a price for its service or object.

Given: Cost of materials
employee expense
Plant expense
cost of advertising
cost of distribution

Determine the real cost of producing the object. What income does this provide the owner of the company? If the owner wished to make a profit of ten percent what would be the selling price?

3. The whole class will construct two circle graphs representing the public and private dollar. These graphs should be compared with respect to total expenditure for service versus partial expenditure for service, with reserve for profit.

4. The whole class will demonstrate that they can share in the private sector of employment through the purchase of stock. They may transact a makebelieve investment, buying and selling stock, to show that they have an understanding of the stock market.

ONE ACTIVITY UNIT

Objective 1D. The student will understand the difference between an employee and an employer.

Introduction to the Student: This unit is to have the student see through the many conflicting aspects of employment and come to a point of view that will enable him to discuss his role as an employee and employer.

Math Focus: The main focus for this objective is to have the students develop an understanding of the financial responsibility of the employee and employer.

Math Activities

1. The whole class could construct a list of financial responsibilities of the employee and employer. Questions like these may be helpful: What is the cost of providing the server for the employee? The cook's hourly wage of the employer. This should be used as an introduction to objectives 1-c and 1-d.

Math Activity #2

Objective #2: The students will identify characteristics of employees.

Introduction to the Problem: The aim of this objective is to provide students with a variety of employees that they may be familiar with to identify a variety kinds of employees that there are and types of jobs they perform, particularly in they affect the financial and personal conditions of employees.

Math Focus: The math focus for this objective is to have the students concentrate on the financial responsibilities of the employees.

Math Activities:

1. The whole class, using a guide introduction, will determine the cost of providing various benefits for the employees (insurance, taxes, social security, unemployment).

2. The whole class will determine a company's profit through the use of a balance sheet.

[illegible]

Objective 5a. The student will identify compensations of employees.

Introduction to the Lesson: The aim of this objective is to enable the students to identify many types of compensations, and to see how the roles of employees differ and in what areas jobs are [illegible].

Math Focus: The main focus for this objective is to have the student concentrate on the financial responsibilities of the employee.

Math Activities:

1. The whole class [illegible] the different forms of monthly pay. (Hourly rate, [illegible], piece work, commission, overtime.)

2. The whole class can identify and explain deductions of a paycheck, gross to net. (class discussion)

3. An individual student given a gross salary and the percent of deductions should be able to compute net pay.

4. The whole class, using sample federal and state income tax forms, will complete with given pertinent data.

5. A small group could compare income tax on a given take home salary, explaining why one person might be getting a lower wage per hour yet still earning more because of the fringe benefits.

General Math Resources

Activities 1,2,3,4,5:

Getting Ready for Payday - Part 1,2,3 - Frank Richards - Library
Economics for Young Adults - W.H. Sadler Inc. Library

MATH ACTIVITY SHEET

Objective 5A The student will demonstrate how his interests, abilities, and needs relate to job possibilities.

Introduction to the Teacher: The aim of this objective is to the student his interest, abilities, and needs vis-a-vis actual work situations.

Math Focus: The math focus for this objective is to have student be aware of the math requirements for different jobs.

Math Activities:

1. The Male class will review the math requirements which are essential, important, useful, or needed occasions to certain jobs from the chart of school subjects and jobs provided.

General Math Resources

Activity 1:

School Subjects and Jobs - SRA - Occupational Exploration Kit - Library

Objective 1A The student will develop an understanding of the progression of the C.O.O.P., grades 7-12.

Introduction to the Teacher: The idea of this objective is to have the students become familiar with the Careers Program offered in grades 7 through 12. This orientation will allow the student to foresee various programs and general aims and how he will benefit from them. He also should see how activities have been developed to help him reach the overall goals of the program.

It would be ideal for the Guidance Counselor or ORS to be involved in these activities in conjunction with either of the four major subject areas.

1. The student will participate in a discussion with the Guidance Counselor (and/or the teacher) on the Flow Chart for career education.

2. A. The student will participate in a class discussion linking his major subjects to the career program objectives (with Guidance Counselor and/or teacher)

   B. The student will explore, with the teacher or counselor, high school courses available which lend themselves to occupational skill developments. (a saleable skill before he leaves school)

   ex. College prep
   General — 9th
   Business

   Business
   Tech
   PACE, etc. — 10th
   Work-study Programs

   C. Student will come to an awareness that the high school diploma represents skill development and is not an end in itself.
   ex. various graduation requirements (need for saleable skills)

   D. Student will participate in a discussion of careers related to people, data, and things.

[illegible] Activity Model

Objective: 2. The student will [illegible] English [illegible] the definition of a "job" and a "career".

Introduction: [illegible] Individual [illegible] may hold [illegible] career, we may explore ideas of the advantages of careful planning.

English Focus: The English focus for this objective is developing skill in [illegible] a word in words and theory. Again [illegible] active [illegible] able discussions.

English Activities

1. Have each student write his conception of "job" and "career".

2. Use a class discussion to arrive at a workable definition for "job" and "career". (See filmstrip "What is a Job"--Singer)

3. Divide the class (according to size) into groups which will define either "job" or "career".

4. Using a dictionary have student look up the definition of "job" and "career", and in a paragraph explain the difference between the two items. (Break down into other terms. e.g. "occupation," "work," etc.)

5. Have each student make a collage illustrating the terms "job" and "career".

ENGLISH ACTIVITY SHEET

Objective: 20. After making a class list of different types of jobs, the student will break these jobs down into three areas: 1) working with people; 2) working with things; 3) working with data.

Introduction to the Teacher: Our major aim here is to introduce the student to the fact that different kinds of jobs require different areas of ability--an important fact in career planning. Later in the program, students will begin to connect these abilities to specific jobs by seeing that a person ought to choose a job depending on his interest in performing required skills.

English Focus: The English focus for this objective is to look at the importance of oral communication through different discussions dealing with job categories.

English Activities:

1. The students will discuss the difference between 'people', "things", and "data".

2. Given a list of jobs, divide the class into three groups (1) people, (2) things (3) data. Each group will select jobs which belong in its group. (See Resource Section for list)

3. Have students make collages illustrating the three job areas (people, data, things).

Supplementary Activities:

1. Have students write paragraphs on why one of the above areas interests them more than the other two.

2. After reading Dickens' Christmas Carol, have students determine Bob Cratchit's job category (people, data, things) and tell whether or not they would enjoy working in this category.

3. Discuss the type of person who would enjoy working with people, data, or things.

ENGLISH ACTIVITY SHEET

Objective 26: The student will forecast the job market for future years.

Introduction to the lesson: With this objective, we hope to teach students that the job market is constantly changing and that career planners will take these changes into account.

English Focus: The English focus for this objective is to show students how to develop the use of their imagination both orally and written.

English Activities:

1. Pretend that you are Rip Van Winkle and that you have awakened in the year 2000. What difficulties would Rip have in finding a job?

2. Divide the class into groups. One group will list jobs that no longer exist; a second group will list jobs which will be needed in the future; a third group will forecast what the job market may be in ten or fifteen years.

Supplementary Activities:

1. Using cassette tapes have students record interviews with relatives, neighbors, etc. concerning their jobs (likes and dislikes) and their possibilities for job change.

2. Pretend that the student is living in the year 1776 and write a newspaper classified section of jobs needed in Boston, during this period.

ENGLISH ACTIVITY SHEET

Objective 20 The student will identify choices that have to be made in career education.

Introduction to the Teacher: Students should be aware that they are making career decisions constantly throughout their lives--by courses they select in school, hobbies they pursue, interests they develop, and part-time jobs they select. Students should be aware, too, that some important decisions lie in the future, and that sound career planning demands that each decision be carefully made.

English Focus: The focus for this objective is stressing the importance of English skills.

English Activities

1. Make a blackboard list of choices the students make daily.

2. Make a list of basic English skills students need for any job. (See Resource Sheet for Basic Skills)

3. Examine English as a subject area and list what jobs it helps prepare a person for. (See 2 resource sheets)

Supplementary Activities:

1. Using the student's hobbies or part-time jobs, each student will determine how English skills help him in his hobby or job.

2. The teacher will provide a business letter filled with spelling, grammatical, and letter-form errors. The students will rewrite the letter correctly. (Carry over into interviews, salespeople, receptionist and other people who use oral skills)
(A business letter is supplied)

3. Invite a personnel manager to speak to the class about the English skills involved in a job interview.

ENGLISH ACTIVITY SHEET

Objective 3A The student will define the meaning of a "skill".

Introduction to the Teacher: The main aim of this objective is to help students see that skills most people are basically required to do a job or have a complete function. While some attention is given by employers to the personal employee in, most attention is given to what necessary skills a person possesses.

English Focus: The English focus for this objective is looking at the individual so that he may pick out the necessary skills that will enable him to express himself clearly and logically, speak fluently, and make his ideas known.

English Activities:

1. Through open discussion the students will define a skill (meaning or meanings).

2. Given certain games (jacks, seven up, card tricks) students will demonstrate their pre-acquired skills.

3. Students can demonstrate or discuss skills they use daily such as carrying on conversation on the telephone with people they do not know.

4. After reading the "Dubbing of General Barbara" have class decide which skills Herbie needed to carry out his role as General Grant. (See Resource Sheet for a list of Herbie's skills)

5. Explain the use of figurative language to the class (simile, metaphor, adjective, and adverb). Have the students describe a given object and then read their descriptions orally noticing different methods used to describe things.

ENGLISH ACTIVITY SHEET

Objective 3B: The student will identify skills required in school, work and community.

Introduction to the Teacher: The main aim of this objective would be to show that skills are required in many areas of student's interests. Some important skills are acquired in pursuits outside of school and it is important to relate the skills needed in work and community programs with school learning situations.

English Focus: The English focus for this objective is the further development of oral, written and reading skills.

English Activities:

1. After reading a short story students will show their skill at understanding what they've read by answering one or more questions on the story.

2. Write a paragraph pointing out the skills you must have to write a good paragraph.

3. Discuss what skills are needed for oral presentations. Then have students prepare a short presentation on any subject. (See Resource Sheet for skills.)

4. Have students write and act out a good interview and a bad interview. Then on the chalkboard list the skills needed for a good interview.

5. List the English skills needed to get any kind of a job.

6. Write a paragraph on skills needed to live in a non-educational society.

ENGLISH ACTIVITY UNIT

Objective: To the student will identify skills needed for given jobs.

Introduction to the Teacher: Students are individually different and skills that are necessary for different required careers. Students should consider such to the realization that they be in remain secure in and out of school will prepare him for future jobs. You may try to relate this with the above interests of so-people, i.e., art, dance and show how some people develop skills to meet their interests.

English Focus: The English focus for this objective is to show the importance of teacher's development of communication skills and why they are needed for acquiring future jobs. (See previous two objectives.)

English Activities:

1. Make up a list of jobs on Blackboard (10-15). Have each student list English skills needed for each job. (Prepare a checklist if needed) (See Resource Sheets 19 and 20)

2. Consult Resource Sheet for speakers and have one or more speakers talk about skills needed in their jobs.

ENGLISH ACTIVITY GUIDE

Objective 3D Given a course of study, the student will identify skills that he will be acquiring in the seventh grade.

Introduction to the Teacher: It would be important here to have the teacher outline his course of study with the student so that he will be able to see certain skills that might be important to him in his present situation and in the future. Also together the teacher and student might discuss skills that will be necessary to him.

English Focus: The English focus for this objective is to have students visualize the growth that will occur as a result of exposure to the course of study.

English Activities:

1. List content covered in English in seventh grade. Student will then tell what basic skills are needed such as reading, writing, etc., in attaining these skills.

2. Have students demonstrate the skills they have acquired in letter-writing by writing a letter asking for an application for a job.

3. Have students compose a short speech on whom the student feels is the most important person in the community, and why.

4. Have students read an editorial from the local newspaper and decide what the main point is behind the editorial.

5. Given a list of sentences and sentence fragments, student will decide which one relates a complete thought. (See Resource Sheet on Sentences and Sentence fragments.)

ENGLISH ACTIVITY SHEET

Objective: 3B: The student will identify skills that he needs or acquire for a given job.

Introduction to the Teacher: The main aim of this objective is to develop within the student a process that will enable him to recognize the many skills people need for particular jobs. It is hoped that this will occur early enough in his career selection so that he can give thought to the preparation that is necessary for a career.

English Focus: The English focus for this objective is to make students aware of the fact that English skills are a necessary part of most jobs.

English Activities

1. Have each student select a given job and then list the skills he has required and the skills he will need for the job.

2. Have students write paragraphs about what they have to do to be what they want to be.

3. Have students write a business letter applying for a job(state their qualifications). (Sample letter in Resource Sheets. See resource sheet for rules.)

4. Have students interview someone who has a job and report how they looked for and found the job.

5. Have students prepare a bulletin board that displays ways and places for finding jobs.

6. Have students fill out job applications forms. (See application form in Resource Sheets)

7. After filling out the job application form (number 6) decide what English skills were needed in filling out the application.

8. Have students interview people and ask the question "What did you want to be in junior high school?" "What did you end up becoming?"

ENGLISH ACTIVITY SHEET

Objective VI: The student will recognize the necessity of having a saleable skill prior to leaving school.

Introduction to the Teacher: Our aim here is to help the student see that, by the time he graduates from high school, he should have developed some skills which can be sold to an employer in order to earn a living. Some students may need these saleable skills if plans for further education fall through or because of sudden reversal in family finances. Other students will use these skills to finance college, career education, or setting up households. But for all students, possessing saleable skills is the base for financial security and independence immediately after graduation.

Example: A student who plans to be a computer engineer--requiring two year or four-year college preparation--could finance his college as a punch-card operator--if he has acquired this training in high school.

English Focus: The English focus for this objective is that the skills learned in English can apply to any career.

English Activities:

1. Have the students list the saleable skills learned in English (e.g. Spelling as related to secretaries, typists, etc.)

2. Have a student assume the role of salesman and sell a product or commodity to the class. Then discuss the skills he needed in order to be a salesman(e.g. oral skills)

3. Have the students correct a paragraph containing spelling errors.

4. Read a list of very simple directions and have students write down what the directions were.

5. See Resource Section for reading a five minute reading selection on following directions.

ENGLISH ACTIVITY STUDY

Objective IV. Given an inventory, the student will assess his interests.

Introduction to the Teacher: This objective aims to assist the student on a general determination of his interests.

English Focus: The English focus for this objective is to make the students aware that their personal interests can direct some their job selection.

English Activities:

1. Have students write essays or paragraphs on:
   a. My Hobbies
   b. My Likes--Dislikes
   c. What I Do In My Spare Time
   d. The Type or Types of Jobs I Like or Dislike Doing

2. Have students discuss how their interests, abilities, and needs determine their selections of jobs.

3. Have students discuss the difference in meaning between 'interest' and 'need.'
   (A worksheet on Interests, Abilities, and Needs is included in Resource Sheets)

ENGLISH ACTIVITY UNIT

Objective 5A: The student will know the difference between the public or the private sector of employment.

Introduction to the Teacher: The aim of this objective is to have students recognize that there is such employment in either the public or private sector of the economy. The students should also learn the ways each sector is organized and the purposes for which each exists. The students should know the kind jobs each sector employs people in as well as the responsibilities of each sector to the community.

English Focus: The English focus for this objective is to have the students become aware of terminology.

English Activities:

1. In a class discussion each student will come to an understanding of the words public and private.

2. The student will list jobs that fall into each category. (Lists already prepared in Resource Phase.)

3. Students will make posters or collages illustrating public and private employment.

4. Students will write a comparison and contrast composition on the similarities and differences between public and private employment.

5. Have students read 'The Christmas Carol' or show the film 'Christmas Carol' and with knowledge of terms of employer and employee:

   a. Was Scrooge a public or private employer? (Why?)

   b. What fringe benefits did his employees receive, if any? Explain.

   c. Characterize Scrooge as an employer.

   d. What were Bob Cratchit's characteristics as an employee?

ENGLISH ACTIVITY UNIT

Objective: 83 The student will understand the difference between an employee and employer.

Introduction to the Teacher: This aim is to have the student get through the many confusing aspects of employment and come up with something that will enable him to distinguish the roles of an employer and employee.

English Focus: The English focus for this objective is to make the student aware of the terminology associated with employers and employees and related vocabulary to social studies.

English Activities:

1. In a class discussion, students will define employee, employer.

2. With the student assuming the role of employee, in a seventh grade English class, he will write a list of his jobs only insofar as they are related to the English content he is studying.

3. Evaluate a student in your class as an employee, keeping in mind that you are his employer.

4. Have students write and act out skits about good employers and poor ones and vice versa.

5. Have students make listings of the qualities of a good employer and good employee.

6. If you were in a situation where you owned your own company, list your responsibilities to your employees (and vice-versa).

ENGLISH ACTIVITY CARDS

Objective 5C The student will identify characteristics of employers.

Introduction to the Teacher: The aim of this objective is to enable the student to identify the main kinds of employers that there are and types of jobs they perform particularly as they affect the benefits and "on and" conditions of employees.

English Focus: The English focus for this objective is satisfied by the Social Studies objective.

English Activities that may be used by English teachers in aiding the students to see the aim are:

1. Interview three people with different kinds of jobs, and write down their comments about the responsibilities and characteristics of each or their employers.

2. In a paragraph list the qualities you would like your boss(employer) to have and why.

3. What qualities wouldn't you want your boss to possess.

4. Students will listen to an employer relate characteristics he thinks employers should have.

5. Given a list of characteristics of employer and employee, students will pick which ones relate to the employer and which relate to the employee. (Worksheet included in Resource Sheets.)

ENGLISH ACTIVITY SHEET

Objective 52 The student will identify characteristics of employers.

Introduction to the Teacher: The aim of this objective is to enable the students to identify many types of employers and to see how the roles of employers differ a great deal from job to job.

English Focus: The English focus for this objective is to show students that the word "job" has many different connotations.

English Activities for Students:

1. List the meanings of the word "job" in relation to school, home, and work.

2. Have students interview parents and neighbors on cassette tapes and ask the question "What is a good employer?" Play tapes in class.

3. Make a collage showing the attributes of a good employee.

4. Select two classmates and tell what characteristics each has that would make him(her) a good or bad employer.

5. Given an unpleasant "on the job" situation, and a list of alternative behaviors, select one and tell why you picked it. (Sample situation in Resource Sheets.)

6. Write a script that shows a "confrontation" between employer and employee.

7. Write down the qualities you think you possess that would enable you to be a good employer.

8. The student will list the characteristics he now possesses which enable him to be a good employee.

ENGLISH ACTIVITY SHEET

Objective 6A The student will demonstrate how his interests, abilities, and needs relate to job possibilities.

Introduction to the Teacher: The aim of this objective is to tie together his interest, abilities, and needs with actual work situations.

English Focus- The English focus for this objective is to have the student see his total self in relation to job situations.

English Activities:

1. Have students assume the role of teacher. Show the method you would use in handling a difficult class.

2. As a culminating activity the student will write a composition about who he is and how he fits into the world of work.

3. Have students make a game showing the relationship of individual jobs to the job cluster.

4. Given a list of English-related jobs, the students will put each into one job cluster(see resource list)

5. Have students discuss the difference between job and job cluster.

6. Show a movie of how, for example, a hospital has many jobs belonging to one cluster.
(Movie available "This Is Upstairs")

Objective 1A The student will develop an understanding of the progression of the G.O.O.P., grades 7-12.

Introduction to the Teacher: The idea of this objective is to have the students become familiar with the Careers Program offered in grades 7 through 12. This orientation will allow the student to foresee various programs and general aims and how he will benefit from them. He also should see how activities have been developed to help him reach the overall goals of the program.

It would be ideal for the Guidance Counselor or ORS to be involved in these activities in conjunction with either of the four major subject areas.

1. The student will participate in a discussion with the Guidance Counselor (and/or the teacher) on the Flow Chart for career education.

2. A. The student will participate in a class discussion linking his major subjects to the career program objectives (with Guidance Counselor and/or teacher)

   B. The student will explore, with the teacher or counselor, high school courses available which lend themselves to occupational skill developments. (a saleable skill before he leaves school)

   ex. College prep
   General — 9th
   Business

   Business
   Tech
   PACE, etc. — 10th
   Work-study Programs

   C. Student will come to an awareness that the high school diploma represents skill development and is not an end in itself.
   ex. various graduation requirements (need for saleable skills)

   D. Student will participate in a discussion of careers related to people, data, and things.

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[illegible]

Objective [illegible]

[illegible]

Science Focus: [illegible]

Science Activities:

Introduction [illegible]

1. [illegible]

Independent Investigations

1. [illegible]

2. Whenever [illegible] a job [illegible] have [illegible] in the future.

Culmination:

Class will relate the scientific method to the creation of new jobs.

SCIENCE ACTIVITY SHEET

Objective 3C The student will identify skills needed for given jobs.

Introduction to the Teacher: There are definitely different skills that are necessary for different occupations--the students should generally come to the realization that what he is learning today--in and out of school--WILL prepare him for future jobs. You may try to relate this with the above interests areas--people, things, and data and show how some people develop skills to meet their interests.

Science Focus: Students will identify skills they have acquired so far in their activities.

Science Activities: Class as a whole

1. Students will make a composite list of skills they have acquired to this point and relate them to various jobs they have performed.

2. Students will identify these skills as working with people, data, or things.

[illegible]

Objective 3b: Given a course of study, the student will identify skills he will be expected to use in the 7th grade.

Introduction [illegible]: It is felt [illegible] to have the student outline the course of study [illegible] and certain skills that will be used [illegible] and in the future. Also, [illegible] the teacher and students where diagnose skills that will be necessary to have.

Science Focus: It is here students will relate the science experiences and the skills [illegible] to their present situation and future in a science-related career.

Introductory Activities

1. The teacher will outline the course of study in science for the year and suggest various careers related to subject matter.

2. The teacher will introduce the Periodic Table and its importance to Chemistry.

Class Activities in Chemistry - See resource materials for activities in detail.

1. Using some modern [illegible] and pencil, students will become familiar with atomic structure by creating some models.

2. Electrolysis

3. Distillation

4. Density and Buoyancy

5. Elements, Compounds and Mixtures

6. Electroplating

Independent Activities for Chemistry

1. Student will identify certain chemicals and/or chemical processes used in various trades by a [illegible] baker, plumber, mechanic, electrician, custodian, etc.

2. Student may use materials found around the home to make a still.

3. Student may study the effect of the strength of a solution on its rate of freezing by using paper cups, rubbing alcohol, and water in a home experiment.

Notes to Teacher: Students may do any independent activities well as a teacher would normally accept. The student should relate his projects to necessary skills or a career area.

Culminating Activity for Chemistry:
Students will refer back to their list of skills needed for careers in science and identify those used in chemical-related careers. We will also add new skills to his list.

Introductory Activity for Physics: Teacher will assign students to research matter to be covered and say what careers relate to it.

Physics

Group Activities: See resource material for activities in detail.

1. Work and force
2. Friction
3. Machines: A. lever
   B. inclined plane
4. Methods of heat transfer
5. Measuring heat energy
6. Specific heat
7. Nature of sound
8. Speed of sound
9. Music
10. Nature of light
11. Spectographic analysis
12. Lenses - refraction
13. Mirrors
14. Electro-magnetic spectra
15. Magnetism
16. Static Electricity
17. Ac-Dc (Generators and Batteries)
18. Series and Parallel circuits
19. Electromagnets
20. Catch that electron
21. Radio Active decay

Independent Activities: Students may select any usual type of extra credit project usually acceptable to the teacher to supplement his knowledge of Physics.

Culminating Activity - Physics
Students will refer back to their list of skills needed for careers and identify those involved in physics. We will also add new skills to his list.

Note to Teacher: We do not intend for you to necessarily teach as we suggest. We only hope to show you how career education will fit into the science curriculum regardless of the teaching method you elect.

Science Activities

Objective 1: The student will identify skills that [illegible] need for a career.

Introduction to the teacher: The main element this objective is to acquain[illegible] with the concept of [illegible] and will enable him to [illegible] the [illegible] skills people need for preparation [illegible] in [illegible] and [illegible] each [illegible] and [illegible] the [illegible] can give [illegible] to the preparation that is necessary for a career.

Science Focus: Students will explore a science related job and develop a process that will enable him to [illegible] the [illegible] skills people need for particular jobs.

Science Activities:

1. Student will go to the library, refer to the job file or careers, select one science-related job and identify skills a person would need to acquire to perform the job.

2. Student will interview a person on the job and identify the various skills needed (field trip).

[illegible] ACTIVITY CHART

Objective 3B: The student will [illegible] the [illegible] [illegible] [illegible]

[illegible]

Objective 9A: Given an interest, the student will [illegible] the interest.

Introduction to the Teacher: This objective aims to start the student on a general re-examination of his interests.

Science Focus: This objective aims to start the student on a personal determination of his interests in science.

Science Activities:

1. Given an interest, the teacher will [illegible] it to his students to assess his interest. (Some students have already been interested by guidance or another [illegible] or event.)

2. Once results are received from interest inventory, teacher will point out how a person's interests could be related to a "Science-related career".

Science Plan Sheet

Objective 5a. The student will identify the [illegible] between the public and the private business [illegible].

Introduction to Pupils: [illegible] The job of these [illegible] is to [illegible] know what [illegible] in the job [illegible] to [illegible] and the rest of the public. They are [illegible] to the [illegible] and [illegible] services. They should [illegible] that the [illegible] of the business world is [illegible] to provide goods and services [illegible] a profit for the owners.

Science Focus: Students will be looking at the private and public sectors of the business world. [illegible] to students. They will learn how these [illegible] not always provide goods and services but provide profit for owners.

Science Activities:

Introductory Activities:

1. Teacher will ask students to list business [illegible] that are related to science and conduct a class discussion on how each provides goods and/or services.

2. Field trips (see Resource material)

SCIENCE ACTIVITY SHEET

Objective 5.0: The student will understand the difference between an employee and employer.

Introduction to the Problem: This lab is to [illegible] the student [illegible] the many [illegible] involved and some problems [illegible] that could lead to frustration for both an employer and employee.

Science Focus: The student will understand the difference between employee and employer in science-related jobs. Should be taught in conjunction with social studies.

Science Activities:

1. Students will discuss territoriality and how it might relate to job situation.

2. In lab situation, who has dominant role "organizer", assignment of duties etc.? Who does undirect role?

[illegible]

Objective 5a: The student will [illegible] the rights of employees.

Introduction to the lesson: The aim of this objective is to enable the students to identify some of the ways, and to see how the rights of employees affect a [illegible] from job to job.

Science Focus: [illegible] IN SOCIAL STUDIES

SCIENCE ACTIVITY [illegible]

Objective #8: The student will demonstrate his [illegible] abilities, and more relate to job possibilities.

Introduction to the Teacher: The aim of this activity is to tie together his interests, abilities, and needs with actual work situations.

Science Focus: The student will demonstrate how his interests, abilities, and needs relate to some or any of the job possibilities in science.

Science Activities:

1. The student will identify how his interests, abilities, and needs fit him into one or each of the job possibilities in science-related fields

2. Class discussion to review the Are I and Not I fit into World of Work and how best that we have done in science helped us to answer these questions for ourselves.

8TH GRADE - GUIDED OCCUPATIONAL ORIENTATION PROGRAM

What are my opportunities in the world of work which relate to my interests, abilities, and needs?

Goal I The student will develop a process whereby he relates his interests, needs, and abilities to career choices and develops a method to investigate many career choices.

A. The student will evaluate or re-evaluate interests, abilities, and needs as related to a career selection.
B. The student will identify and use available tools in job selection
C. The student will develop criteria such as people, data, and things to investigate job choices.
D. The student will demonstrate how he will support himself until reaching his career goals--including a saleabl saleable skill at his high school graduation.
E. The student will list a sequence of steps for future job and/or career selection. The list should include previous objectives:
   1. relating interests, abilities, and needs to job choice;
   2. using criteria in evaluating prospective jobs;
   3. using available tools of job selection;
   4. determining a saleable skill.

Goal II The student will demonstrate that he has many career choices.

A. The student will distinguish why (how) jobs are grouped in job clusters.
B. The student will investigate what skills are required for the jobs in the cluster.
C. The student will be aware of the progression of jobs within the job cluster.

Goal III The student will see the importance of what he is learning as it relates to job selection.

A. The student will participate in activities in a given subject that relates to job clusters.

Goal IV The student will investigate tentative career selections made in clusters.

A. The student will determine characteristics of jobs.
B. The student will relate preparation and requirements needed to each job choice.

Goal V The student will demonstrate that he can change his career selection as his interests, abilities, or needs change.

A. The student will show how skills needed in one cluster can be applied to other clusters.
B. The student will develop tentative lifetime careers.
C. The student will forecast the retraining additional skills and continual education necessary to maintain or change his jobs.

SOCIAL STUDIES ACTIVITY SHEET

Objective 1A The student will evaluate or re-evaluate interests, abilities, and needs as related to a career selection

Introduction to the Teacher: At this point, we should help the student summarize the information and inquiries he has done during his seventh grade work. This time, he will use this information as the base for exploration of various jobs, careers, and processes for obtaining both.

Social Studies Focus: The student should consult the list of Social Studies and English skills and take the interest and needs survey. The student should be helped to see the skills he will be learning in class will help develop his interest and help prepare him for a career selection.

Social Studies Activities:

1. Take or retake interests survey developed

2. Take or retake needs survey developed.

3. Review list of skills - Student should make up an inventory as follows: skills he has, skills he needs to develop, skills he needs to acquire (See Resource Sheet.)

4. Student will begin a form which will help him or her compile the information about himself and add to it as he pursues the activities related to job selection. (See REsource Sheet)

NOTE: Student who used form in 7th grade will continue it or make changes where necessary.

5. Students could use the information about skills interests and needs to write a personal history to be used in applying for jobs.

6. Students who enjoy more artistic endeavors could do a poster or collage which will show their needs, interests, and skills. Answering the question - Who am I?

7. Students could select a government job and a person to go with that job. i.e. Governor, President, etc.

a. Student will then write a summary of this person's life and career.

b. Student then research the skills and interests required for this job as well as needs to be satisfied. (Students may need teachers help in identifying a job category for the person selected, i.e. public service management.)

c. The student will compare the person selected with job requirements and determine how they do or do not match.

SOCIAL STUDIES ACTIVITY SHEET

Objective 1B. The student will identify and use available tools in job selection.

Introduction to the Teacher: Many people have difficulty obtaining employment simply because they do not know where to find help. Our aim with this objective is to help students become familiar with the tremendous number of agencies, sources, and materials for help in career-choice or placement.

Social Studies Focus: The emphasis of this objective is to help students develop skills connected with finding and evaluating information. The student should become aware that such skills are helpful in learning Social Studies and in job selection.

Social Studies Activities:

1. Given a chart listing resources by categories the student will select one resource from each category and investigate the type of information available.

2.A. Use the form begun in objective 1A. Add information about the 5 jobs that he uncovers in the investigation of resources in activity 1.

B. Keep a record on all the information gained about 5 or more jobs in the investigation in activity 1. This could be kept like a folder or notebook.

From investigation of Resources:

3. Student could develop a check list (See SRA Workbook for widening Occupations kit) to use in interviewing someone who is already working at a job in which student is interested.

4. Students could develop a check list to use in interviewing employers in job areas in which they are interested.

Suggested Questions:

1. What needs of society are filled by your job area?
2. What type of organization are you ? (Corporation, Partnership, etc.)
3. Are you profit, non-profit , private, or public?
4. How do you select people for jobs? What are criteria and process?
5. What opportunities for advancement are there in your job area?
6. What are fringe benefits?

SOCIAL STUDIES ACTIVITY SHEET

Objective 1C. The student will develop criteria such as people, data and things to investigate job choice.

Introduction to the Teacher: The person who wishes a career which will provide continued satisfaction to him must choose that career wisely. In particular, he should choose a career where the day-to-day routine work matches his own likes and dislikes. A person who likes work with things would be foolish to choose a job primarily devoted to direct work with people. Our aim here is to introduce the idea of such choices to students.

Social Studies Focus: The student should understand that criteria are set up based on some set of value judgements. For purposes of investigating jobs the student needs some set of criteria to use. The students must determine his value judgements related to jobs.

Social Studies Activities:

1. The students should list his values about:
   1. School
   2. Education
   3. Work
   4. Leisure time
   5. Marriage
   6. Children
   7. What they want their life to be like
   8. Salary
   9. Music, etc.

2. The student should decide from their list of values, what things would be important in a career.

3. The student should list from three to five categories that reflect the values they have regarding careers.

   Examples:

   I want a job that deals primarily with people.
   I want a job that will enable me to be creative.
   I want a job that will provide a social service to people. Etc.

4. The students should review the categories People, Data, Things and Ideas and see if it is useful for them.

5. Using the form from objective 1A, the student should fill in the information for each job already selected under the category - People, Data and Things - OR change and use the categories they developed.

SOCIAL STUDIES ACTIVITY SHEET

Objective 1D. The student will demonstrate how he will support himself until reaching his career goals--including a saleable skill at his high school graduation.

Introduction to the Teacher: Our aim with this objective is to show students that, immediately at high school graduation, many people are forced to begin earning income. The logical preparation for this situation is that each student, during his years in public school, should acquire some skill which can be "sold" to an employer. He can then use this school to set up a household, finance further education, or any other purpose for which financial security is needed.

Social STudies Focus: The student should be able to determine which of the skills he has or is learning is saleable immediately. The student should realize that some skills he is learning in Social Studies maybe saleable at some future date.

Social Studies Activities:

1. Given the want ads from the New York Times or a Syracuse newspaper the student will select three jobs for which he already has the necessary skills. Students should list the skills he has that he thinks prepare him for a job.

2. The student will research entry level jobs in job areas he is interested in. The student will make up a short life-history that explains what skills he has that would enable him to do the entry-level job.

3. The student who plans on education beyond high school should estimate costs of such education and determine how he will pay for this education. The student will list the skills he has that would enable him to get a job that would pay for his education.

4. The students will list the positive characteristic they could demonstrate that would help them get a job for which they have the skills.

5. The students will submit their life-histories to firms offering jobs for which they are prepared and set up interviews.

6. The student will write a short paragraph explaining how he would support himself he for some reason he had to leave school at 16.

General Social Studies Resources

See resource sheets 7th grade Math objective 2A.

SOCIAL STUDIES ACTIVITY SHEET

Objective 1E. The student will list a sequence of steps for future job and/or career choice. The list should include previous objectives: a. relating interests, abilities and needs to job choice; b. using criteria in evaluating prospective jobs; c. using available tools of job selection; d. determining a saleable skill.

Introduction to the Teacher: Our aim with this objective is that each student should develop his own, personal process for career choice and job-seeking. Hopefully, he can use such a process throughout his life in determining a satisfactory situation for employment. As we have suggested, the most logical process will include the objectives already worked on under this goal (listed above).

Social Studies Focus: The students should realize that the information finding skills they have learned or reinforced in Social Studies will enable them to develop a sequences of steps that will help them select a satisfying career choice (or class may make one up).

Social Studies Activities:

1. Given a list of career-choices (or class may make one up) decisions prople might have to make the students will list the procedures these persons should employ in acquiring the information they need to make a good decision.

2. The students should analyze the form used in Objective 1A and 1B and determine:

a. How many steps are involved?
b. What are thesteps?
c. In what order should these steps be completed? (Most important first)
d. What steps would they add?
e. What steps would they leave out?
f. Make a new form showing: 1. step they would use
2. Order in which they should be done.

3. Select one of career-choice decisions from activity 1 and use your sequence of step and locate the information. Write a case study (Try to select a career decision that is likely to apply to you).

4. For creative students - A group might like to create a skit from one of the career decisions in Activity one showing:

a. Before - No way to get information
b. After - Having developed and followed a sequence of information finding steps.

SOCIAL STUDIES ACTIVITY SHEET

Objective 2A. The student will distinguish why (how) jobs are grouped in job clusters.

Introduction to the Teacher: "Clusters" are rapidly becoming the most prevalent means of organizing career groups. Each major function within society--transportation, Manufacturing, etc. -- becomes the organizing force behind a group of jobs, and all jobs which support this function are grouped together. Thus transportation would include not only bus drivers, but also secretaries at bus firms, highway engineers, taxi-routers, and railway workers-- all workers who somehow contribute to maintaining the nation's transportation system.

Social STudies Focus: The student in his eighth grade work can see the historical developments which led to the creation of many fasceted job areas. One way the students can organize these related areas is into job clusters. In the course of 8th grade work several job clusters relate more directly that others. There are:

Manufacturing
Transportation
Public Service (Government Services)
Agri-Business (Shared with Science)
Communication and Media (Shared with English)

Social Studies Activities:

1. Given a topic of study from the curriculum from each of the cluster related to Social Studies the students will list all the things that must be done to get the job done.

Examples:
Canals - Transportations
Making of Steel - Manufacturing
A public work project - Public Service (New Deal)
Cattle raising in Far West - Agri-Business (Conflict with farmers and sheep raisers)
Development of Connunication satallies - Communications & Media
Part of Space Projects.

The students can complete this assignments using texts, ingroups through library research, etc.

2. Given an explanation of each cluster and a list ofjobs the student will categorize each job under the most appropriate cluster.

3. Utilizing the results in activity 1 the students will list jobs that were performed in more than one cluster (Most of these should be organizational, clerical, financial, managerial, etc.) The idea is to show that certain jobs are common to many clusters - some specific.

4. Given a list of people with certain job experience and skills - Student will determine what job cluster or clusters the person could investigate in looking for a job.

5. The students will explain why or why not it is an advantage to them to have jobs grouped into job clusters.

General Social Studies Resources

For activity 4, see resource sheet of objective 5A - Social studies 8th grade - People and Job experiences.

SOCIAL STUDIES ACTIVITY SHEET

Objective 2B. The student will investigate what skills are required for the jobs in the cluster.

Introduction to the Teacher: Our aim here is to help students see that each cluster requires specialized skills and that jobs within each cluster demand that the job-holders possess skills. At the same time, a person with a particular set of skills could seek work in many clusters. Secretarial skills, for example, are present in almost all of the clusters. The key to proper job selection, however, is to choose a suitable career aim, then to secure training in the skills needed for placement in that career.

Social Studies Focus: The Social Studies focus for this objective is to examine the clusters designated for Social Studies and determine which Social Studies skills are necessary to obtain the jobs in each cluster.

Social Studies Activities:

1. A. The student should utilize the form from objective 1A. To the jobs already listed, the student should select one job from each of the five clusters related to Social Studies they are most interested in. Using widening OCC Roles Kit or the other kit, the student will investigate each of the jobs and fill in the information about each job on their form.

B. The student will determine for each of five jobs whether the skills needed for that job can be transferred to another job in that cluster or to a job in a different cluster.

2. The student will determine:
   1. The advantages of having job skills that can be transferred from cluster to cluster
   2. The advantages of having specialized job skills

3. For each of the jobs listed on resource sheet, the student will determine:
   1. Which of jobs could be transferred from cluster to cluster without retraining
   2. Which jobs would need complete retraining to move from cluster to cluster.

   3. Which jobs would require some retraining to move from cluster to cluster.

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SOCIAL STUDIES ACTIVITY SHEET

Objective 2C. The student will be aware of the progression of jobs within the job cluster.

Introduction to the Teacher: All jobs within a particular cluster fit a logical order--close to the "line of promotion" in that cluster. A person may start his career with on-the-job training, become a fulltime worker, and later attain a managerial level within the same cluster. Our aim here is to help students recognize this progression.

Social Studies Focus: The student should realize that as he learns a skill in Social Studies, he can then progress to a more difficult skill. The student should also realize that if he increases his skills education and experience he may move from job to job.

Social Studies Activities:

1. Utilizing the information gained about one job in each cluster in objective 2B, The student will be asked to develop a series of at least five jobs which he could move to related to that job.

A student might use the following:

1. entry job - where he could start with skills he has now
2. Where he could move after
   a. getting experience on the job
   b. Getting a high school diploma
3. What job might he get if
   a. Showed leadership on the job
   b. Took special training to develop new skills
4. What job could he move to if:
   a. finish specialized training or college
   b. Earned a reputation for doing his job well
5. What job could he move to if:
   a. he married the boss' daughter; she married the boss' son
   b. Came up with sometime or cost-cutting ideas and presented them well.
   c. Took on extra jobs (Community, union, social committee, etc.)and became well know and more influential

2. Student will determine what social studies skills you need to do the following

1. Tell how far Chicago is from Detroit.
2. Tell the direction you go in to get from City Hall to Onondaga Lake.
3. Navigate a plane from New York City to San Francisco.
4. Locate an article on Martin Luther King.
5. Discuss the present economic situation.

3. Write to a company which is part of one of five clusters and ask them for materials regarding particular series of jobs skills needed - opportunities for advancement - educations, personal qualities from information- Write up a job progression.

See Manufacturers, Products 1970 Guide to Greater Syracuse Industry, Onondaga county, New York.

See resource for suggested job progression.

SOCIAL STUDIES ACTIVITY SHEET

Objective 3A. The student will participate in activities in a given subject that relate to job clusters

Introduction to the Teacher: In this very important objective, we are attempting to show students how their regular schooling relates, ultimately, to employment. Each subject a student studies will prepare him with skills suitable to jobs in various clusters. Our aim here is to show students the validity and worth of their schooling as related to future career placement.

Social Studies Focus: The Social Studies teacher in the objective will relate the curriculum to Career Clusters though specific activities. The student should investigate the basic structures of the following clusters:
Agri-Business - Shared with English
Transportation
Manufacturing
Communication & Media - shared with English
Public Service - Government

Social Studies Activities: Activities for this objective are organized by clusters. In addition, general activities are included as well as summary or composite activities which include several cluster.

Teacher are encouraged to search out specific places in the curriculum, as they teach it, to relate the clusters.

Culminating Activity:

I.

A. As a result of completing activity 3a, the student should be able to complete the form - Career Cluster Information - See resource sheet. This form should contain information about 5 or more jobs within one of the career clusters that follow:

Transportation
Manufacturing
Public Service
Communications and Media
Agri-Business

B. In addition the student should be able to write a brief description of the cluster and a brief summary of some historical development within that cluster.

Activities -

The student will investigate several jobs to get the necessary information asked for on the suggested worksheet called Career Cluster information. There are many ways the students can get the information.

1. Have each student interview his working parents and exchange the data with other students in class.

2. Use one of the "job briefs" series in library, guidance office, or classrooms.

3. By observing people on the job, either on field trips or after school.

4. Field trips to appropriate places. I.e. Television studio, factory, forestry school - at Syracuse University Campus, a farm - Borden's, a government office - Motor Vehicle Bureau

SOCIAL STUDIES ACTIVITY SHEET

Objective 3A. Continued

II Use Resource Sheet called Social Studies Skills

a. Have students research on their own and complete the resource sheet.

b. Break the class in groups. Let each group assign responsibility for certain skills and research - As a group decide which clusters have jobs that require those skills.

III. After completing the resource sheet on Inventors, the students may:

a. Make a timeline of the inventions and inventors.

b. Select one inventor from an area in which the student is interested in working and do a report on this person's life and the effects on society of his invention.

c. Have each student make a poster of an invention and inventor for display in class.

d. Have students do collages showing a particular invention and its uses or effects.

IV. Complete Resource Sheet- Population Trends. The students may:

a. research population trends of the future and predict the influence on the growth of the Career Clusters for Social Studies

b. Research trends in growth or declines of Career Clusters and hypothsize the causes of these trends.

c. Select a job cluster area which has best possibility for student in terms of career selection.

V. Complete the resource sheet - Transportation - A History, then students may :

a. Students will make a transportation collage or series of posters.

VI. Students will complete activity and Public Service Growth. Then:

a. students will research present bedgets and determine

1. Areas of greatest expenditures
2. Possible reasons for increases

VII. Students will complete resource sheet - Public Service History and Cost. Then:

1.a.Make as complete a list as possible of all government services.
b.Estimate costs (using budget) of 5 or more services.

VIII. Agri-Business Activities

a. Have students make a list of: all the inventions in their texts which helped agriculture; of all the Legislation affecting Agriculture.

b. Have students research either an agricultural invention or legislation and write a report explaining the effects on society.

SOCIAL STUDIES ACTIVITY SHEET

Objective 4A. The student will determine characteristics of jobs.

Introduction to the Teacher: With this objective, students begin tentative, exploratory investigations of particular jobs and careers, finding out as much as possible about the day-to-day requirements of such work and what benefits such employment provides the worker.

Social Studies Focus: The student will determine the characteristic of a job. The student will also decide what charateristic he is most interested in by relating job characteristic to his value judgements and career goals.

Social Studies Activities:

1. The student will draw up a list of their expectations of an ideal job (This could be done individually, in groups, in class by discussion with or without research.)

2. The students will take the role of employer. For their ideal job, they are to list all the things an employer could expect from an ideal worker. (on the job performance, qualifications, attitudes, etc.)

3. From the lists composed in activities one and two the student should make up a composit list. The list of what they expect and what demands the job will make should show the major characteristic of a job.

4. Students shoudl compare their lists with a list of job characteristics (See resource sheet) There maybe some things to add to their lists or to the master list.

5. The students should select a job and research the characteristics according to their list. (Students should already know how to do this).

6. Students should answer the following question:

How does society benefit if the individual can match his expectations of a job with a real job?

General Social STudies Resources

1. SRA Kit Booklet - What Employers Want
2. Employee Booklets from firms like MONY of Carrier

3. See math resources 5A - 7th grade for budget and tax dollar graph
4. See Math resources 5C 7th grade for information on Social Security
5. See Math resources 5D 7th grade for information on Fringe Benefits

SOCIAL STUDIES ACTIVITY SHEET

Objective 4B. The student will relate preparation and requirements needed to each job choice.

Introduction to the Teacher: If a student is to secure future employment in a career satisfactory and rewarding to him, he must prepare adquately in order to secure the job. Our aim here is to help students determine the amount and variety of preparation necessary for those jobs which, at this point, interest him.

Social Studies Focus: The student should have begun to consider educational and training goals related to job interests. The student should become familiar with the variety of opportunities for job preparation available in school, community, and industry.

Social Studies Activities:

1. A. The student should review the form begin in objective 1 and reasses his interests in the jobs he has investigated to date. At this point the students should add to or delete from the list.

b. For each job remaining on the student's list, he should investigate the training and education requirements of each job. The student should determine the ways in which he can fulfill these requirements.

1. By investigating the opportunities within the school system
2. By determining how he could obtain training and experience through part-time summer or volunteer work !
3. By identifying college, training programs or other schools which could help him meet the job requirements.

This information should be added to that already obtained through other activities. The student by this time may require a folder or notebook in which to keep his work.

2. For one job the student is to describe how he could fulfill the job requirement from now until the day he might get the job (include courses to take in school).

3. The student will answer the following question:

After you meet the requirements for a job and get it, what reasons are there for continuing educational or skill development? How would you go about this process?

General Social Studies Resources

1. Outline of Occupational and Continuing Education for Syracuse - see resource sheet.

2. Pupil Services Bulletin No. 15. Jan. 10, 1972

SOCIAL STUDIES ACTIVITY SHEET

Objective 5A. The student will show how skills needed in one cluster can be applied to other clusters.

Introduction to the Teacher: As has been mentioned before, certain skills are needed by more than one job cluster. A person with carpentry skills, for example, could build houses (Construction), work in the carpentry shop of a howpital (Health), build mock-ups for auto manufacturers (manufacturing), or help maintain and modify public buildings (Public Service). A person who desires longtime employment and constant demand for his skills will explore such possibilities, so that his personal career can meet the changing needs of the economy and employment market.

Social Studies Focus: The student should be broadening his awareness of the transferability of some skills from class to class, from job to job, and from job cluster to job cluster. In addition the student should see that highly technical or specialized skills may be limited in their applicability to jobs.

Social Studies Activities:

I. Given a list of cluster and a cluster breakdown the student will list all the clusters in which the following might be qualified for a job. (The teacher may wish to identify each with a feal figure.)

1. A political figure who has held a major administrative post. (See resource sheet for list of skills)

2. A lawyer who has specialized in financial and corporation cases

3. A singer who writes, arranges, and performs her own songs.

4. A scientist who specializes in problems dealing with travel in space - has also been in charge of several projects

5. A truck driver who specializes in long distance delivery of unusual products, i.e. explosives, poisonous gases, arts objects, live animals, etc.

II. Given a list of five social studies skills (or you might have the student select five). (See resource list for skills.)

The student will:

a. List the school subjects in which these skills are used.
b. List as many jobs as you can find in five or more clusters in which each skill can be useful.

III. Select one of the skills from activity II and explain how the skill is helpful in the jobs chosen in activity II.

IV. List the skills (do research if necessary). (Teacher may want to ditto copies of each job brief common to each of the following job holders:
1. Carpenter; 2. Craft Artist (Carves Statutes); 3. Furniture designer,
4. T.V. personality with a show emphasizing antique and quality furniture
5. An importer of woods used in furniture-making

V. For one of the jobs you have identified as interesting to you decide:
1. What cluster could you be employed in (assuming you are qualified)?
2. Are all the skills you need for this job transferable? Explain.
3. What other jobs could you be qualified for in any one cluster?

SOCIAL STUDIES ACTIVITY SHEET

Objective 5B. The student will develop tentative lifetime careers.

Introduction to the Teacher: Our aims here is not to lock a student into a set of unchangeable, rigid career plans. What we hope the student will do, however, is hypothesize and predict about future career plans. If he chooses a particular entry-level job, where will it lead? If a student predicts that he will have a managerial position at age 40, what must he do at age 25 to plan for his future? What type of educational program should a student follow after high school to plan for careers in the future?

Social Studies Focus: The student should become aware that goals are necessary to make school and a choice of a career more satifying. People who derive satisfaction from what they are doing may be more productive and happy members of society.

Social Studies Activities:

1. Review the process of career selection
   a. Through oral discussion
   b. Through a written group assignment
   c. By writing a skit or short story about a person making a career choice.
   d. Though posters, cartoons, drawings that demonstrate the process.
   e. By using film strips Choosing Your Career and Job Attitudes- A Job That Goes Someplace

2. The student will pretend that they have discovered a Genie. The Genie will guarantee them happiness if:

1. They present a career plan for the next 10 years that will prepare them for a career in which they are suited.

2. Each student will submit such regarding around the job they have already investigated and in which they are interested.

3. Select a day you might spend on a job that is part of your career in 10 years. Show what the day will be like (by writing, drawing, etc.) and how you would be furthing you career and life goals.

4. Create a mack interview with a prospective employer. Answer his question: What do you want to do with you life and how does this job fit in?

SOCIAL STUDIES ACTIVITY SHEET

Objective 5C. The student will forecast the retraining, additional skills, and continual education necessary to maintain or change his job.

Introduction to the Teacher: As the US economy changes, as the labor market shifts, or as technological innovation becomes increasingly applied throughout the economy, individual workers must continually develop and adapt their skills to the new situations. Our aim here is to help students see the lifelong need for continued development of skills and working ability.

Social Studies Focus: The student should demonstrate flexibility in regarding his career plan in terms of his goal.

Social Studies Activities:

I Each student will decide how the following could effect them in their career choices.

1. Most people work at least 45 years of their lifetime.
2. A larger percentage of the work force is women.
3. Many jobs will disappear in the years to come and new jobs requiring new training will develop.
4. Most people spend more of their time at work than at any other single activity.
5. Many people must change their careers 3 times or more in their lifetime.
6. Many people must move 3 or more times in their lives in order to keep their jobs or advance.
7. Most jobs today require at least a high school diploma and/or special training.
8. Circumstances like death, injury or sickness, personal problems, closing down of an industry, discrimination will affect some people's career or education plans.

II. Given short case studies the students will react to each by criticizing the career plans decision of the people in the case studies or use the filmstrip Job Attitudes - A Job that Goes Someplace and do the same for the people in the filmstrip.

III. Make up a case history or series of cartoons include as many problems that could face the individual in his career plan and show what the person does to solve the problems.

IV. Select a career you are interested in and decide what factors could happen that will cause you to alter your plans. How would you deal with these factors or alterations.

MATH ACTIVITY SHEET

Objective 1C The student will develop criteria such as people, data and things to investigate job choice.

Introduction to the Teacher: The person who wishes a career which will provide continued satisfaction to him must choose that career wisely. In particular, he should choose a career where the day-to-day routine work matches his own likes and dislikes. A person who likes work with things would be foolish to choose a job primarily devoted to direct work with people. Our aim here is to introduce the idea of such choices to students.

Math Focus: The Math focus for this objective is to have the student construct a Venn Diagram representing the make-up of a job cluster with respect to the interest area of people, data, and things.

Math Activities:

1. The whole class can brainstorm to construct a list of jobs within a job cluster. This list can be organized by a Venn diagram to see the jobs available within the interest areas.

MATH ACTIVITY SHEET

Objective 1D The student will demonstrate how he will support himself until reaching his career goals--including a saleable skill at his high school graduation.

Introduction to the Teacher: Our aim with this objective is to show students that, immediately at high school graduation, many people are forced to begin earning income. The logical preparation for this situation is that each student, during his years in public school, should acquire some skill which can be "sold" to an employer. He can then use this skill to set up a household, finance further education, or any other purpose for which financial security is needed.

Math Focus: The Math focus for this objective is to have the student realize how Math skills, which are learned in school, are involved in jobs they could find before and after graduation.

Math Activities:

1. The whole class could look at the Math skills involved in selected jobs. They could then try to solve given problems using these skills.

2. An individual student could analyze the help wanted section of a newspaper to determine the availability of jobs that he could handle with his present skills. He could also determine jobs that would be available using the skills obtained prior to graduation. All students should go through this activity, students who plan on furthering their education often have a need for employment to finance this education. For class sets of newspapers contact Mr. Ralph Borden or Mr. Greg Horn in the Circulation Department. 473-7881

MATH ACTIVITY SHEET

Objective 2A The student will distinguish why (how) jobs are grouped in job clusters.

Introduction to the Teacher: "Clusters" are rapidly becoming the most prevalent means of organizing career groups. Each major function within society--transportation, manufacturing, etc.--becomes the organizing force behind a group of jobs, and all jobs which support this function are grouped together. Thus transportation would include not only bus drivers, but also secretaries at bus firms, highway engineers, taxi-routers, and railway workers--all workers who somehow contribute to maintaining the nation's transportation system.

Math Focus: The Math focus for this objective is to have the student logically derive the concept of cluster and be able to locate jobs into the proper job cluster.

Math Activities:

1. The whole class , given a random selection of topics from the eighth grade syllabus, will organize them by major concepts into a logical sequence of study. They should then do this with a random selection of jobs grouping them with respect to their common function (a job cluster).

2. A small group, using the basic concepts of set theory, will be able to group jobs into their proper job cluster.

MATH ACTIVITY SHEET

Objective 2B The student will investigate what skills are required for the jobs in the cluster.

Introduction to the Teacher: Our aim here is to help students see that each cluster requires specialized skills and that jobs within each cluster demand that the job-holders possess skills. At the same time, a person with a particular set of skills could seek work in many clusters. Secretarial skills, for example, are present in almost all of the clusters. The key to proper job selection, however, is to choose a suitable career aim, then to secure training in the skills needed for placement in that career.

Math Focus The Math focus for this objective is to have the student identify the Math skills required for jobs within a job cluster.

Math Activities:

1. The whole class will list job activities that would demonstrate the use of a defined Math skill.

2. The whole class given a specific job activity will perform the Math computation required.

MATH ACTIVITY SHEET

Objective 2C The student will be aware of the progression of jobs within the job cluster.

Introduction to the Teacher: All jobs within a particular cluster fit a logical order--close to the 'lone of promotion' in that cluster. A person may start his career with on-the-job training, become a fulltime worker, and later attain a managerial level within the same cluster. Our aim here is to help students recognize this progression.

Math Focus: The Math focus for this objective is to have the student analyze by Flow Chart the progression of jobs within a job cluster.

Math Activities:

1. The whole class, given case studies, could devise a chart showing job progression using the variables of further education, on the job training and apprenticeship programs.

MATH ACTIVITY SHEET

Objective 3A. The student will participate in activities in a given subject that relate to job clusters.

Construction

Introduction to the Teacher: In this very important objective, we are attempting to show students how their regular schooling relates, ultimately, to employment. Each subject a student studies will prepare him with skills suitable to jobs in various clusters. Our aim here is to show students the validity and worth of their schooling as related to future career placement.

Math Focus: The math focus for this objective is to have the student explore jobs in the construction cluster. The concentration of their study will be on the math related aspects of this cluster.

Math Activities:

1. The whole class might brainstorm a list of jobs in construction and classify them by interest area. (people, data, things)

2. The whole class could do the given problems involved in various jobs in the cluster. Additional problems might be suggested by the teacher or the stude

3. An individual Student might do research to determine the measuring tools used by specific jobs within the cluster.

4. Many of the jobs available in construction are obtained through an apprenticeship program. The class might research an apprenticeship program to determine length of apprenticeship and job expectation upon completion.

5. Refer to the library resource file for information on a slide presentation by the Syracuse Builders Exchange and other construction related i

MATH ACTIVITY SHEET

Cluster: Business and Office

Objective 3A The student will participate in activities in a given subject that relate to job clusters.

Introduction to the Teacher: In this very important objective, we are attempting to show students how their regular schooling relates, ultimately, to employment. Each subject a student studies will prepare him with skills suitable to jobs in various clusters. Our aim here is to show students the validity and worth of their schooling as related to future career placement.

Math Focus: The Math focus for this objective is to have the student explore jobs in the Business and Office cluster. The concentration of their study will be on the Math-related aspects of this cluster.

Math Activities:

1. The whole class might brainstorm a list of jobs in Business and Office and classify them by interest area. (people, data, and things)

2. The whole class could do the given problems involved in various jobs in the cluster. Additional problems might be suggested by the teacher or the students.

3. Refer to the Library Resource File for information on a field trip to Bell Telephone, and other business-related field trips.

MATH ACTIVITY SHEET

Objective 3A. The student will participate in activities in a given subject that relate to job clusters.

Marketing and Distribution

Introduction to the Teacher: In this very important objective, we are attempting to show students how their regular schooling relates, ultimately, to employment. Each subject a student studies will prepare him with skills suitable to jobs in various cluster. Our aim hereis to show students the validity and worth of the schooling as related to future career placement.

Math Focus: The math focus for this objective is to have the students explore jobs in the Marketing and Distribution cluster. The concentration of their study will be on the math related aspects of this cluster.

Math Activities:

1. The whole class might brainstorm a list of jobs in marketing and distribution and classify they by interest area. (people, data, things)

2. The whole class could do the given problems involved in various jobs in the cluster. Additional problems might be suggested by the teacher or the students.

3. Refer to the library resource file for information on a field trip to the Pepsi-Cola Plant (manufacturing) or the I.B.M. Corporation (Marketing and Distribution) and other related field trips.

MATH ACTIVITY SHEET

Objective 4A. The student will determine characteristics of jobs.

Introduction to the Teacher: With this objective, students begin tentative exploratory investigations of particular jobs and careers, finding out as much as possible about the day-to-day requirements of such work and what benefits such employment provides the worker.

Math Focus: The math focus for this objective is to have the student investigate the characteristics of jobs within the clusters.

Math Activities:

1. The whole class will investigate characteristics of jobs within the job clusters, Construction, business and office, and Marketing and Distribution, by using the instrument provided. (Refer to resource section)

For resources the students may use:

1. Encyclopedia of Careers and Vocational Guidance , Vol. II Careers and Occupations, Hopke, Doubleday

2. W.O.R.K. (Occupation Exploration Kit), SRA

3. O.E.K. (Occupation Exploration Kit), SRA

4. Occupational Outlook Handbook, U.S. Dept. of Labor.

MATH ACTIVITY SHEET

Objective 5B. The student will develop tentative lifetime careers.

Introduction to the Teacher: Our aims here is not to lock a student into a set of unchangeable, figid career plans. What we hope the student will do, however, is hypothesize and predict about future career plans. If he chooses a particular entry-level job, where will it lead? If a student predicts that he will have a managerial position at age 40, what must he do at age 25 to plan for his future? What type of educational program should a student follow after high school to plan for careers in the future?

Math Focus: The math focus for this objective is to have the student investigate job progressions through a career ladder.

Math Activities:

1. The whole class, given career ladder samples, will analyze job progressions with respect to entry-level jobs, educational background and career goal.

2. An individual student, using the career ladder samples as a guide, will develop their own "tentative" career ladder.

MATH ACTIVITY SHEET

Objective 5C. The student will forecast the retraining, additional skills, and continual education necessary to maintain or change his job.

Introduction to the Teacher: As the U.S. economy changes, as the labor market shifts, or as technological innovation becomes increasingly applied throughout the economy, individual workers must continually develop and adapt their skills to the new situations. Our aim here is to help students see the lifelong need for continued development of skills and working ability.

Math Focus: Refer to Mathematics, Goal 5 Objective B.

MATH ACTIVITY SHEET

Objective 5A. The student will show how skills needed in one cluster can be applied to other clusters.

Introduction to the Teacher: As has been mentioned beofre, certain skills are needed by more than one job cluster. A person with carpentry skills, for exampl could build houses (construction), work in the carpentry shop of a hospital (Health), build mock-ups for auto manufacturers (Manufacturing), or help maintain and modify public buildings (Public Service). A person who desires longtime employment and constant demand for his skills will explore such possibilities, so that his personal career can meet the changing needs of the economy and employment market.

Math Focus: The Math focus for this objective is to have the student relate job "skills" to different cluster. They should be aware of the possibili of changing jobs between clusters while retaining the same skills.

Math Activities:

1. The whole class will analyze the employment possibilities of an occupational group in different clusters. (Table 9C provided in resource section)

2. Individual Students may select one of more occupational groups and analyze through a circle graph the employment possibilities in the different clusters.

ENGLISH ACTIVITY SHEET

[illegible] interests, abilities, and needs as related to a career selection.

Introduction to the teacher: At this point, we should help the student summarize the information and inquiries he has done during his seventh grade work. This time, he will use this information as the base for exploration of various jobs, careers, and processes for obtaining both.

English Focus: The English focus for this objective is to have the student gather information about himself and then summarize and utilize it.

NOTE: This objective will be used as an evaluation this year but as a re-evaluation next year.

English Activities:

1. The student will be given the interest inventory prepared by [illegible] and given to this year's seventh grade. (each school will decide who will administer test).

2. The student will select one interest and write a list of jobs related to that interest.

3. The student will decide how his abilities and needs are related to job choices.

4. The student will create a collage or booklet and illustrate his interest abilities, and needs.

5. The class will discuss how the interests, needs, and abilities of an individual change as he matures, starting from infancy throughout a life-span.

6. Give each student a list of positive and negative attitudes and have each student decided which attitudes pertain to him. (See resource section for list of attitudes.)

7. The class will discuss why a person should be realistic in career selection.

8. Let each student determine why he should consider accepting a job which meets these standards:
   a. interests him
   b. is one he can do well
   c. fits his personality
   d. pays reasonably well
   e. provides opportunity for advancement
   f. provides good working conditions.

ENGLISH ACTIVITY SHEET

Objective 1B. The student will identify and use available tools in job selecti

Introduction to the Teacher: Many people have difficulty obtaining employment simply because they do not know where to find help. Our aim with this objectiv is to help students become familiar with the tremendous number of agencies, sources, and materials for help in career-choice or placement.

English Focus: The English focus for this objective is to make students aware of what work resources* are and how to use them.

* work resources - library materials such as pamphlets, books, Reader's Guide to Periodical Literature, card catalog, filmstrips, and casette recordings.

English Activities:

1. The student will make a list of possible ways of finding a job.

2. The student will visit the library and write down the tools that are available there (books, pamphlets, filmstrips, etc.)

3. The student will investigate thoroughly two of the tools used and the information each provides.

4. In a class discussion make a list on the chalkboard of sources for finding jobs.

5. Each student will write a short paragraph on how each of the following provides opportunity for career selection:
   a. public employment services
   b. private employment services
   c. school
   d. college
   e. newspaper advertisement
   f. direct calling

6. The student will visit a private employment agency and interview on casette tapes a representative of the agency.

7. Each student will read a book or magazine article on a specific job or career or about a person who has a job or career. He will then summarize in a composition using the following:
   a. What education is needed?
   b. What skills are needed?
   c. What interests and abilities does a person need to succeed at the job?
   d. What are the duties and responsibilities of the employee?

ENGLISH ACTIVITY SHEET

Objective 1C. The student will develop criteria such as people, data, and things to investigate job choice.

Introduction to the Teacher: The person who wishes a career which will provide continued satisfaction to him must choose that career wisely. In particular, he should choose a career where the day-to-day routine work matches his own likes and dislikes. A person who likes to work with things would be foolish to choose a job primarily devoted to direct work with people. Our aim here is to introduce the idea of such choices to students.

English Focus: The English focus for this objective is to develop an awareness of terminology and word associations. Using the terms people data, and things the teacher will help students realize the jobs that fall into the three categories.

English Activities:

1. In a class discussion students will discuss the terms people, data, and things and try to give examples orally of jobs that are examples of the three categories.

2. The teacher can use a prepared list (see resource) and have students categorize these jobs into three groups (pointing out that in some cases, two jobs may fall into more than one category.

3. Give the job cluster, (eg. Fine Arts and Humanities) the student will categorize each job in the cluster under people, data, and things. The same activity can be done with the clusters Hospitality and Recreation and Consumer and Homemaking.

4. Using a class literature book or anthology, the students will read a story dealing with a job or a person who has a job and determine what category the job deals with (eg. " The Carwash Professional" from Stories of the Inner City .)

ENGLISH ACTIVITY SHEET

Objective 1D. The student will demonstrate how he will support himself until reaching his career goals--including a saleable skill at his high school graduation.

Introduction to the Teacher: Our aim with this objective is to show students that, immediately at high school graduation, many people are forced to begin earning income. The logical preparation for this situation is that each student, during his years in public school, should acquire some skill which can be "sold" to an employer. He can then use this skill to set up a household, finance further education, or any other purpose for which financial security is needed.

English Focus: The English focus for this objective is to show that the English skills (reading, writing, etc.) are not only saleable skills but also are vital in succeeding in any job.

English Activities:

1. Have each student write a list of part-time jobs he would like to have prior to leaving school or to a final career choice.

2. Have each student list saleable skills in English and apply these skills to jobs he would like to pursue.

3. The student will make a poster or collage of jobs that interest him and indicate what English skills are needed or helpful in each job.

4. Let each student assume that his education will end at the completion of grade 12. He will then write a list of jobs that his total education has prepared him for, especially his English curriculum.

5. Have two students try to communicate without speaking and writing to one another. Have classmates then discuss the necessity of having those two basic skills.

ENGLISH ACTIVITY SHEET

Objective 1L. The student will list a sequence of steps for future job and/or career choice. The list should include previous objectives: a. relating interests, abilities, and needs to job choice; b. using criteria in evaluating prospective jobs; c. using available tools of job selection; d. determining a saleable skill.

Introduction to the Teacher: Our aim with this objective is that each student should develop his own, personal process for career choice and job-seeking. Hopefully, he can use such a process throughout his life in determining a satisfactory situation for employment. As we have suggested, the most logical process will include the objectives already worked on under this goal (listed a above)

Focus: . The focus for this objective is to make the student aware that previous to selecting a career he must have developed a logical process. By doing this, he will discover a method of utilizing all his educational skills and all the knowledge he has gained about himself.

Directions:

One discipline , preferably English, can sufficiently cover this objective. If the student has completed goal 1. a through d, he has part of a sequence of steps he needs in a career selection. However, there are other factors involved in choosing a career that are part of a sequence of steps and are often individually oriented. The task for the student, then, is to reassess what he has done and to decide what other determining factors would influence him, and develop his own sequence of steps in order of importance. (In other words, the student is developing his own individual process for career selection.)

ENGLISH ACTIVITY SHEET

Objective 2A. The student will distinguish why (how) jobs are grouped in job clusters.

Introduction to the Teacher: "Clusters" are rapidly becoming the most prevalent means of organizing career groups. Each major function within society--transportation, manufacturing, etc.-- becomes the organizing force behind a group of jobs, and all jobs which support this function are grouped together. Thus, transportation would include not only bus drivers, but also secretaries at bus firms, highway engineers, taxi-routers, and railway workers--all workers who somehow contribute to maintaining the nation's transportation system.

English Focus: The English focus for this objective is to have the teacher explain what a cluster is and to investigate the three English clusters-- Fine Arts and Humanities, Hospitality and Recreation, and Consumer and Homemaki

English Activities:

1. Given a job cluster (eg. Fine Arts) and a breakdown of jobs under it, the student will determine why each job belongs in the cluster pointing out the similarities among the jobs in the cluster. (See resource sheets for breakdowns of clusters).

2. Using the clusters and breakdowns for each one, decide why they are grouped the way they are.

3. The teacher will show as many filmstrips as possible from Job Opportunities Now -- Group 1 - (SVE Educational Filmstrips - Singer). After viewing filmstrips and listening to the cassette tapes, the students will discuss how each job is part of a cluster.

4. The students will write and stage a short play, demonstrating the working of a cluster, for example, Fine Arts and Humanities.

ENGLISH ACTIVITY SHEET

Objective 2B. The student will investigate what skills are required for the jobs in the cluster.

Introduction to the Teacher: Our aim here is to help students see that each cluster requires specilized skills and that jobs within each cluster demand that the job-holders possess skills. At the same time, a person with a particul set of skills could seek work in many clusters. Secretarial skills, for example are present in almost all of the clusters. The key to proper job selection, however, is to choose a suitable career aim, then to secure training in the skills needed for placement in that career.

English Focus: The English focus for this objective is to examine the clusters designated for English and determine which English skills are necessary to obtain the jobs in each cluster.

English Activities:

1. In the cluster "Fine Arts and Humanities", write a paragraph about what skills are needed for a job in the cluster. (See two resource sheets on skills.)

2. Have the students make a chart dealing with the specific jobs in a cluster. This can be a class activity or an individual activity.

3. Have the class pretend they are all working in a hospital. Each student will assume the role of an employee (technician, nurse, doctor, secretary). Each student will then make a list of skills he needs to perform his job within the cluster.

4. Have the students pretend that their school is the cluster, and breakdown the jobs and the skills needed to accomplish the jobs in the school.

*Clusters - Fine Arts and Humanities
Consumer and Homemaking
Recreation and Hospitality
Communication and Media

5. After viewing the Singer Filmstrips entitled "Job Opportunities in a Hospital", Restaurant, Dept. Store, Supermarket (Job Opportunities Now Group 1), The students will list the skills needed in each of the four job areas.

ENGLISH ACTIVITY SHEET

Objective 2C. The student will be aware of the progression of jobs within the job cluster.

Introduction to the Teacher: All jobs within a particular cluster fit a logical order--close to the "line of promotion" in that cluster. A person may start his career with on-the-job training, become a fulltime worker, and later attain a managerial level within the same cluster. Our aim here is to help students recognize this progression.

English Focus: The English focus for this objective is to show students that as there is a progression of jobs in a cluster, there is also a progression of English skills within the cluster.

English Activities:

1. Given the cluster and the jobs, breakdown the skills needed from basic to highly advanced.

2. Given a cluster, the student will rank jobs in the cluster according the schooling needed. (See sample resource sheet)

3. The student will draw a chart using pictures for jobs (eg. service sta attendant and show how the jobs in any one of the clusters progresses by adding more pictures to the progression.)

ENGLISH ACTIVITY SUITE

Objective 3: The student will participate in activities in a given subject that relate to job clusters.

Introduction to the Teacher: In this very important objective, we are attempting to show students how their regular schooling relates, ultimately, to employment. Each subject a student studies will prepare him with skills suitable to jobs in various clusters. Our aim here is to show students the validity and worth of their schooling as related to future career placement.

English Focus: The English focus for this objective has been reviewed, reinforced by accomplishing the previous two objectives.

English Activities:

1. English content to be used in Consumer and Homemaking Cluster.

a. The student will imagine that he is a consumer researcher and in the position of interviewing applicants for a consumer research bureau. What qualifications should he seek?

b. Have a speaker from the Better Business Bureau come in and speak about the functions of the bureau.

c. Write a letter to Ralph Nader asking for more information about consumerism.

d. Read an article in Consumer Reports, and tell why a certain product is good or inferior.

e. Find out what services are available for child care (institutional or community child care services) and prepare a report for the class.

f. Have students point out the specific need for reading labels.

g. You have just inherited an apartment building. Make a list of your responsibilities, as the landlord.

h. Plan a menu for a family of four.

i. Pretend you're a waitress or waiter. What oral skills must you have?

j. Have each student pretend that he is a teacher and prepare a tenure or lesson on nutrition.

k. Make up a bulletin board illustrating consumer and homemaking operations.

l. Each student will decided what English skills are needed for the following jobs:

1. Tailor
2. Seamstress
3. Parent-Teacher
4. Homemaker
5. Interior Decorator
6. Guidance Counselor
7. Consumer Counselor
8. Maintenance Worker
9. Furniture refinisher.

ENGLISH ACTIVITY SHEET

Objective 3A Activity 2 continued

2. English content to be used in Fine Arts and Humanities.

a. Write a play about any topic and put it on in front of the class. Then list different departments and skills essential in the production of the play.

b. Using slides and cassette recorders , make a presentation of problems faced in the community. List the jobs needed in producing it.

c. Interview a T.V. Announcer using a cassette tape recorder. Play the tape back to the class.

d. Write and stage a fashion show. What skills are needed to be a model?

e. Have students draw a series of pictures illustrating a story they've read.

f. Using any verse form (Haiku, Tonka, etc.), write a poem about any subject.

g. Draw a stage setting from one scene in any story read in class. Explain in writing the stage design.

h. Have students read any play or short story and present scenes from it before the class.

i. Have the students determine the basic difference in form among the following: a. novel; b. poetry, c. essay; d. drama; e. short story, and specific skills needed to write each.

j. Have the student write an original story or play.

ENGLISH ACTIVITY SHEET

Objective 3A Activity 3 continued

3. English content to be used in Recreation and Hospitality

a. The student will imagine that he is employed by the New York State Dept. of Conservation as a creative writer. He will write a pamphlet advertising one or more scenic points, beaches, wildlife preserves, state parks, etc.

b. As the owner of a resort (ski, beach, etc.), the student will write and advertisement for his resort. (This can also be an oral assignment).

c. Have the students read articles or advertisements on Recreation facilities in New York State and make a bulletin board or collage of his findings.

d. Have the student write a program for a senior citizen center or a pre-school play and day care center. What English skills and training does the student need to fulfill this?

e. The student will give an oral report based on research on one of the following:

1. Everson Museum
2. Syracuse Public Library
3. Environmental Education
4. Special Culture Programs (Indian, Black, Youth)
5. N.Y.S. Festivals and Fairs

f. Have students prepare a T.V. or radio news program based on Travel and Recreation. Props and stage set may be provided by students who are interested in stage sets and designs.

g. A group of students will write and act out a 15 minute T.V. serial before the class based on Park Ranger Lightower. At the same time, some students can be filming and taping the episode.

h. Have the student research and give an oral or written report on Recreation workers (See Occupational Outlook Handbook).

i. Have a speaker come in from the Dept. of the Army and speak about careers in Armed Forces, and U.S.O. centers.

ENGLISH ACTIVITY SHEET

Objective 3A Activity 4 Continued

Communication and Media

a. Have the students discuss the various means of communication and media.

b. Have the students write and produce a T.V. Talk show or a T.V. game show. (This same activity can be done with radio news programs,etc.)

c. Have each student proofread a newspaper for spelling errors.

d. Have the class publish a class newspaper. Assign individual groups to cover the different sections of the paper.

e. Each student will write a newspaper article (eg. finance, sports, household, etc.) or an editorial.

f. The students will bring to class editorial or political cartoons and give an oral explanation of them.

g. Have groups of students write scripts dealing the inventions of the telephone, telegraph, radio, television, etc. Then using puppets, act out each script.

h. Have the class make a film on any subject. Previous to the filming have the students determine the skills they'll be using.

i. Have some students make an animated cartoon strip.

j. Using sheets of blank newspaper, have each student prepare a dummy using pictures and articles from newspapers.

k. Using a series of photographs, have the student tell a story

l. Using the newspaper, have each student cut out similar ads and compare how they are set up and possibly which ads are better.

m. The class will make a list of the symbols used in advertising and make up ads using these symbols.

n. Each student will design a sign for any kind of shop or service.

o. Have some students write a script involving a telephone operator and a customer and act out the skit before the class.

p. Have each student write an essay on what responsibilities a newspaper publisher or a radio or television station manager has to the public in the area of communication and services.

ENGLISH ACTIVITY SHEET

Objective 3A Activity 5 Continued

English Content for Business and Office Occupations

a. The teacher will dictate a short paragraph to the class using words that have been studied in 8th grade English curriculum. Then have students check their paper for spelling errors.

b. Given a unorganized business letter, the student will reorganize the letter into correct business form (See resource sheet)

c. Discuss the English skills necessary to be a secretary, or a stenographer, etc.

d. Discuss what public relations is and why English skills are essential to anyone who is working in the field of public relations (eg. a receptionist).

e. Given a scrambled paragraph, have students unscramble it. (See resource sheet)

f. Given a paragraph, insert necessary capitalization and punctuation (See resource sheet)

g. Pretend you are a teacher. Prepare a lesson plan, and teach the lesson to the class.

h. Make up a list of office standards you'd want to have followed as an office manager.

i. Set up a system for organizing paragraphs (introduction, topic sentence, middle, conclusion). Draw a diagram showing the system.

j. Make a list of people in your class and decide what career each will have in 10 years from now.

k. Set up imaginary telephone calls that requires taking notes between 2 students.

l. Write a letter to a vacation resort asking for brochures about the resort.

ENGLISH ACTIVITY SHEET

Objective 4A. The student will determine characteristics of jobs.

Introduction to the Teacher: With this objective, students begin tentative, exploratory investigations of particular jobs and careers, finding out as much as possible about the day-to-day requirements of such work and what benefits such employment provides the worker.

English Focus: The English focus for this objective is to acquaint the student with some information about the jobs in which he is interested and determine how English skills may be a necessary part of the job.

English Activities:

1. Using the tentative career selections made in clusters, the student will list all of the characteristics of the given jobs using the SRA Series to find career choices (characteristics - pay benefits - hours, education, people, working conditions).

2. The students will write and act out in front of the class a skit based on a job that has good fringe benefits or bad fringe benefits.

3. The students will bring in the Want Ad section of the newspaper and cut out jobs and underline the job benefits listed. They will then paste the ads on a poster board and arrange the jobs according to the range of benefits good to poor.

4. Have the students listen to an employer or a person in charge of hiring other people talk about characteristics of a given job.

ENGLISH ACTIVITY SHEET

Objective 4B. The student will relate preparation and requirements needed to each job choice.

Introduction to the Teacher: If a student is to secure future employment in a career satisfactory and rewarding to him, he must prepare adequately in order to secure the job. Our aim here is to help students determine the amount and variety of preparation necessary for those jobs which, at this point, interest him.

English Focus: The English focus for this objective is to show students that preparation for a career is multi-leveled, and that each job choice involves careful consideration.

English Activities:

1. After choosing a few jobs, the student will determine what preparation and/or requirements are needed for each job and what he must do to fulfill them.

2. Have students fill in the chart (Job Survey Chart). (See resource section for chart).

3. Each student will select jobs he is interested in, from the SRA Exploration Kit, he will then make a list of requirements needed for each job chosen. The Occupational Outlook Handbook and the OB-Guide for Young Workers may also be used as a reference tool.

4. Each student will fill in the Activity on Career Investigation form after having completed a thorough investigation of tentative career choice. (See resource section for form.)

ENGLISH ACTIVITY SHEET

Objective 5A. The student will show how skills needed in one cluster can be applied to other clusters.

Introduction to the Teacher: As has been mentioned before, certain skills are needed by more than one job cluster. A person with carpentry skills, for example, could build houses (construction), work in the carpentry shop of a hospital (Health), build mock-ups for auto manufacturers (Manufacturing), or help maintain and modify public buildings (Public Service). A person who desires longtime employment and constant demand for his skills will explore such possibilities, so that his personal career can meet the changing needs of the economy and employment market.

English Focus: The English focus for this objective is to stress the fact that once skills are acquired, they can be applied to different clusters and different jobs.

English Activities:

1. The student will list any number of skills. He will then show how each of these skills will fit in the given clusters.

2. The student will take a given cluster and look at the jobs in the cluster and decide how they are similar (skill wise) to jobs in other clusters.

3. The students will make a chart with a skill in the center. The student will then draw a diagram relating different jobs to the skill in the center.

ENGLISH ACTIVITY SHEET

Objective 5B. The student will develop tentative lifetime careers.

Introduction to the Teacher: Our aim here is not to lock a student in a set of unchangeable, rigid career plans. What we hope the student will do, however, is hypothesize and predict about future career plans. If he chooses a particular entry-level job, where will it lead? If a student predicts that he will have a managerial position at age 40, what must he do at age 25 to plan for his future? What type of educational program should a student follow after high school to plan for careers in the future?

English Focus: The English focus for this objective is to show students that the English skills used now can be perfected to achieve many kinds of jobs the individual may wish to have in the future.

English Activities:

1. The student, after choosing a tentative lifetime career, will write a play about a day in the life of the career.

2. The student will write a list of part-time jobs he'd like to have and show how they are related to tentative lifetime careers.

3. The students will interview five people each and ask the question "How many jobs have you had in the last 10 years and what were they?" The student will then decide if the jobs were in any way related to each other.

4. The student will project himself into the future and pretend he(she) has a family? Would the tentative career chosen fill the needs of his family?

ENGLISH ACTIVITY SHEET

Objective 5C. The student will forecast the retraining, additional skills, and continual education necessary to maintain or change his job.

Introduction to the Teacher: As the U.S. economy changes, as the labor market shifts, or as technological innovation becomes increasingly applied throughout the economy, individual workers must continually develop and adapt their skills to the new situations. Our aim here is to help students see the lifelong need for continued development of skills and working ability.

English Focus: The English focus for this objective is to point out to the students that some of them may have to develop and adapt further English skills, while others may not because of particular job situation.

English Activities:

1. The student will determine what re-training or additional education he will need to maintain a specific job over a period of years.

2. Have each student decide what he will need to do to change from one job to another either within a cluster or from one cluster to another.

3. Using the Occupational Outlook Handbook, the student will forecast the job market in the area of his tentative career.

4. Each student will interview five people and ask them if they have changed jobs and what they had to do to accomplish a job change (retraining,etc.)

5. The student will predict now what jobs will be needed 20 years from now.

SCIENCE ACTIVITY SHEET

Objective 1A The student will evaluate or re-evaluate interests, abilities, and needs as related to a career selection.

Introduction to the Teacher: At this point, we should help the student summarize the information and inquiries he has done during his seventh grade work. This time, he will use this information as the base for exploration of various jobs, careers, and processes for obtaining both.

Science Focus: The student will evaluate or re-evaluate his interests, abilities and needs and then relate them to possible careers in science.

Introductory Activities

1. Teacher may explain how a person's interests, abilities, and needs help people select a career.

2. The teacher may explain how to use the OEK Kit or take the class to the Library for explanation by the Librarian.

Independent Activities:

1. Each student may evaluate his interests using the instrument developed by the guidance department or the OEK Kit in the Library.

2. Each student will decide his main interest areas.

Culminating Activities:

Clas[illegible]ussion to relate interests to job choices. Stud[illegible]y state their interests and then the jobs they [illegible] they would enjoy doing.

[illegible]aker(Guidance Counselor) to explain how [illegible]bilities and [illegible]ds are related to career

SCIENCE ACTIVITY SHEET

Objective 1B The student will identify and use available tools in job selection.

Introduction to the Teacher: Many people have difficulty obtaining employment simply because they do not know where to find help. Our aim with this objective is to help students become familiar with the tremendous number of agencies, sources, and materials for help in career-choice or placement.

Science Focus: Once the student has learned to identify and use the available tools in job selection, the student should realize that the reasoning involved in the scientific method is involved in career selection.

Class Activity:

1. Teacher may bring in OEK, WORK Kits, DOT and other career determining tools from the Library and explain how they might be used for career selection, students might be taken to the Library.

Independent Activities:

1. Students may go to the guidance counselor and/or Librarian to compose a list of tools (sources) available to aid career selection.

2. After identifying several tools used in job selection, the student will write a short explanation on how he would use any 3 of these tools to guide him in career selec[illegible].

Culminating [illegible]vities:

[illegible] Clas[illegible]ssion to brin[illegible] out all the tools students hav[illegible]ered to assist them in career selection.

[illegible]dents may expl[illegible]n how to use certain tools [illegible]lection.

[illegible] l make a lis[illegible] of all the tools each stu[illegible]d.

[illegible]entific method to career

SCIENCE ACTIVITY SHEET

Objective 1C The student will develop criteria such as people, data, and things to investigate job choice.

Introduction to the Teacher: The person who wishes a career which will provide continued satisfaction to him must choose that career wisely. In particular, he should choose a career where the day-to-day routine work matches his own likes and dislikes. A person who likes work with things would be foolish to choose a job primarily devoted to direct work with people. Our aim here is to introduce the idea of such choices to students.

Science Focus: Students will become aware that jobs may involve working with people, data and things or some combination of the three.

Introductory Activity:

1. Class may make a blackboard list of science-related jobs. The class may decide if these jobs deal with people, data, or things.

Independent Activity:

1. Each student may select one job to explore. He or she will list the activities the person in the job performs in one day.

Culminating Activity:

1. The class may discuss several of the jobs the students have researched and develop criteria for deciding if the job deals mainly with people, data or things.

SCIENCE ACTIVITY SHEET

Objective 1D The student will demonstrate how he will support himself until reaching his career goals--including a saleable skill at his high school graduation.

Introduction to the Teacher: Our aim with this objective is to show students that, immediately at high school graduation, many people are forced to begin earning income. The logical preparation for this situation is that each student, during his years in public school, should acquire some skill which can be "sold" to an employer. He can then use this skill to set up a household, finance further education, or any other purpose for which financial security is needed.

Science Focus: Students will become aware that the skills they learn in science at this level are saleable skills in the world of work.

Introductory Activity:

1. Class discussion to bring out the necessity of having a saleable skill even though you may be going on in your education toward a career.

Independent Activity:

1. Each student will write a short explanation of how he would support himself if he had to leave school when he was sixteen.

Culminating Activity:

1. Class discussion to acquaint the students with the idea that the scientific method is a skill or tool in problem solving which may be used in any job. It is a saleable skill.

SCIENCE ACTIVITY SHEET

Objective 1E The student will list a sequence of steps for future job and/or career choice. The list should include previous objectives: A) relating interests, abilities, and needs to job choice; B) using criteria in evaluating prospective jobs; C) using available tools of job selection; D) determining a saleable skill.

Introduction to the Teacher: Our aim with this objective is that each student should develop his own, personal process for career choice and job-seeking. Hopefully, he can use such a process throughout his life in determining a satisfactory situation for employment. As we have suggested, the most logical process will include the objectives already worked on under this goal (listed above.)

Independent Activity: To be covered by English!!

1. Each student will develop his own sequence of steps he would use to select a career. The student should explain the logic of his plan.

SCIENCE ACTIVITY SHEET

Objective 2A The student will distinguish why (how) jobs are grouped in job clusters.

Introduction to the Teacher: "Clusters" are rapidly becoming the most prevalent means of organizing career groups. Each major function within society--transportation, manufacturing, etc.--becomes the organizing force behind a group of jobs, and all jobs which support this function are grouped together. Thus transportation would include not only bus drivers, but also secretaries at bus firms, highway engineers, taxi-routers, and railway workers--all workers who somehow contribute to maintaining the nation's transportation system.

Science Focus: Students will recognize the science-related jobs within clusters and identify the major science-related clusters. Once the students have identified the major science clusters, they will realize the importance non-science related jobs play within the cluster.

Introductory Activities:

1. Guidance counselor will explain to the class what job clusters are and how jobs are grouped into a cluster.

   Note: Only one of the four disciplines needs to do this introduction. You should check to see if another teacher has already done it.

2. Teacher will make students aware of the four major and two minor clusters they will be working with in science: Marine Science Occupations, Agri-Business and Natural Resources, Health Occupations, Environment, Communication and Media, Manufacturing, and Public Service.

Group Activities: Refer to Resource Material.

Students will be given a list of jobs to relate to the science [illegible].

Independent Activity:

Each student will consider his own job interests even though they may not seem to be related to science and even if he or she should still work in one of the science related job cluster.

Culminating Activities:

[illegible] to clarify science focus of objective.

SCIENCE ACTIVITY SHEET

Objective 2B The student will investigate what skills are required for the jobs in the cluster.

Introduction to the Teacher: Our aim here is to help students see that each cluster requires specialized skills and that jobs within each cluster demand that the job-holders possess skills . At the same time, a person with a particular set of skills could seek work in many clusters. Secretarial skills, for example, are present in almost all of the clusters. The key to proper job selection, however, is to choose a suitable career aim, then to secure training in the skills needed for placement in that career.

Science Focus: Students will investigate what skills are required for jobs in clusters which are science oriented.

Note to Teacher: The activity found in the Resource side of this objective covers the following objectives as well: 2C, 4A, 4B. You may decide to use this activity as the students complete each cluster study or at the end of the year when they have completed all the clusters.

For science, this activity fits best after objective 3A because of the information they will gain in objective 3A.

SCIENCE ACTIVITY SHEET

Objective 2C The student will be aware of the progression of jobs within the job cluster.

Introduction to the Teacher: All jobs within a particular cluster fit a logical order--close to the "line of promotion" in that cluster. A person may start his career with on-the-job training, become a fulltime worker, and later attain a managerial level within the same cluster. Our aim here is to help students recognize this progression.

Science Activity: Covered in activity for 2B.

SCIENCE ACTIVITY SHEET

Objective 3A The student will participate in activities in a given subject that relate to job clusters.

Introduction to the Teacher: In this very important objective, we are attempting to show students how their regular schooling relates, ultimately, to employment. Each subject a student studies will prepare him with skills suitable to jobs in various clusters. Our aim here is to show students the validity and worth of their schooling as related to future career placement.

Science Focus: Students will relate the concepts and skills learned in the Science curriculum to career clusters.

Note to Teacher: See following sheets to identify career clusters we hope to relate to the Science curriculum as covered in Principles of Science Book I and Book II.

SCIENCE ACTIVITY SHEET

Objective 3A The student will participate in activities in a given subject that relate to job clusters.

8th Grade Career Study

Science-Related Clusters	Units of Study in Science			Principles of Science Book I		
	Disc., Inv.	Matter and Energy	Heat, Light Sound	Magnetism Electricity Nuclear Energy	Living Things	Living Things and the Environment
Marine Science Occupations	x				x	
Agri-Business and Natural Resources	x					x
Health Occupations	x				x	
Environment	x					x
Communication and Media	x		x			
Manufacturing	x	x				
Public Service				x		

SCIENCE ACTIVITY SHEET

Objective 3A

Obj.	Discovery and Inventior	Matter and Energy	Heat, Mag., light, electricity sound nuclear energy	Living things	Living things and Environment	Earth in Space	Planet Earth	Chemistry	Human Bio.	Conservation	Notes
1A											1A-E & 2A-(Intro
1B											Orien tion
1C											To Caree
1D											
1E											
2A											
2B											
2C											
3A	Intro to all clusters	Manufac. Const.	Communication	Public service, Manufac.	Health, Marine	Environment	Environment	Agri-Manu. Bus., Nat. Res. Envir.	Health	Envir.	Sci Curr in
4A											
4B											clus
5A											Stud
5B											
5C											

SCIENCE ACTIVITY SHEET

Objective 3A (Continued)

Science-Related Clusters	8th Grade Career Study Units of Study in Science Principles of Science Book II				
	Earth in Space	Planet Earth	Chemistry	Human Biology	Conservation
Marine Science Occupations	NOT COVERED IN BOOK II CAREER STUDY				x
Agri-Business and Natural Resources		x			x
Health Occupations				x	
Environment	x	x			x
Communication and Media	NOT COVERED IN BOOK II CAREER STUDY				
Manufacturing	x		x		

SCIENCE ACTIVITY SHEET

Objective 3A The student will participate in activities in a given subject that relate to job clusters.

Book I - Principles of Science

Cluster: Manufacturing

Science Focus: Students will relate the concepts and skills learned in their Science curriculum. (Book I Principles of Science) to career clusters.

Introductory Activities:

1. Teacher will introduce the manufacturing cluster and point out the part of the Science curriculum they will study in relation to this cluster.

2. Students will relate the teacher definition of manufacturing to the local job opportunities in this cluster by referring to the classified section of the newspaper and selecting all jobs related to manufacturing.

Class Activities: See Lab book in Library for activities in detail. Activities 1-11

1. Distillation
2. Electrolysis
3. Density and Buoyancy
4. Elements, Compounds, and Mixtures

Questions Relating Curriculum Content and Skills to Manufacturing (See Resource Material for Question sheet.)

Independent Activities:

1. See Book II Independent Activities and last years Career Unlimited: Manufacturing.

Culminating Activity:

1. Class discussion of questions to relate Science content to Manufacturing cluster.

SCIENCE ACTIVITY SHEET

Objective 3A The student will participate in activities in a given subject that relate to job clusters.

Book I - Principles of Science

Cluster: Communication

Introductory Activity:

1. Teacher may define communication and point out the part of the Science curriculum which is related to this cluster. Teacher should also point out that much of this material is related to Manufacturing.

Class Activities See Lab book in Library for activities in detail. Activities 12-23

1. Work
2. Forces
3. Levers
4. Inclined Plane
5. More Machines
6. Heat Transfer
7. Measurement of Heat Energy
8. Specific Heat
9. Sound (Science Kits)
10. Light (Science Kits) Not written up in book.
11. Spectrographic Analysis

Questions on Communication and Manufacturing: See Resource Material for Question sheet.

Independent Activities:

1. See Book II Independent Activities and last year's Careers Unlimited: Entertainment and Communications and Structural Work.

Culminating Activity:

1. Class discussion to relate career questions on Communication to Science content.

SCIENCE ACTIVITY SHEET

Objective 3A The student will participate in activities in a given subject that relate to job clusters.

Book I - Principles of Science

Cluster Public Service

Introductory Activity:

1. Teacher may define public service and point out the part of the Science curriculum which relates to this cluster.

Class Activities: See Lab book in Library for activities in detail. Activities 24-31.

1. Demonstration-Electroplating
2. Magnetism
3. Battery Demonstration
4. Static Electricity
5. Circuits
6. Electromagnets
7. Catch That Electron
8. Half-life

Questions on Public Service Cluster: See Resource Material for Question sheet.

Independent Activities:

1. See last year's Careers Unlimited: Services people oriented, Services Things Oriented.

Culminating Activity:

1. Class discussion to relate questions to Science content.

SCIENCE ACTIVITY SHEET

Objective 3A The student will participate in activities in a given subject that relate to job clusters.

Book I Principles of Science

Major Cluster: Health

Minor Cluster: Marine Science

Introductory Activity:

1. Teacher may define Health Cluster and point out the part of the Science Curriculum which relates to this cluster.

Class Activities: See Lab book in Library for activities in detail. Activities 32-48

1. Microscope
2. Slides
3. Plant and Animal Cells
4. Bacteria
5. Diffusion and Osmosis
6. Fermentation
7. Elodea Cells
8. Roots
9. Stems
10. Leaves
11. Flowers
12. Seeds
13. Frog
14. Chromosomes
15. Dominant and Recessive Traits in Man
16. Mating Two Hybrids

Independent Activities:

1. See Book II Independent Activities and last year's Careers Unlimited: Working on the Land and Services: People Oriented and Services Things Oriented

Culminating Activity:

1. Class discussion to relate Question sheet to Science content

SCIENCE ACTIVITY SHEET

Objective 3A The student will participate in activities in a given subject that relate to job clusters.

Book I Principles of Science

Cluster: Environment

Introductory Activity:

1. Teacher may define Environment cluster and point out the part of the Science curriculum which relates to this cluster.

Class Activities: See Book II Class Activities

Questions: See Resource Material for Question sheet.

Independent Activities: See Book II Independent Activities and last year's Careers Unlimited: Working on the Land.

Culminating Activity

1. Class discussion to relate question sheet to Science content.

SCIENCE ACTIVITY SHEET

Objective 3A The student will participate in activities in a given subject that relate to job clusters.

Book II-Principles of Science

Major Cluster: Environment

Minor Clusters: Communication and Media - Manufacturing
Chapters: 1-4

Introductory Activity:

Teacher orientation to the Earth and space with possible class discussion.

Class Activities:

1. Pendulum Experiment
2. Time zone activity
3. Trip across U.S.
4. Hours of daylight at 40th parallel
5. Spectroscope Activity
6. Parallax Activity
7. Sunspot Activity
8. Ellipse Activity
9. Demonstration of Keplers second law
10. Sun's Path Activity

Independent Activities:

1. Explain the practical use made by man of the North star.
2. Construct a simple telescope. Compare your method to the actual construction of a telescope by a telescope manufacturing company.
3. [illegible] a short report on radio astronomy.
4. [illegible]ruct an Astrolabe and explain how it works and what [illegible] would make use of it.
5. [illegible] charts [illegible] model of solar system. Explain the diffi[illegible]ies whic[illegible]uld be involved in making a model to scale.

SCIENCE ACTIVITY SHEET

Objective 3A Book II Activities Environment Cluster (continued)

6. Make chart or model of solar and lunar eclipses to show relative positions of Sun, Earth, and Moon.

7. Student will identify all the job areas involved in preparing an astronaut's meals.

8. Identify all the jobs involved in putting a man on the moon.

9. Make a collection of model rockets and write a brief history of Rocketry.

10. Research the amount of money the U.S. has spent on its space program. How much of this money has been used to pay employees involved in the program?

11. Identify the different types of man-made satellites and relate each type to different jobs.

12. Student may make a sundial and explain how it keeps time.

Culminating Activity:

1. Class may make a list of all the jobs covered in their study of the earth in space.

2. Students may classify their list of jobs by placing them in the appropriate job cluster.

SCIENCE ACTIVITY SHEET

Objective 3A The student will participate in activities in a given subject that relate to job clusters.

Book II - Principles of Science

Cluster: Environment

Chapter 7 - The Atmosphere

Introductory Activity:

Class discussion to orient the students to their study of the Atmosphere.

Class Activities: See Resource Material for details.

1. Oxygen in the Atmosphere
2. Greenhouse Activity
3. Adiabatic Cooling
4. Weather Map Activity
5. Demonstration to show convection currents in air (No activity written for this.)
6. Relative Humidity and Cloud Formation

Independent Activities:

1. Collect weather maps from the newspaper for a week. Explain how weather systems move across the U.S. and how a meteorologist makes use of this information.
2. Construct your own weather instruments and set up your own weather station. Explain how each instrument helps a meteorologist to predict the weather.
3. Make posters to illustrate any atomspheric condition you wish: layers of atmosphere, wind patterns, water cycle, nitrogen cycle, etc. Explain how one career field would make use of this concept.
4. Explain why a farmer would be interested in the nitrogen cycle.
5. Explain how an airplane pilot would make use of knowledge about the jet stream.
6. Research and explain how computers enter into weather forecasting.

Culminating Activities:

1. Field trip to Hancock Weather Station(If they are having them.)
2. List all the types of jobs people might hold in a weather station.
3. Class discussion to relate science content in chapter

SCIENCE ACTIVITY SHEET

Objective 3A The student will participate in activities in a given subject that relate to job clusters.

Book II Principles of Science
Chemistry

Major Cluster: Manufacturing

Introductory Activity:

Teacher may elect to introduce the unit on Chemistry with a short history of Chemistry and a discussion of Alchemy and the importance it played in Chemistry. A discussion might also involve the importance played by the Chemistry manufacturing industry.

Class Activities:

1. Demonstration of the preparation of certain gases. i.e. oxygen, hydrogen, and/or carbon dioxide (Not written up in Resource Material)

2. Law of Conservation of Matter

3. Separation of elements in a mixture.

4. Crystal forms of sulfur.

5. Acids, Bases, and Salts

6. Solutions

7. Water pollution and purification

8. Hard and soft water

9. Soap making

Independent Activities:

1. Examine the labels of different soap products to identify elements they have in common as well as those elements they don't have in common.

2. Perform a simple experiment with two Brillo pads. One pad will have all the soap removed and one will be unused. Use both pads to clean a pan. Observe which pad cleans best and explain what the soap in the pad actually does to the dirt to remove it.

3. Write away to a soap company to find out their process of soap making. Explain how their process is similar to the process you used in Lab.

SCIENCE ACTIVITY SHEET

Objective 3A Book II Activities Agri-Business and Natural Resources Cluster (Continued)

6. Make models of earth formations out of clay, soap or some other substance.

7. Make your own scaled time-line of Geologic time.

8. Make a scale model of the Grand Canyon.

9. Obtain a topographic map quadrant and locate your school on it. Identify major streets, parks, waterways, and note elevations, etc.

10. Obtain a street map (Lincoln Bank) and trace major streets, etc. See if street patterns follow any major geological features.

11. Using map with North Arrow and compass note directions and orient yourself with the map.

12. Learn how to read and use a topographic map--symbols, contour, lines, elevations, geologic features, etc. Explain what career areas make use of topographic maps.

13. Create a map of your neighborhood putting in streets, parks and other interest spots. Explain what type of career you might select in which you could make use of this skill.

Note to Teacher: Students may select any project which is related to geologic history and relate it to skills or jobs involved in particular career areas.

Culminating Activity:

Class discussion to draw together all the concepts developed in this chapter and relate the knowledge and skills to possible career choices. Students might present their individual projects at this time.

SCIENCE ACTIVITY SHEET

Objective 3A The student will participate in activities in a given subject that relate to job clusters.

Book II - Principles of Science

Major Cluster: Agri-Business and Natural Resources
Chapters 5-8

Class Activities:

1. Mineral Identification
2. Rock Identification
3. Crystal Growing
4. Demonstration relating Convection Currents to Continental Drift
5. Plotting Earthquakes and Volcanoes
6. Footprint Puzzle
7. Grand Canyon Activity
8. Time-line Activity
9. Rock History
10. Rock Correlation
11. Topographic Map Activity

Independent Activities:

1. Construct a seismograph and explain how a geologist uses it. Explain how an instrument which could predict earthquakes would be of value to man if one could be invented.
2. Explain how the construction of buildings would be affected in a region having frequent earthquakes.
3. Explain how industry makes use of minerals.
4. Look up the main source of sulfur or some other mineral and explain how it is extracted from the earth and then used by man.
5. Make a collection of rocks, minerals or fossils and develop a system of classification to identify them.

SCIENCE ACTIVITY SHEET

Objective 3A Book II Activities Manufacturing Cluster (Continued)

4. Visit Allied Chemicals and find out how they make sodium carbonate.

5. Contact Bristol Labs to find out what chemicals they make and how these chemicals are made.

6. Write to a rubber company to find out their process of making synthetic rubber. Explain how synthetic rubber is different from natural rubber.

7. Contact a plastic manufacturing company to identify their process of producing plastics.

8. Explain how synthetic fibers are made.

9. Examine different types of clothes under a microscope and explain similarities and differences.

10. Write away to a refining company to identify the process of petroleum refining.

11. Compare Chapters 10 and 11 to Chapter 12. Explain how the pure Chemistry which is covered in Chapters 10 and 11 is applied in Chapter 12.

12. Select one chemical industry and identify the different types of jobs you might hold in this industry.

Culminating Activities:

1. Class discussion to make students aware of the many types of jobs they might select in the field of Chemistry

2. Field trips

SCIENCE ACTIVITY SHEET

Objective 3A The student will participate in activities in a given subject that relate to job clusters.

Book II - Principles of Science

Cluster: Health

Introductory Activity:

Teacher will introduce the study of Human Biology.

Class Activities: (See Resource Material for activities in detail.)

1. Independent study centers for each body system.
2. Goldfish demonstration of capillaries
3. Blood Typing
4. Digestion and Food Nutrients
5. Learning and Conditioned Reflexes
6. Culture Activity and Effect of Household Disinfectants and Antiseptics on Micro-organisms
7. Blood cell staining
8. Independent study centers on drugs

Independent Activities:

1. Contact an anatomist(physiologist, dietitian, pathologist, medical researcher, etc.) at Upstate and find out what duties he forms and the function he forms in field of Health.
2. Contact a clinical laboratory to find out the modern methods used in testing.
3. Draw diagrams or make models of one of the sense organs and relate this to a career field.
4. Design an experiment to investigate a conditioned reflex and relate this concept to human learning. Explain what types of jobs you could get which would involve this type of work.
5. Design your own experiment on bacterial cultures and the effects of certain chemicals on them.
6. Keep a wild fruit fly culture and keep track of any mutants which occur.

SCIENCE ACTIVITY SHEET

Objective 3A Book II Activities Health Cluster (Continued)

7. Contact Argosy House or some such center to learn how drug addiction is handled today.

8. Contact AAA and find out current statistics on alcoholism, its treatment and its effects on body and society.

9. Research a disease for which man has recently found a cure to identify the process scientists used to discover the cause and the treatment for the disease.

10.. Contact your family physician to learn how and what drugs are used in the treatment of certain diseases.

Culminating Activities:

1. Field trip--Upstate Medical Center

2. Dissection of frog to relate human anatomy to anatomy of frog.

3. Students may complete their career study sheet on Health Cluster at this time.

4. Class discussion to bring out information gained from student investigation of Health careers.

5. Students may report the results of their independent activities.

SCIENCE ACTIVITY SHEET

Objective 3A The student will participate in activities in a given subject that relate to job clusters.

Book II - Principles of Science

Cluster: Environment

Note to Teacher: You may wish to refer to Resource book--"Career Education in the Environment" This book offers two good sets of lesson plans in Environmental Education. One is a fifteen day plan. The other is a semester plan. The book also has job descriptions in a number of different areas.

Introduction: Perhaps one way of introducing this cluster of study is by referring to our current environmental problems.

Class Activities: (See Resource Materials for activities in detail.)

1. Rock Abrasion
2. Soil Formation
3. Soil Water Movement
4. Stream Pollution
5. Air Pollution
6. Stream Table and Soil Erosion
7. Exponential Population Growth

Independent Activities:

1. Obtain a soil testing kit and test the pH of a variety of soil samples. You could use the activity on p. 452 in your text. Relate the pH of various soils to crop growing.
2. Visit a water-supply station to learn how your community obtains its water.
3. Research and explain what measures your community is taking to prevent or decrease air or water pollution.
4. Examine and compare the type of life found in two different stages of a forest succession.
5. Visit a fish hatchery or wildlife preserve and explain their function.

SCIENCE ACTIVITY SHEET

Objective 3A Book II Activities Environment Cluster
(Continued)

6. Explain why some species are considered endangered and the factors which have contributed to their endangerment.

7. Refer to Resource Book, 'Career Education in the Environment' to select a job area relative to the environment. Explain the job duties of a person in this job area and how he is working to improve our environment.

8. Create a closed biological system.

Culminating Activities:

1. Students may present the results of their independent activities.

2. Make a diagram of what a model community would look like in view of what the class has learned about the environment.

3. If the moon was colonized, how would you set it up so as not to change the moon's natural environment. (Class discussion)

4. Students may complete the career activity sheet on the Environment cluster at this time.

SCIENCE ACTIVITY SHEET

Objective 4A The student will determine characteristics of jobs.

Introduction to the Teacher: With this objective, students begin tentative, exploratory investigations of particular jobs and careers, finding out as much as possible about the day-to-day requirements of such work and what benefits such employment provides the worker.

Science Activities: Covered in Objective 2B

SCIENCE ACTIVITY SHEET

Objective 4B The student will relate preparation and requirements needed to each job choice.

Introduction to the Teacher: If a student is to secure future employment in a career satisfactory and rewarding to him, he must prepare adequately in order to secure the job. Our aim here is to help students determine the amount and variety of preparation necessary for those jobs which, at this point, interest him.

Science Activity: Covered in Activity for Objective 2B.

SCIENCE ACTIVITY SHEET

Objective 5A The student will show how skills needed in one cluster can be applied to other clusters.

Introduction to the Teacher: As has been mentioned before, certain skills are needed by more than one job cluster. A person with carpentry skills, for example, could build houses (Construction), work in the carpentry shop of a hospital (Health), build mock-ups for auto manufacturers (Manufacturing), or help maintain and modify public buildings (Public Service) A person who desires longtime employment and constant demand for his skills will explore such possibilities, so that his personal career can meet the changing needs of the economy and employment market.

Science Activity: Covered in Objective 2B.

SCIENCE ACTIVITY SHEET

Objective 5B The student will develop tentative lifetime careers.

Introduction to the Teacher: Our aim here is not to lock a student into a set of unchangeable, rigid career plans. What we hope the student will do, however, is hypothesize and predict about future career plans. If he chooses a particular entry-level job, where will it lead? If a student predicts that he will have a managerial position at age 40, what must he do at age 25 to plan for his future? What type of educational program should a student follow after high school to plan for careers in the future?

Science Activity: Covered in Objective 2B.

SCIENCE ACTIVITY SHEET

Objective 5C The student will forecast the retraining, additional skills, and continual education necessary to maintain or change his job.

Introduction to the Teacher: As the U.S. economy changes, as the labor market shifts, or as technological innovation becomes increasingly applied throughout the economy, individual workers must continually develop and adapt their skills to the new situations. Our aim here is to help students see the lifelong need for continued development of skills and working ability.

Science Activity: Covered in Objective 2B.

GENERAL ORIENTATION FOR TEACHERS.

Highlights of Seventh grade program:

1. Exploration of self-interests, abilities, values, and needs.

2. Exploration of economic system.

3. Exploration of opportunities in working world.

Highlights of Eighth grade program:

1. Exploration of career clusters (families)

2. Exploration of components of career planning.

The ninth grade aim is to complete a tentative life-time career by:

1. completing a career planner
2. writing reports on field trips which relate to his/her career selection
3. confering with the guidance counselor and writing a record of the interview.
4. Outlining his/her high school program.

The 7th and 8th grade career program is organized by objectives specific to the grade level. These objectives are met through organized activities followed by teacher and student resources.

Suggested Approaches to Ninth Grade Curriculum

The careers program has established these goals for the ninth grade:

Goal 1. The student will develop a process whereby he relates his interests, needs, and abilities to career choices and develops a method to investigate many career choices.

a. The student will evaluate or re-evaluate interests, abilities, and needs as related to a career selection.
B. The student will identify and use availiable tools in job selection.
c. The student will develop criteria such as people , data, and things to investigate job choices.
d. The student will demonstrate how he will support himself until reaching his career goals, including a salable skill at his high school graduation.
e. The student will list a sequence of steps for future job and/or career selection. The list should include previous objectives:

1. relating interests, abilities, and needs to job choice.
2. Using criteria in evaluating prospective jobs.
3. Using available tools of job selection
4. Determining a saleable skill.

Goal 2. The student will investigate clusters of jobs.

a. The student will determine characteristics of jobs.
b. The student will relate preparation and requirements needed to each job choice.

Ninth Grade Goals con't.

Goal 3.

a. The student will develop tentative lifetime careers (contract job cluster).
b. The student will complete career planner.

There are several ways of meeting these established goals. Each school will decide which method will best meet the needs of the individual students.

1. Use last year's Careers Unlimited booklets.

2. Use this year's eigth grade G.O.O.P. program - Objectives 1A through 2C - which parallel this year's ninth grade objectives. Then, follow this up with the Career Planner, field trips, etc.

3. The school may set up an individualized program in which the teacher will serve as an advisor for an established number of students, and the objectives of the program will be met by individual contracts.

4. Each school may set up a committee of ninth grade teachers to establish its own program.

NOTE: There are samples of contracts enclosed.

5. Use of Student Log Book

a) Complete a prepared list of activities. (A list of objective related activities is provided if the teacher wants to use it).

b) A selection of activities may be taken from the Careers Unlimited booklets which meet the ninth grade objectives.

c) Activities from the seventh and eigth grade programs may be completed.

ACTIVITY SHEET FOR METHOD #5 (LOG)

Goal 1. The student will develop a process whereby he relates his interests, needs, and abilities to career choices and develops a method to investigate many career choices.

A. The student will evaluate his interests, abilities, and needs as related to a career selection.

Activities:

1. The students may complete the interest survey - See resource section of attached sheets. in 8th grade guidance section.

2. Use the self-evaluation instrument in the OEK kit which is found in the library.

3. Write an analysis of your interests, needs and abilities.

4. Explain how an organism is built to fulfill its needs. (Consider this fact: The individual needs of a person often determine which career selection he will make.)

5. Determine the needs of a family and working with the family's assets, budget these needs.

6. Write a paragraph on how hobbies and out-of-school activities are or can be related to career selection.

B. The student will identify and use available tools in job selection.

Activities:

1. List a number of tools a person can use to find a job or to find information about a job. (See resource section)

Interview the guidance counselor to find out what work programs or training programs are offered in school.

3. After identifying several tools used in job selection, the student will write a short explanation on how he would use any three of these tools to guide him in a career selection.

C. The student will develop criteria such as people, data (idea), and thi to investigate job choices.

Activities:

1. In the WORK kit (found in library), read through the index of jobs and select jobs from each area (people, idea, things) which appeal to you. Explain.

a. Why the job is people, idea, or thing oriented?

b. How a job which deals with people differs from one which deals with ideas or things?

2. Write three paragraphs which describe the kinds of personalities that would enjoy working with:

a. people

b. data (ideas)

c. things

Activity Sheet Con't.

D. The student will demonstrate how he will support himself until reaching his career goals, including a saleable skill at his high school graduation.

Activities:

1. In each subject you are now taking, you are acquiring saleable skills. If you quit school now, which skills would you have that you could sell to an employer?

E. The student will list a sequence of steps for future job and/or career selection.

Activities:

1. Consider the activities you've done up to this point to develop a sequence of steps for career selection.

Goal 2. The student will investigate career clusters.

a. The student will determine characteristics of jobs and relate prepara and requirements needed to job choices.

Activities:

The student will complete the two activity sheets dealing with career investigation. (See resource section)

Goal 3. The student will develop a tentative life-time career.

Activities:

1. The student will complete a career planner.

2. The student will outline his high school program.

3. The student will confer with his guidance counselor and write a brief report.

RESOURCE SECTION

Goal 1.

The Student will develop a process whereby he relates his interests, needs, and abilities to career choices and develops a method to investigate many career choices.

A. The student will evaluate his interests, abilities, and needs as related to a career selection.

INTEREST SURVEY TEACHER MANUAL

Activity One: Interest surveys

This interest survey accomplishes two ideas: (1) It gives a measure of eight interests, and (2) It gives an indication of whether the student is leaning toward jobs dealing with people, things, data--ideas This survey measures eight interests. They are:

1. Literary Work. People interested in literary work like to read, write, and teach.

2. Scientific Work. People interested in scientific work like to solve problems or invent things.

3. Mechanical Work. People interested in mechanical work like to use machines and tools and fix things.

4. Clerical Work. People interested in clerical work like details, accuracy, and working indoors.

5. Persuasive Work. People interested in persuasive work like to deal with others and sell them ideas and products.

6. Outdoor Work. People who like to work outdoors usually do well as farmers, foresters, construction workers, etc.

7. Social Service Work. People interested in social service work enjoy helping others.

8. Artistic Work. People interested in artistic work like to create things with their hands using design, colors, and materials.

NOTE: See Attached Sheet, "Jobs in Eight Fields."

SCORING PROCEDURE:

After each item in the survey you find in parentheses a number and letter. The number represents one of the job interests, 1 though 8, and the letter represents People, Things, and Data-Ideas,

Count the number of LIKED, DISLIKED, AND UNDECIDED for each of the eight job interests. Place the number of LIKED, DISLIKED, AND UNDECIDED after the name of each job interest.

Count the number of LIKED, DISLIKED, AND UNDECIDED responses for items referring to People, Things, and Data-Ideas. Place the number of LIKED DISLIKED, AND UNDECIDED after the category of people, things, data-ideas. If a higher percentage of LIKED responses is found in any category then the student measures a positive interest in that work area. If a higher percentage of DISLIKED responses is found in any category then the student measures a negative interest in any work area. The same applies to undecided responses. For example:

		L	?	D		
a.	Clerical Work	___	___	___	=	Positive Interest
	Literary Work	___	___	___	=	Negative Interest
	Artistic Work	___	___	___	=	Uncertain Interest
b.	People	___	___	___	=	Positive Interest in people jobs
	Things	___	___	___	=	Negative Interest in things jobs
	Data-Ideas	___	___	___	=	Neutral Interest in data-idea Jobs

The teacher may use one of three procedures:

1. Give the various categories to the students. Have them count up LIKED, DISLIKED, UNDECIDED RESPONSES, and put the numbers counted after each category as shown in examples (a) and (b).

2. Teacher may score the survey himself using the set procedure and give the results back to each student.

3. Consult with guidance counselor for the possibility of scoring.

An example of a scoring sheet:

	L	?	D		Positive Interest	Undecided Interest	Negative Interest
1. Literary Work	___	___	___	=	_____	_____	_____
2. Scientific Work	___	___	___	=	_____	_____	_____
3. Mechanical Work	___	___	___	=	_____	_____	_____
4. Clerical Work	___	___	___	=	_____	_____	_____
5. Persuasive Work	___	___	___	=	_____	_____	_____
6. Outdoor Work	___	___	___	=	_____	_____	_____
7 Social Service work	___	___	___	=	_____	_____	_____
8. Artistic Work	___	___	___	=	_____	_____	_____
People	___	___	___	=	_____	_____	_____
Things	___	___	___	=	_____	_____	_____
Data-Ideas	___	___	___	=	_____	_____	_____

JOBS IN EIGHT FIELDS

If You Like	You Might Like To Be A
1. Literary Work	newspaper reporter magazine writer author advertising writer librarian teacher editor proofreader news broadcaster
2. Scientific Work	doctor laboratory technician dietician engineer electronics technician chemist dentist pharmacist biologist physicist space scientist draftsman bacteriologist
3. Mechanical Work	heavy-machinery operator auto mechanic airplane maintenance or repairman TV or radio repairman small-appliance repairman telephone installer air-conditioner installer locksmith machinist airline pilot electrician truck driver plumber
4. Clerical Work	office clerk secretary bookkeeper computer operator order-fulfillment clerk office manager file clerk post-office clerk accountant bank teller typist hotel clerk switchboard operator tabulating-machine operator office messenger stock clerk ticket agent

If you like	You might like to be a
5. Persuasive Work	salesclerk car or insurance salesman lawyer politician union leader door-to-door salesman employment manager lecturer travel agent
6. Outdoor Work	house painter bricklayer carpenter telephone lineman construction worker farmer forester gardener sports instructor pro athlete gas-station attendant recreation director
7. Social Service Work	Nurse nurse's aid YMCA worker tutor vocational counselor religious leader social worker physical therapist orderly home economist practical nurse
8. Artistic Work	artist photographer musician actor dress designer model dancer interior decorator hand letterer movie cameraman architect hair stylist cartoonist furniture designer

INTERESTS SURVEY

Directions:

This survey is not a test, but a look at your interests. There are no passing or failing scores. An answer is right if it is true for you. Your answers tell you, your teacher, and your guidance counselor what kind of job you'd enjoy.

Below you will find a list of things to do. Decide whether you like, dislike, or are undecided. Beside each activity, put an "X" on the first line, the one headed (L) or on the second line, the one headed (?), or on the third line, the one headed (D). Pretend you can do all the things listed, even those that need special training

	L	?	D		L	?	D
1. Repair cars (3T)	___	___	___	10. Work on a big tobacco farm (6T)	___	___	___
2. Design new cars(8D-I)	___	___	___	11. Write for a newspaper (1D-I)	___	___	___
3. Sell cars (5P)	___	___	___	12. Work in an Airplane factory(3T)	___	___	___
4. Discover a cure for a disease (2D-I)	___	___	___	13. Draw a picture of a dog (8D-I)	___	___	___
5. Write an article about a disease (1D-I)	___	___	___	14. Build a doghouse (6T)	___	___	___
6. Help someone overcome a disease	___	___	___	15. Write a story about a dog (1D-I)	___	___	___
7. Work at a telephone switchboard (4T)	___	___	___	16. Plan a school dance (5P)	___	___	___
8. Repair telephone lines (6T)	___	___	___	17. Collect tickets at the door (4D-I0	___	___	___
9. Install telephones in homes (3T)	___	___	___	18. Decorate the dance hall (8T)	___	___	___

		L	?	D
19.	Sort mail in a Post office (4T)	___	___	___
20.	Grow vegetables (6T)	___	___	___
21.	Care for old people (7P)	___	___	___
22.	Work as a YMCA counselor (7P)	___	___	___
23.	Keep track of dues and expenses (4D-I)	___	___	___
24.	Write a news article about the YMCA (1D-I)	___	___	___
25.	Teach a child how to swim (6P)	___	___	___
26.	Fix a toy for a child (3T)	___	___	___
27.	Explain electricity to a child (2D-I)	___	___	___
28.	Work as an orderly in a hospital (7P)	___	___	___
29.	Repair small electrical appliances (3T)	___	___	___
30.	Sell insurance around the country (5P)	___	___	___
31.	Manage a pilitical campaign (5P)	___	___	___
32.	Design campaign posters (8D-I)	___	___	___
33.	Answer the phone at headquarters (4P)	___	___	___
34.	Set up displays in a store (8T)	___	___	___
35.	Sell from door to door (5P)	___	___	___
36.	Write advertisements (1D-I)	___	___	___
37.	Prepare paychecks in an office (4D-I)	___	___	___

		L	?	D
38.	Repair office equipment (3T)	___	___	___
39.	Prepare X-rays in a dentist's office (2T)	___	___	___
40.	Write a Play (1D-I)	___	___	___
41.	Direct a play (5P)	___	___	___
42.	Paint scenery for a play (8T)	___	___	___
43.	Do research on improving a product (2D-I)	___	___	___
44.	Persuade people to use a new product (5P)	___	___	___
45.	Figure out the cost of producing a product (4D-I)	___	___	___
46.	Teach first aid at a camp (7D-I)	___	___	___
47.	Teach arts and crafts at a camp (8T)	___	___	___
48.	Teach sports at a camp (6P)	___	___	___
49.	Draw plans for houses (2D-I)	___	___	___
50.	Help build houses(6T)	___	___	___
51.	Sell houses (5P)	___	___	___
52.	Work in a chemical laboratory (2T)	___	___	___
53.	Work in a weather station (2D-I)	___	___	___
54.	Counsel in a prison (7P)	___	___	___
55.	Write magazine articles (1D-I)	___	___	___
56.	Deliver magazines by truck (6T)	___	___	___

	L	?	D
57. Bill customers for magazines (4D-I)	___	___	___
58. Pilot an airliner (3T)	___	___	___
59. Make airplane reservations(4D-I)	___	___	___
60. Sell airline service (5P)	___	___	___
61. Repair factory machinery (3T)	___	___	___
62. Inspect factory products (2T_	___	___	___
63. Check factory worker's health (7P)	___	___	___
64. Create oil paintings (8D-I)	___	___	___
65. Paint houses (6T)	___	___	___
66. Fill out orders for paint (4D-I)	___	___	___

SATISFYING NEEDS THROUGH WORK

Teacher Manual

Introduction: The following statement should be read to the students before they start this survey of need satisfactions.

" It is not easy for anyone to know the inner you. But it is important for you to understand as much as possible about your inner needs and how to satisfy them. Satisfaction through suitable work is a basic way of meeting some of your inner needs. One point that should be made clear is that the work you engage in does not have to satisfy every one of your needs. If a person's two or three strongest needs are satisfied, he tends to feel overall satisfaction."

Scoring Procedure:
The teacher will find a number in parenthesis to the right of each item. This number refers to one of four needs categories. Add up the plus signs(+) only and put the total number after the specific need category. A score of 8 to 11 indicates a strong need satisfaction; 5 to 7 indicates an average need satisfaction; and 1 to 4 indicates a low needs satisfaction.

Example of scoring sheet:	Total + Signs
1. Need for security; physical and psychological safety	_____
2. Need for affection	_____
3. Need for selfrespect; prestige; independence; Respect for others	_____
4. Need for knowledge and understanding; making most of one's self	_____

The student should receive the results. Then he should explore various jobs that might lend themselves to satisfying some of his stronger inner needs.

NOTE: The teacher may refer to a booklet entitled, "Your Personality and Your Job", from SRA for further information and activities.

SATISFYING NEEDS THROUGH WORK

Directions:

Put a plus sign (+) to the left of each satisfaction that goes with one of your strongest needs, and a minus sign (-) to the left of each satisfaction you feel you need not seek.

___ Feeling important (3)
___ Working with words (4)
___ Being told what to do (1)
___ Being treated like a person (3)
___ Getting attention (2)
___ Being a member of a group (2)
___ Being challenged intellectually (4)
___ Feeling sure of keeping your job (1)
___ Feeling proud of yourself (3)
___ Knowing why you're doing something (1)
___ Being liked by co-workers (2)
___ Achieving your ambition (4)
___ Working for a small firm (1)
___ Feeling self-confident (3)
___ Exercising leadership (3)
___ Feeling suited to your work (4)
___ Being creative or original (4)
___ Influencing people (3)
___ Being honest (3)
___ Eating good food (1)
___ Liking your co-workers (2)
___ Seeing the product of your work (2)
___ Always knowing what's next (1)
___ Being able to express your ideas (4)
___ Feeling safe from accidents (1)
___ Making your family proud of you (2)
___ Not having responsibility (1)
___ Talking to co-workers (2)
___ Feeling part of something big (1)
___ Mastering an area of knowledge (4)
___ Feeling loyal to others (3)
___ Being promoted (4)
___ Working in pleasant surroundings (1)
___ Using your capabilities (4)
___ Telling others what to do (3)
___ Living up to your ideals (4)
___ liking the work you do (2)
___ Being with other people (2)
___ Dealing with ideas (4)
___ Feeling useful and needed (2)
___ Doing things others can't do (3)
___ Having your work praised (2)
___ Gaining status in your community (3)
___ Working for a large company (1)

RESOURCE SHEET

Goal 2A The student will determine characteristics of jobs and relate preparation and requirements needed to job choice.

Activity one

Activity on Career Investigation

Activity covers the following objectives: 2C, 4A, 4B, 5A, 5B, 5C

Getting Started: Each student should refer to his list of jobs under each cluster to select two jobs from each cluster for research.

Cluster _____

1. Job Title: a) _____ b) _____

2. This job deals mainly with (people, data, and things)

   a) _____ b) _____

3. List the skills a person would need for this job.

   a) 1. b) 1.

   2. 2.

   3. 3.

4. List the characteristics of this job.

Salary Range	a.	_____	b.	_____
Environment	a.	_____	b.	_____
Movement	a.	_____	b.	_____
Union	a.	_____	b.	_____
Hazards	a.	_____	b.	_____
Where Job is Found	a.	_____	b.	_____
Number of Hours	a.	_____	b.	_____

5. What preparation and requirements are needed for the job?

a) How much education?	a)	_____	b.	_____
b) Apprenticeship	a)	_____	b.	_____
c) How would you get started in the job?	a)	_____	b.	_____
d) What further education would you need to keep the job?	a)	_____	b.	_____

RESOURCE SHEET

Goal 2A Activity one (continued)

6. Do you see any similarities between the two jobs selected in this cluster? _____ If so, list them.

7. Do you see a progression from one of these jobs to the other? _____

8. Is the job secure in the future? _____

RESOURCE SHEET

Goal 2A The student will determine characteristics of jobs and relate preparation and requirements needed to job choice.

Activity two Career Selection Activity

Student will refer to his research sheets for jobs in each cluster to answer the following questions.

Refer to question 3 to complete the following table of skills.

Skills	Cluster
1.	
2.	
3.	
4.	
etc.	

Directions:

1. List all the skills under "skills" on the table, you found during your research of jobs in the clusters. (not cluster you found it under)

2. Put a check in each cluster box where the skills are found.
Note: Some skills maybe found in more than one cluster.

Questions:

1. Can you see where a set of skills a person might have for a job would fit into more than one job cluster.

2. Select two jobs from two different clusters which do not seem to be related in terms of skills or other requirements and explain what you would need to change jobs.

3. Select two related jobs in one cluster and explain what additional skills or education you would need to change jobs.

4. In view of the information you have obtained from your study of careers, what lifetime careers are you pursuing?

NINTH GRADE RESOURCE SHEET

Resource for #3 Sample Contracts.

Sample 1.

Group Members:

_____

_____

_____

Our group is going to study _____occupations. This is what we are going to do between _____ (date) and _____ _____(date). We are going to make our report to the class on_ _____(date

_____ will do these things:
(member of group)

_____will do these things:

_____will do these things:

_____will do these things:

_____will do these things:

_____will do these things:

Sample Contracts continued

Sample 2

Student's Name _____ Teacher _____
(or names of students in group)

Guided Occupational Orientation Program

I am going to study the _____ field of occupations. I have read through the booklet and would like to follow these objectives:

p. _____ _____

p. _____ _____

p. _____ _____

p. _____ _____

Teacher's notes: (Teacher can work out independently; teacher can cooperatively plan with student.)

For an "A"

Page _____ Activity _____

Page _____ Activity _____

Page _____ Activity _____

For a "B"

Page _____ Activity _____

Page _____ Activity _____

Page _____ Activity _____

For a "C"

Page _____ Activity _____

Page _____ Activity _____

Student's agreement:

I am going to work for a _____ grade, based on the assignments above.

Sample Contracts Continued

Sample 3

Student's Name _____ Period _____

I am going to study occupations in the _____ booklet.

I would like to learn the following things about these jobs: (objectives)

_____

_____

_____

_____

_____

_____

I would like to learn these things by doing these activities from the booklet:

Page _____ Activity _____

Page _____ Activity _____

Page _____ Activity _____

Page _____ Activity _____

Page- _____ Activity _____

I think that if I get this work done by _____ (date),

I should get a _____ grade.

Student's signature _____

Teacher's comment: I will agree with your proposal if you also do these things

Teacher's signature _____

Sample Contracts continued

Sample 4

Student's Name _____ Period _____ Teacher _____

Lesson Plan

	Activity I plan to do:	Activity I actually did
First Day		
Second Day		
Third Day		
Fourth Day		
Fifth Day		

Sample Contracts Continued

Sample 5

I am going to study_____Career.

In my agreement with_____ _____(teacher), I know that I will rec

_____grade and one credit for doing these things:

1.

2.

3.

4.

5.

6. Work must be completed by _____(date).

_____ Teacher Signature

_____ Student's signature

NINTH GRADE CHECKLIST FOR STUDENTS

Regardless of the type of program each school selects to implement in the ninth grade, each student must complete activities in the following categories

Category	Complete	Incomplete
Goal 1. The student will develop a process where by he relates his interests, needs, and abilities to career choices and develops a method to investigate many career choices by: a. evaluating interests, abilities, and needs as related to a career selection. b. identifying and using available tools in job selection c. developing a criteria such as people, data (ideas), and things to investigate job choices. d. Demonstrating how he will support himself until reaching his career goals - including a saleable skill at his high school graduation. e. listing a sequence of steps for future job and/or career selection		
Goal 2. The student will investigate career cluster by: a. determining the characteristics of jobs. b. relating preparation and requirements needed to each job choice.		
Goal 3. The student will develop a tentative life-time career by: a. completing a career planner b. writing reports on field trips which relate to his/her high school program.		

Taken from the "Transportation Club of Syracuse, Inc."
Newsletter - "The Note Book"
Vol. XXII No. 10, December 1972

SPECIAL REPORT ON EDUCATION. . .Pres. Don French

The number one priority of this administration was establishing a dialogue between the transportation profession and the Syracuse school system. This has been accomplished. Early this year, Ward Sperry of the Education Committee and Bob Guadagno of the Special Committee made contact with the Board of Education. Since then many meetings have been held and additional people have become involved in this worthy project. On Oct. 24 and again on the 31st, Harry Weber, John Milliti, Jim Davis, Jim Carlton and yours truly held a lecture and discussion meeting with a group of senior students at Henninger High School. The main lecture was given by our most enthusiastic and vocal member, Harry Weber, followed by the other members of this task force touching on the major facets of transportation.

We now feel our immediate goal is the establishment of a course in transportation in the school curriculum. This will be backed up by guest lecturers and discussion leaders from the Transportation Club of Syracuse. The people from the Board of Education who have been guiding us are known as occupational resource specialists. They are: Mrs. Mary Jane Fossaceca, Mrs. Frances Traynor, Mr. Bob Brown and Mr. Ronald Cocciole. To them go our heartfelt thanks.

There is so much more to add but time and space do not allow it. Suffice to say, your incoming administration is committed to building greater involvement between ourselves and the schools. We need many more good people in this wonderful field of transportation. The horizons are unlimited. Come forward if you have new ideas and if you are asked to be a discussion leader or a lecturer. Give it your best shot. We have the talent, we have the door open. Let's move on this opportunity. Remember - nothing happens till something is moved.

* * * * * *

"Middle age is when work begins to be a lot less fun - and fun begins to be a lot more work".

JUNIOR HIGH SCHOOL G.O.O.P. QUESTIONAIRE
Syracuse City School District

Grade Taught _____ Subject _____

INTRODUCTION

The materials used this year in Careers Unlimited were designed to be used in the 7th grade. We plan to revise these materials and write additional materials for 8th and 9th grades. In order to do this, we need the feedback of teachers who have been involved in the program this year so that any change is based on this feedback.

As you respond to the following questions, those that don't apply to your grade level may be omitted, but please answer as many questions as you possibly can.

1. How many of your students showed interest in career studies?

   most, some, very few, none at all

2. Do you feel that Guided Occupational Orientation aided in fulfilling this need (if any) for career studies?

   yes, no, not sure

3. Do you, as a teacher, feel that career studies are necessary?

   yes, no, not sure

4. Do you feel that career studies should be an integral part of the curriculum?

   yes, no, not sure

5. With the materials available, do you feel the booklets used this year were appropriate for this grade level?

   yes, no

6. The booklets used this year were originally designed for the 7th grade. Do you feel these booklets were appropriate for this grade level?

   yes, no

7. If answer was no, to what grade level do you feel they <u>were</u> appropriate?

   8th, 9th, none at all

(OVER)

8. Do you feel that the 7th grade program materials should be revised to provide more structure?

   yes, no, not sure

9. Which type of alternative materials would you consider more appropriate for 7th graders?

   a. textbooks

   b. structured student workbooks

   c. individual student activity books

   d. teacher reference packet (i.e. sample worksheets, sample outline, lesson plans, sample discussion)

   e. other _____

10. Do you feel that 8th grade materials should be written to provide more structure?

    yes, no, not sure

11. Which type of alternative materials would you consider appropriate for 8th graders?

    a. textbooks

    b. structured student workbooks

    c. individual student activity books

    d. teacher reference packet (i.e. sample worksheets, sample lesson plans, sample discussion outline)

    e. other _____

12. Do you feel that 9th grade materials should be written to provide more structure?

    yes, no, not sure

13. Which type of alternative materials would you consider appropriate for 9th graders?

    a. textbooks

    b. structured student workbooks

    c. individual student activity books

d. teacher reference packet (i.e. sample worksheets, sample lesson plans, sample discussion outline)

e. other _____

14. Do you feel that the content of the program used this year (introduction unit and individualized career studies) was too extensive to cover in a period of 120 class hours?

agree, disagree, not sure

15. The program for career study this year was designed to consist of approximately 30 class hours per subject area. Do you feel that this was too much time, sufficient time, or insufficient time?

16. One of the objectives of the program is to integrate career study with the regular school curriculum. What format do you feel would be most effective in accomplishing this?

a. straight bloc of time

b. one day a week

c. individual choice by teacher to incorporate into subject area where and when appropriate

17. Do you feel that it is necessary to establish a city-wide policy for evaluation of student participation in program?

yes, no, not sure

18. Do you feel student evaluation should be:

a. pass - fail

b. school grade

(OVER)

Do you have any additional comments, suggestions, or criticisms? (If related to a specific question above, please indicate the number of the question.)

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Return to:

Guided Occupational Orientation
Career Center
George Washington School
1970 Meadowbrook Drive
Syracuse, New York 13224

10 teachers finish workshop

By SUE CAMPBELL

A team of 10 Syracuse eachers has completed a .ive-week workshop geared toward incorporating career planning and preparation into the city's junior high school program.

The summer workshop was part of the district's $544,000 federally funded Guided Occupational Orientation Program. Aim of the program is to develop career planning skills in the district's students, and at the same time make day-to-day instruction in academic classes more meaningful. Under the program, English, social studies, science and mathematics teachers work together to point their instruction towards career aims.

Efforts were made in this direction during the last school year. The summer workshop completely revised last year's materials, based on teacher and student recommendations, constructed a totally new seventh and eighth grade guide. and prepared special materials for ninth graders.

Skill building kits were assembled for teacher use, containing ideas for career education and where to go to implement them.

The teachers also planned school personnel orientation programs to be held this fall, beginning with Levy Junior High in late September. The workshops are planned to aid teachers in working with the prepared materials and tell them about career resources in the city.

One of the resources are the four occupational resource specialists, working under Richard Bannigan, district assistant for guided occupational orientation.

The specialists are responsible for coordinating the program and helping teachers locate resources such as films, public agencies, field trips.

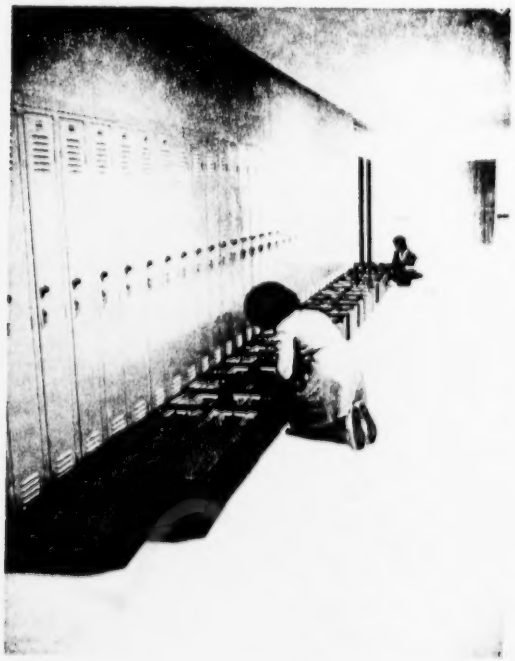
According to Ron Cocciole of Shea Junior High, workshop director, the district hopes to make educational efforts more relevant and meaningful to non-college students, at the same time as helping college-prep students make more valid, long-term career decisions.

Working with Cocciole in the workshop held at Corcoran High School were Leonard Obler of H. W. Smith School, Dorothy Savo of Lincoln. John Hernandez of Clary, Job Bonura of H. W. Smith, Leo Sweeney of Eastwood, Jo Kornbluth of Roosevelt, Thomas Calabufo of Blodgett, Tom Homestead of Levy, and Irma Hilts of Grant Junior High. Several school principals, administrative personnel and the city's occupational specialists worked with the group on a consulting basis.

Discussing junior high program changes are, from left, Len Obler, social studies teacher at H.W. Smith; John Hernandez, math teacher at Clary; Dorothy Savo, English teacher at Lincoln; Thomas Colabufo, guidance counselor at Blodgett, and Irma Hilts, science teacher at Grant Junior High.

Print Shop Teacher and Neighborhood Youth Corp
workers printing Career Education curriculum materials

Teachers and Neighborhood Youth Corp workers collating curriculum materials and making up 7th and 8th grade Resource Kits



THE WORLD OF WORK

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Student's Name _____ Teacher _____

School _____

ORIENTATION PRE-POST TEST

LESSON I

Match the word with the meaning by putting the correct letter in the blank.

A. Trait ___being able to do certain things

B. Ability ___a feeling of wanting to know, see, or own something

C. Interest ___words used to tell how people act

D. Personality ___traits, abilities and interests that make you different from others

LESSON II

Put T for true and F for false on the blank.

___A. Everyone should do the same kind of work no matter what they like or dislike.

___B. It is important to know your likes and dislikes.

LESSON III

Put a check (✓) mark in front of the right answer.

1. If we are often late for school, our teacher can

___fire us ___stop our salary ___keep us in after school

2. If we don't do our school work we get low marks, but if a worker doesn't do his work his boss can

___keep him in after work ___give him low grades ___stop his salary

3. If we work hard in school we can get good marks. If a worker works hard on his job he can get

___a raise in salary (more money) ___fired ___high marks

4. A good student and a good worker comes to school or work

___dirty and sleepy ___late or doesn't come in at all ___clean and ready to work

LESSON IV

Put T for true or F for false.

___1. Certain jobs are needed in every area where people live.

___2. The location of a job does not matter as long as you get paid for doing it.

___3. Jobs can be "grouped" in many different ways, such as location, amount of skill needed, etc.

___4. Certain jobs have certain duties that do not belong to any other job.

LESSON V

Put T for true or F for false.

___1. If we do not get paid for helping our parents with the housework what do we do is not considered work.

___2. Division of labor means working only part of a day.

___3. Each person depends on others to produce most of the goods and services he needs.

___4. When people work, they produce either goods or services.

LESSON VI

1. In a factory, workers are grouped as: (check one group)

___old, young, middle aged

___unskilled, semi-skilled, skilled

___early, late, careless

2. Put T for true or F for false.

___a. Unskilled workers get the lowest pay

___b. A semi-skilled worker gets on-the-job training

___c. A skilled worker learns his skill as an apprentice

___d. A technician needs no speical training

___e. A bus driver is a professional person

___f. A para-professional is an aide or assistant to a professional person.

3. Put T for true or F for false.

___a. A job family contains many different jobs all in the same career area.

___b. Some job families are made up by the amount of skill and training required.

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

AN INTRODUCTION TO THE WORLD OF WORK

Table of Contents

Lesson:		Page:
	Introduction	
I.	Who Are You?	1
II.	What Do You Like to Do?	10
III.	What Good Is School?	13
IV.	What Is a Job?	18
V.	What Is Work?	27
VI.	Job Families	31
	Glossary	45

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ACKNOWLEDGEMENTS

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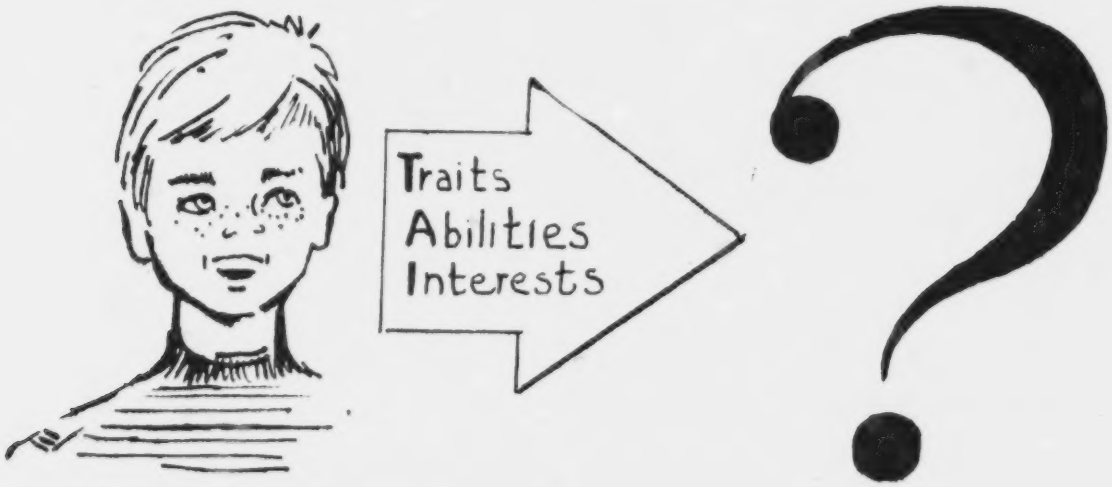
THE JOBS YOU GET by Richard H. Turner. Copyright C 1962 by Richard H. Turner. Used by permission of Follett Educational Corporation.

INTRODUCTION

In this study, our goal is to realize that each of us is more than just skin and bones, and some of the things that make us different are called traits, abilities and interests. We will try to learn more about ourselves by studying our own traits and abilities. We'll see how our interests affect what we do, and how we do it.

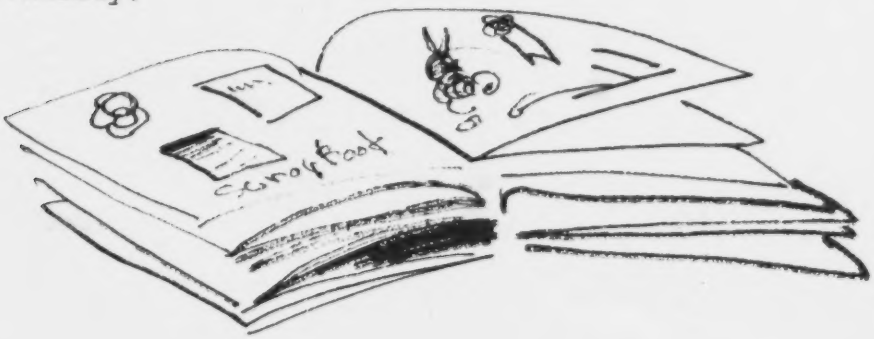


Can you see why this study is important? By understanding ourselves, we can not only learn to live with others, but also we can know more fully what we can and cannot do as a person.

The more thought you give to planning your future, the better prepared you will be for it!

IDEA!!

Begin making a scrapbook of pictures and clippings from old magazines and newspapers that you feel reflects your personality.



NEEDED:

Newspapers, magazines.

Paper on which to mount pictures and clippings.

Paper and scissors

Your thoughts about YOU.

EXAMPLES:

Pictures or articles about your favorite sport.... your style of clothing.... your hobbies.... your ambition or goal, etc.

LESSON I
"Who Are You?"

Filmstrip #1 Who Are You?
Newspaper - "Help Wanted" section

Have you ever dreamed about the job you will have when you grow up? Most boys and girls have. This new material you're going to study is about those jobs. The study is called, "The World of Work" and it will do two things:

1. It will help you to know more about jobs.
2. You will have a chance to discover some things about yourself.

Fifth grade is not too early to begin to think about your future. You can see many jobs by looking around your neighborhood, your school, your own house! How about your Dad? Can you name good and bad things about his work? Is he satisfied? Would you feel the same way about that job?

Those are some of the questions that will help you find out about what you can do.

Activity

When everyone has finished this page, share the jobs you have written down with your class. As you tell the class about them, be sure to say why you picked these jobs, (why you might like them).

Look at the "*Help Wanted*" section of a newspaper. You will find many different kinds of work. Pretend you are looking for a job and make a list of those jobs you would be interested in. After you list each job, copy any information you want to from the want-ad.

Name of Job	Facts About The Job
_____	_____
	_____
	_____
_____	_____
	_____
	_____
_____	_____
	_____
	_____
_____	_____
	_____
	_____
_____	_____
	_____
	_____

Activity

Traits - are words used to tell how people act.

Example: honesty, bravery, laziness, tardiness, loyalty

Can you name some others? Remember! They are words that tell how people act. You may use more than one word, such as "hard working".

_____ _____

_____ _____

_____ _____

Discuss these with your teacher and classmates, then do the exercise below: Choose one of the traits listed that you think best completes each sentence.

Alert, Bravery, Fair, Kindness, Honest

a. George Washington was a very _____ man.

b. Tarzan is known for his _____.

c. The crossing guard on the corner is very _____.

d. A referee in a hockey game has to be _____ to both teams.

e. _____ to animals is an important trait.

Ability - power, skill, talent

Can you find the root word in "ability"? Write here what you think it is. _____ You can check to see if your answer is right by turning this sheet upside down and looking in the corner. People have different abilities because they are able to do different things. For example, you are able to do things an adult cannot do....and an adult has the ability to do things that you cannot do. These differences are based on many things, such as age, training, size, etc.

Activity

Some examples of *abilities* are:

1. strong athlete _____
2. good cook _____
3. leadership _____
4. good salesman _____
5. musical _____

Opposite each ability listed, write the name of someone whom you think has that ability.

Interest - a feeling of wanting to know, see or own something

I'm sure you know many things in which you have an interest. For example: sports, swimming, special TV shows, your friends, etc. List 3 things you have a special interest in.

a. _____

b. _____

c. _____

Are you sure what the words *traits*, *ability* and *interest* mean? Do this exercise to find out. Put an A before the sentences that tell about an ability, put a T before the sentences that tell about a trait, put an I before the sentences that tell about an interest.

____a. Sally thinks that being a model would be a fun career.

____b. Oscar Robertson is tall enough to be a star basketball player.

____c. Abraham Lincoln was known as "Honest Abe".

____d. Carol likes rock music.

____e. Paul Bunyon and Pecos Bill were strong enough to do almost anything.

____f. My brother is always kind to his dog.

Activity

Personality...what a long word! Let's take it apart and see what's in it.

Person - you, me, my friend, anyone

Personal - something that has to do with ME.

Personality - all the things that make me different from others, mainly the traits, abilities, and interests that I have.

Think - your *personality* is what "makes you tick" in your own special way. It will be a very important factor in the type of work you do someday.

Our self-study will cover your *PERSONALITY* first, because it is so important.

PERSONALITY

Other Ways to Learn About Jobs

As you continue growing up, the things you study at school and the jobs you do at home or after school will help you discover the things you can do well and will like to do. Also, the kind of boy or girl you are, the things you like, your friends--- all these things have a great deal to do with the job you choose.

For Example: You know that there are no two people just alike. Look at the boy or girl nearest you. Are you taller or shorter than him? Do you both have the same color hair, or skin, or weigh the same?

I'm sure you will feel that you not only look different but also that you differ in other things, such as favorite games, subjects in school and sports. In other words you can see that you have your own traits and interests that make you-----you!

Now, because you differ from other people, your choice of jobs in the world of work will be different from that of others. Let's start out by thinking what kind of work you are interested in.

LESSON I
"Who Are You?"

Activity

What Kind of Personality Do You Have?

Join a partner to do this exercise.

Talk over each set of personality traits and decide which one best suits each of you.

In each box put a check mark ( ) beside the one quality which you feel best describes the way you look, feel, or behave most of the time.

____moody ____happy ____restless ____angry	____shy ____talkative ____thoughtful ____noisy	____worried ____carefree ____nervous ____calm	____bright ____average brains ____brilliant ____stupid
____rude ____casual ____few manners ____polite ____	____popular ____unpopular ____hated ____liked	____handsome ____average looks ____ugly ____good looking	____sloppy ____well-dressed ____dirty ____dishonest ____truthful

Activity

What Do You Like to Do?

Choose a friend and do this exercise as a team of two. One person should ask the other if he has the traits listed here.

Put a check mark ( ) beside ten that you both feel best tell what he is like. Keep all your work sheets in your folder.

___good at handling money

___like drawing

___good at meeting new people

___people turn to you for advice

___have a good imagination

___able to get things organized

___like sports

___like to read

___like to work with your hands (build models, knit, sew, etc.)

___like to work outdoors

___like to create fashions or design cars

___enjoy working with people

___have a good memory

___enjoy working with very small children

___like to travel

___not afraid of heights

___don't mind hard work

___interested in anything that has to do with outer space

___have good handwriting

___physically strong

___like to work with animals

___like to work by yourself

ACTIVITY

After you have marked the ten traits that you feel you have, copy them on these lines.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

With your partner, think of some jobs that would call for the traits you listed above. Write the jobs here:

_____ _____

_____ _____

_____ _____

LESSON II ACTIVITY
"What Do You Like to Do?"

My Likes and Dislikes

1. Subjects I like to read about: _____

_____

_____

2. My favorite TV show: _____

3. My favorite sport: to play _____

to watch _____

4. Hobbies: _____

_____

_____

5. My best subject: _____

6. Jobs I have had: _____

_____

_____

7. My clubs: _____

_____

8. My favorite book: _____

_____

LESSON II (cont'd)
"What Do You Like to Do?"

Filmstrip #2

What Do You Like to Do?

Now, because you differ from other people, your choice of jobs in the world of work will be different from that of others. Let's start out by thinking what kind of work you would like to do. Here is a list of many different jobs. Put a check mark ( ) beside the ones you think you'd like to have. Put a cross (X) beside the ones you think you would not like to have.

___baker
___pro-athlete
___teller in a bank
___policeman
___truck driver
___circus performer
___TV cameraman
___cowboy
___jet pilot
___farm worker
___secretary

___teacher
___steel mill worker
___carpenter
___forest ranger
___factory worker
___bellhop
___electrician
___salesman
___newspaper reporter
___house painter

___waitress
___skin diver
___taxi driver
___milkman
___coach
___social worker
___dentist
___FBI agent
___waiter
___radio announcer

___gas station worke
___cattle rancher
___postal clerk
___telephone lineman
___TV repairman
___auto mechanic
___typist
___nurse

LESSON II
"What Do You Like to Do?"

ACTIVITY

Why You Want a Job

A. Select any one of the jobs in the lists that you put a check mark beside. Then in the spaces below give at least 2 reasons why you think you'd like to have this particular job.

1. _____

_____

2. _____

_____

B. Are these based on your likes and dislikes? _____

C. Do you know what training would be necessary in order for you to get this job?

1. Write here what you think it is.

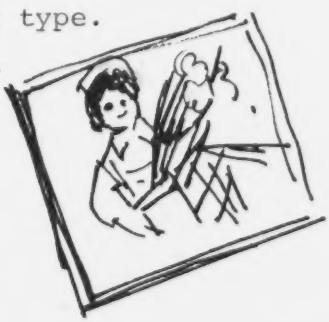
_____

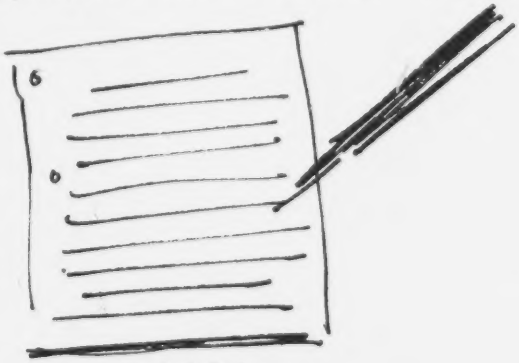
_____

_____

D. Choose one picture you have chosen for your scrapbook and write a paragraph that includes the following:

1. What job the picture is about.
2. Why you are interested in that job.
3. How you would use your interests and abilities in a job of that type.





LESSON III
"What Good Is School?"

Filmstrip
"What Good Is School?"

Words to watch for (Use your glossary)

1. Put this list in alphabetical order:

grade _____

test _____

questions _____

salary _____

important _____

mechanic _____

2. Use your dictionary to find the meanings of the words in the above list. Write the meanings here:

a. _____

_____

b. _____

_____

c. _____

_____

d. _____

_____

e. _____

_____

f. _____

_____

g. _____

_____

Henry and Tom

Which One Are You Like?

Henry and Tom are brothers, but they are not alike. When they were both in school, Henry was a good student, had good grades, did well on his tests, and asked good questions. He knew school was important. The teacher could depend on him, he was honest, wanted to do a good job, and helped other people. He was the kind of person you want to be.

Tom was very different from Henry. When Tom was in school, he didn't care at all about school. He stayed home often, he came late, he did not listen, and he was almost thrown out of school. Tom thought school was a waste of time. He couldn't wait to be old enough to quit school, find a job, work for a boss, and make a salary so he could buy things.

Henry and Tom both finished school and found jobs. Henry went to work as a mechanic. He acted the same way that he did in school. He had listened and learned the things in school that would help him keep his job. He did the right things in school so he would know what to do when he went to work.

Tom had never learned the right things in school. He lost the job because he lost some tools. He didn't know what was important to hold a job. The sad part is he wants to work and make money but he had never learned how. He has not learned what he needs to know to hold a job.

Almost everyone wants to get a job and make money, but many people just don't know how. Will you be a Henry or a Tom? You sould begin now while you are in school to learn the things that will help you get and hold a job later in life. It will be too late to learn things once you are out of school.

LESSON III
"What Good Is School?"

ACTIVITY

1. Which person in the story do you think is better, Henry or Tom?

_____

2. Put a check next to the answers which tell why you felt one boy was better.

___earns his own way

___always was late

___always was on time

___took care of tools

___wanted to be a success

___didn't care

3. Do you think school and work are alike? Some things you do in school are almost like things you would have to do on a job. Also there are things you can do in school that you cannot do on a job without being fired. The list below gives two choices. Put a check ( ) in Column A for the things that are alike in school and work. Put a check in Column B if they are different.

A (Alike)	B (Different)	
_____	_____	1. Being on Time School: We must be on time. If we are too late often, we have to stay after school. Work: We must be on time. If we are late too often, we will be fired.
_____	_____	2. Doing Our Work School: If we don't do our work, we get low marks, but we can still come to school. Work: If we don't do our work, we lose our salary and are fired.
_____	_____	3. Talking Back School: If we talk back to the teacher we are punished. When we learn to be nice we are not punished anymore. Work: If we talk back to the boss we get fired and lose our salary.
_____	_____	4. Being a Good Worker School: If we work hard, we can get higher marks. Work: If we work hard, we can het a higher salary.

These are just a few ways to compare school and work. If you want to become the kind of person who can hold a job, make good money, and be happy while you do it... listen carefully in school. You learn a lot about being a good worker and keeping a job. Learn these things while you're in school. Practice them every day.

4. Study the list below to find out if the things that make good or bad students are alike or different from being a good or bad worker. Put a check( ) in the column next to each one, Column A if you think they are alike, Column B if you think they are different.

A (Alike)	B (different)	
_____	_____	1. Being on Time Good Student: is on time Good Worker: is on time
_____	_____	2. Ready for Work Good Student: has had a good night's sleep, clean, has had breakfast, has books, pencil, pen ready. Good Worker: has had a good night's sleep, clean, has had breakfast, has tools ready.
_____	_____	3. Doing Your Best Good Student: Works hard, follows directions, keeps trying. Good Worker: Works hard, follows directions, keeps trying.
_____	_____	4. Attendance Good Student: is at school every day; if he is absent, he has an excuse. Good Worker: is at work every day. The boss can depend on him. If he is absent, he has a reason.

LESSON III
What Good Is School?

Activity

Write a paragraph that tells how school is or is not the same as work. Include information gained by interviewing your parents and either your teacher or someone who works in your neighborhood.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Use this sheet to help you during the interview.

1. What are two qualities that a person should have to be either a good student or a good worker? _____

_____

2. What is meant by a "good attitude" toward school or work?

_____

_____

3. What work habits can a student learn in school that will help him in the World of Work? _____

_____

_____

_____

LESSON III
"What Good Is School?"

ACTIVITY

A. What would you say if you were told these things? Put an X on the line in front of your answer.

When the boss says to you:

1. "This isn't right. Do it again."

___I thought it was O.K., but I'll do it over.

___It was alright when I left it. Someone must have messed it up.

___Why do I get all the dirty jobs?

2. "You're late again today. I'll have to take your pay."

___John was late yesterday, and you didn't take his pay.

___Gee, I couldn't help it. My clock stopped, but the bus didn't.

___Sorry. I'll try not to be late again.

When your teacher says to you:

3. "I'm sure you know the answers. You were careless. Please do this paper again."

___Aw! Do I have to?

___I goofed. I'll try again.

___Why do we have to do this stuff anyway?

4. "You've been late three times this week. You'll have to make up the time after school tonight."

___I couldn't get here. My mother go up late.

___Gee, it was only five minutes.

___I know, I'll try not to be late again.

B. How polite are you to your family? To your friends?

1. Write what you would say when your father or mother says, "I need your help today. I have some heavy work to do and I need someone to help me lift things."

_____

_____

2. Write what you would say when your best friend says, "Gee, I can't to with you until I get this work done for Mom."

_____

_____

3. Write what you would say when your sister or brother says, "Will you get some stamps for me on your way home?"

_____

_____

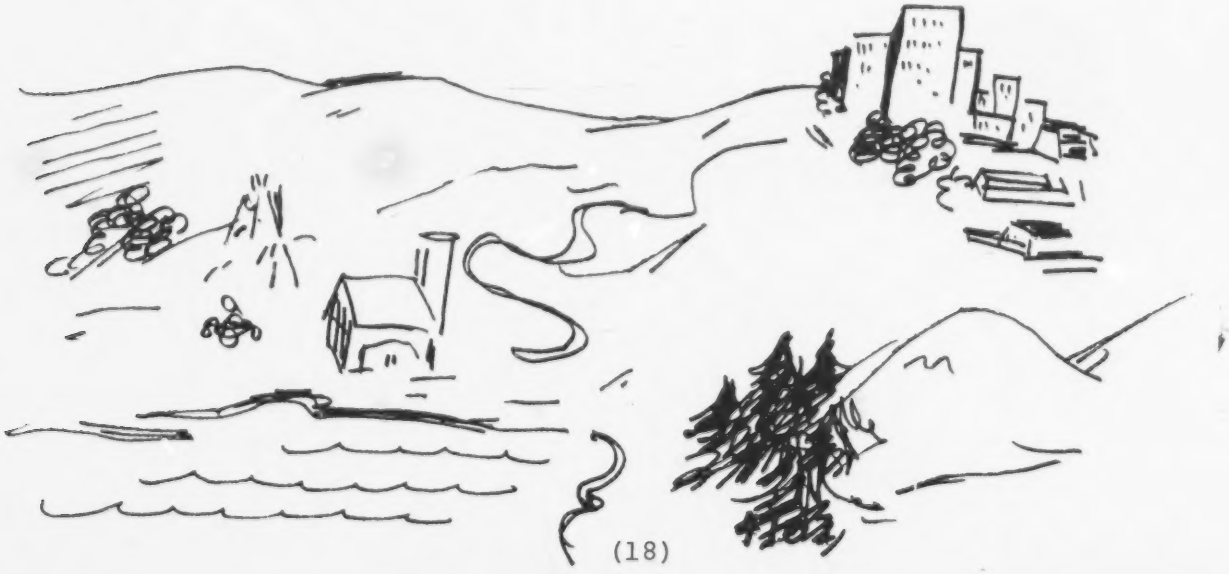
LESSON IV
"What Is A Job?"

Filmstrip
"What Is A Job?"

Many Jobs Are Needed Everywhere

Firemen, Telephone Operators, and Teachers are found everywhere. See how many of the spaces below you can fill in with jobs that are found everywhere.

WHERE DO YOU WANT TO LIVE AND WORK?



INDOOR AND OUTDOOR JOBS

Below is a list of indoor and outdoor jobs. See if you can put them into the correct columns.

JOBS		INDOOR JOBS	OUTDOOR JOBS
1. bookkeeper	10. tailor		
2. forest ranger	11. carhop		
3. street cleaner	12. maid		
4. hatcheck girl	13. butcher		
5. office boy	14. librarian		
6. traffic policeman	15. farmer		
	16. gardener		
7. elevator operator	17. janitor		
8. yard foreman	18. road builder		
9. cattle rancher	19. cashier		
	20. playground director		

LESSON IV
"What Is A Job?"

ACTIVITY

Arrange the list of occupations below in alphabetical order. Try to use your best handwriting.

plumber	1. _____
florist	2. _____
woodworker	3. _____
housekeeper	4. _____
banker	5. _____
artist	6. _____
repairman	7. _____
baker	8. _____
electrician	9. _____
printer	10. _____
jeweler	11. _____
actress	12. _____
cook	13. _____
dentist	14. _____
carpenter	15. _____
model	16. _____
dancer	17. _____
bricklayer	18. _____

JOB DUTIES

Every job has certain duties. See if you can sort out the duties in the list below and put them into the correct columns.

1. dye hair
2. make beds
3. plant seeds
4. open mail
5. plow earth
6. pluck eyebrows
7. make appointments
8. clean windshields
9. give alcohol rubs
10. fill gas tanks
11. frost cakes
12. give facials
13. clean stables
14. mix batter
15. type letters
16. take temperatures
17. put air into tires
18. give manicures
19. answer telephone
20. check oil
21. sift flour
22. change bandages
23. milk cows
24. bake bread

OFFICE WORKER	BAKER	NURSE
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

GAS STATION WORKER	BEAUTICIAN	FARMER
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

CLASS ACTIVITY

JOB DUTIES

Every job has certain duties. See if you can sort out the job duties that are listed below, and write them under the correct job titles.

give transfers	arrange bouquets	adjust lenses	check brakes
fill cavities	repair dentures	mix batter	total deposits
test meters	fry hamburgers	splice cables	erect scaffolding
press suits	insulate wires	saw boards	clean dresses
make wreaths	transplant flowers	count cash	sell money orders
take X-rays	fill in trip sheet	water plants	snap pictures
cash checks	repair radar	print film	make regular stops
light ovens	set up cameras	collect fares	sew on buttons
build stairs	balance accounts	nail plywood	inspect TV sets
make corsages	treat gums	tag garments	scramble eggs
develop photos	make door frames	extract teeth	remove spots
season soup			

BUSDRIVER

1. _____
2. _____
3. _____
4. _____
5. _____

COOK

1. _____
2. _____
3. _____
4. _____
5. _____

BANK TELLER

1. _____
2. _____
3. _____
4. _____
5. _____

FLORIST

1. _____
2. _____
3. _____
4. _____
5. _____

DRYCLEANER

1. _____
2. _____
3. _____
4. _____
5. _____

ELECTRICIAN

1. _____
2. _____
3. _____
4. _____
5. _____

CONTINUED ON NEXT PAGE

LESSON IV
"What Is A Job?"

CLASS ACTIVITY

DENTIST	CARPENTER	PHOTOGRAPHER
1. _____	1. _____	1. _____
2. _____	2. _____	2. _____
3. _____	3. _____	3. _____
4. _____	4. _____	4. _____
5. _____	5. _____	5. _____

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CLASS ACTIVITY

JOB DUTIES

Listed below are more job duties. See if you can sort them out, and write them under the correct job titles.

clean picture screen	balance accounts	act as trustee
replace spark plugs	weigh packages	total checks
test for gas leaks	trim lamb chops	pluck eyebrows
register letters	hammer out dents	make arrests
take fingerprints	give manicures	draw up wills
slice spareribs	install sprinklers	count money
operate cash register	replace worn tubes	dye hair
prepare mortgages	balance wheels	make change
sell money orders	shadow suspects	weigh meat
adjust ignition timing	repair faucets	give facials
check volume control	sell stamps	find clues
try cases in court	install antennas	sort mail
prepare rib roast	disarm gunmen	cut steaks
replace picture tube	defend clients	style wigs
repair headlights	clean drains	saw pipes

PLUMBER	TV REPAIRMAN	GARAGE MECHANIC
1. _____	1. _____	1. _____
2. _____	2. _____	2. _____
3. _____	3. _____	3. _____
4. _____	4. _____	4. _____
5. _____	5. _____	5. _____

CONTINUED ON NEXT PAGE

LESSON IV
"What Is A Job?"

ACTIVITY

BEAUTICIAN	LAWYER	DETECTIVE
1. _____	1. _____	1. _____
2. _____	2. _____	2. _____
3. _____	3. _____	3. _____
4. _____	4. _____	4. _____
5. _____	5. _____	5. _____

POSTAL CLERK	CASHIER	BUTCHER
1. _____	1. _____	1. _____
2. _____	2. _____	2. _____
3. _____	3. _____	3. _____
4. _____	4. _____	4. _____
5. _____	5. _____	5. _____

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THE PERFECT JOB

What is your idea of the perfect job? If you could have your choice of any of the working conditions listed below, which would you choose? Put a circle around each of your choices.

An indoor job
or
An outdoor job

A daytime job
or
A night-time job

A job where the work is interesting but you don't make much money.
or
A job where the work is dull but you make lots of money.

A part-time job
or
A full-time job

A job where you work alone
pr
A job where you work with lots of people

A job where you wear old clothes
or
A job where you wear good clothes

A job where you have a boss
or
A job where you're your own boss

A job in the city
or
A job in the country

A job where you work very hard and make a lot of money
or
A job where you can take it easy and not make much money

A job where you can sit while you work
or
A job where you move around while you are working

WHOLE GROUP ACTIVITY

SPECIAL HELP

There are times when everyone needs someone he can turn to for help. Below is a list of people who can give special help or advice. See if you can match the people who might be able to give help with the kinds of advice that are needed.

PEOPLE

___1. doctor

___2. lawyer

___3. minister, rabbi, or priest

___4. teacher

___5. guidance counselor

___6. parent

___7. policeman

___8. dentist

___9. neighbor

HELP OR ADVICE NEEDED

a. You are lost in the downtown section of the city.

b. You have cavities in your teeth.

c. You need help in planning your career.

d. Your allowance isn't enough for your needs.

e. You have been hurt in an automobile accident and your father decides to sue the driver of the car.

f. You want to borrow a lawnmower.

g. You sprain your wrist.

h. Your sister wants to marry someone of another faith.

i. You need help with a homework assignment.

WHAT IS WORK?

Mark T for true and F for false.

1. People are working when they use energy to make goods and services. _____

2. Washing the dishes for your parents . not work _____

Discuss your answers to these questions with the class.

G O O D S - S E R V I C E S

GOODS

Some examples of goods I need. (List ten necessary items of food, shelter, and clothing.)

1. _____ 6. _____
2. _____ 7. _____
3. _____ 8. _____
4. _____ 9. _____
5. _____ 10. _____

Workers who produce (make) the goods you listed above:

1. _____ 6. _____
2. _____ 7. _____
3. _____ 8. _____
4. _____ 9. _____
5. _____ 10. _____

CONTINUED ON NEXT PAGE

SERVICES

Some examples of services are: Law enforcement, fire protection, medical care, education, etc. List three workers who produce services (Example: dentist). Can you name other services?

1. _____
2. _____
3. _____

DIVISION OF LABOR

As you do this study, you will learn about many different kinds of jobs. You will notice that people do special work and that each job has its own special duties. This is called "division of labor." Think of all the different people employed in a school. List them here.

1. _____
2. _____
3. _____
4. _____
5. _____

Could only one person on your list do all the jobs of himself and the others, and do them well? _____

Check the answer you think is right.

The teacher's main job is to: serve lunches ___, teach lessons___ order supplies ___.

Can you see how the teacher depends on the principal, for example? Answer the question below.

The teacher depends on the:

a. principal to _____

_____

b. custodian to _____

_____

c. nurse to _____

_____

d. bus driver to _____

_____

Complete the following by using these words: goods or services
work
others

Each person does the kind of _____ he likes best to produce _____. Each person depends on _____ to produce most of the goods and services he needs.

Use either goods or services to complete the following:

1. A person who works in a factory making auto parts is producing _____ .
2. A telephone operator who puts your call through to Disneyland is producing a _____.

A REVIEW OF WORK

Use the words below to answer questions 1, 2, and 3.

new shoes	dental care
birthday cake	windows washed
goods	services
chicken dinner	clothes washed
car tires	flood control

1. When people work, they produce either _____ or _____.

2. List two goods and two services that are produced at home.

   _____ _____

   _____ _____

3. List two types of goods and two types of services that are <u>not</u> produced at home.

   _____ _____

   _____ _____

4. Why are there so many different types of work?
   (check the correct answer)

   ___to make money

   ___to do the job they can do best and like best.

   ___to confuse everyone

5. Why is it good for people to do one special kind of work?
   (check the correct answer)

   ___they get more money

   ___they get less money

   ___when work is divided and each person does what he can do and likes best, more and better service can be produced.

6. What workers can you list that you are dependent on?

   _____

   _____

TRY THIS!!

Write endings to complete these statements:

a. We need dairies because _____

_____

_____

b. We need policemen because _____

_____

_____

c. We need school principals because _____

_____

_____

d. We need secretaries because _____

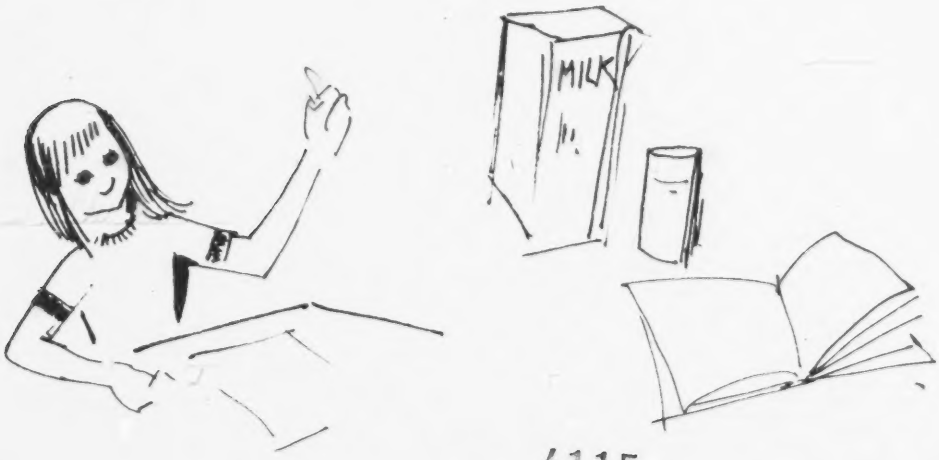
_____

_____

e. We need telephone operators because _____

_____

_____



LESSON VI
"Job Families"

GROUP ACTIVITY
Filmstrip - "What Are Job Families?"

The job of being a practical nurse is part of the Job Family. Below are some other types of jobs. See if you can classify them correctly. Sort them out and write them under the Job Family to which they belong.

1. carpenters
2. firemen
3. nurse's aide
4. writer
5. airplane fueler
6. roofer
7. pilots
8. file clerks
9. bookkeepers
10. electricians
11. actress
12. patrolmen
13. musicians
14. x-ray aide
15. stewardesses
16. TV cameraman
17. plumbers
18. stenographers
19. airline traffic man
20. F.B.I. agents
21. nurse
22. bricklayers
23. typists
24. doctor
25. detectives
26. dentist
27. radio disc jockeys
28. airplane mechanics
29. police chief
30. secretaries

JOB FAMILIES

Health	Building Trades	Aviation
a. _____	a. _____	a. _____
b. _____	b. _____	b. _____
c. _____	c. _____	c. _____
d. _____	d. _____	d. _____
e. _____	e. _____	e. _____

Office	Public Service	TV and Theater
a. _____	a. _____	a. _____
b. _____	b. _____	b. _____
c. _____	c. _____	c. _____
d. _____	d. _____	d. _____
e. _____	e. _____	e. _____

LESSON VI
"Job Families"

ACTIVITY

TRY THIS PAGE ALONE!!

Below is a list of different job titles. See if you can put the titles into the job family which shows where you would find these people doing their jobs.

1. nurse
2. machine operator
3. typist
4. cook
5. doctor
6. file clerk
7. sheet metal worker
8. secretary
9. waiter
10. cashier
11. toolmaker
12. office boy
13. dishwasher
14. chef
15. nurse's aide
16. mechanic

Hospital

a. _____
b. _____
c. _____
d. _____
e. _____

Restaurant

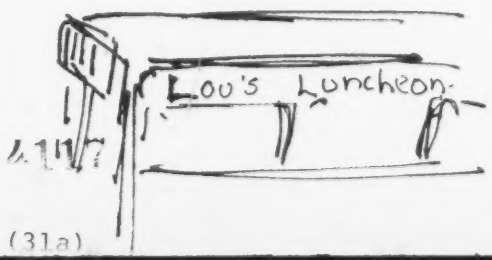
a. _____
b. _____
c. _____
d. _____
e. _____

Office

a. _____
b. _____
c. _____
d. _____
e. _____

Factory

a. _____
b. _____
c. _____
d. _____
e. _____



LESSON VI
"Job Families"

ACTIVITY

Another way of grouping jobs is in the amount of skill needed to do the work. In a factory, workers are grouped as: unskilled
semi-skilled
skilled

Let's think about the word SKILL!

SKILL: an ability gained by practice.

There are many kinds of skills, and they are all a result of practice or training. Pitching a curve ball is a skill resulting from many hours of training. Typing rapidly is a skill resulting from practice and training.

What 3 skills can you name?

a. _____

b. _____

c. _____

In factory work, people are paid differently for doing unskilled, semi-skilled or skilled work. There are two important things that make the work different: a. the amount of training needed

and

b. how difficult the job is

Unscramble these words to make a sentence.

Is of a as skill gained a training result.

_____

The pages that follow will tell you about training for a skill to do jobs that may be more difficult than others.

4118

UNSKILLED WORKERS

An unskilled worker usually has a job that needs no special training. These are jobs such as lifting cartons, wrapping boxes, digging holes, chopping wood, etc. Look at the pictures below; these are examples of unskilled workers. The words that describe these workers are listed at the bottom of the page. Choose the right title and write it under each picture.

_____

_____

_____

washing dishes

raking leaves

shoveling dirt

loading trucks

ACTIVITY

Can you name other unskilled jobs? Think of the places you see on your way to school and the people who work there---for instance, the supermarket, the gas station, the parking lots. From the people you see working in these places, write down two jobs that would be called unskilled.

1. _____

2. _____

A Gloomy Picture

Unskilled workers receive the least amount of money. Their work is very tiring. With the many new machines used in factories today, there are less and less jobs open for unskilled workers...because machines do the work, and machines do not have to be paid!

4120

LESSON VI
"Job Families"

ACTIVITY

SEMI-SKILLED

The next level of jobs in a factory is called semi-skilled. There are more semi-skilled workers than there are any other kind of workers.

Look up the meaning of "semi" in the dictionary. Write its meaning here. _____

_____

Can you guess what semi-skilled means now? Write what you think the meaning is _____

_____

The training for a semi-skilled worker is not very long and the pay is good. Some examples of the kinds of jobs in this group are machine operators, bus and truck drivers and custodians. The training for these semi-skilled jobs is done on the job. No special schooling is needed. On-the-job training is done by a more experienced person. The semi-skilled worker gets his training while he is working on his job- he earns as he learns.

The pictures below are of semi-skilled workers whose job titles are listed below. Put the correct job title under each picture.

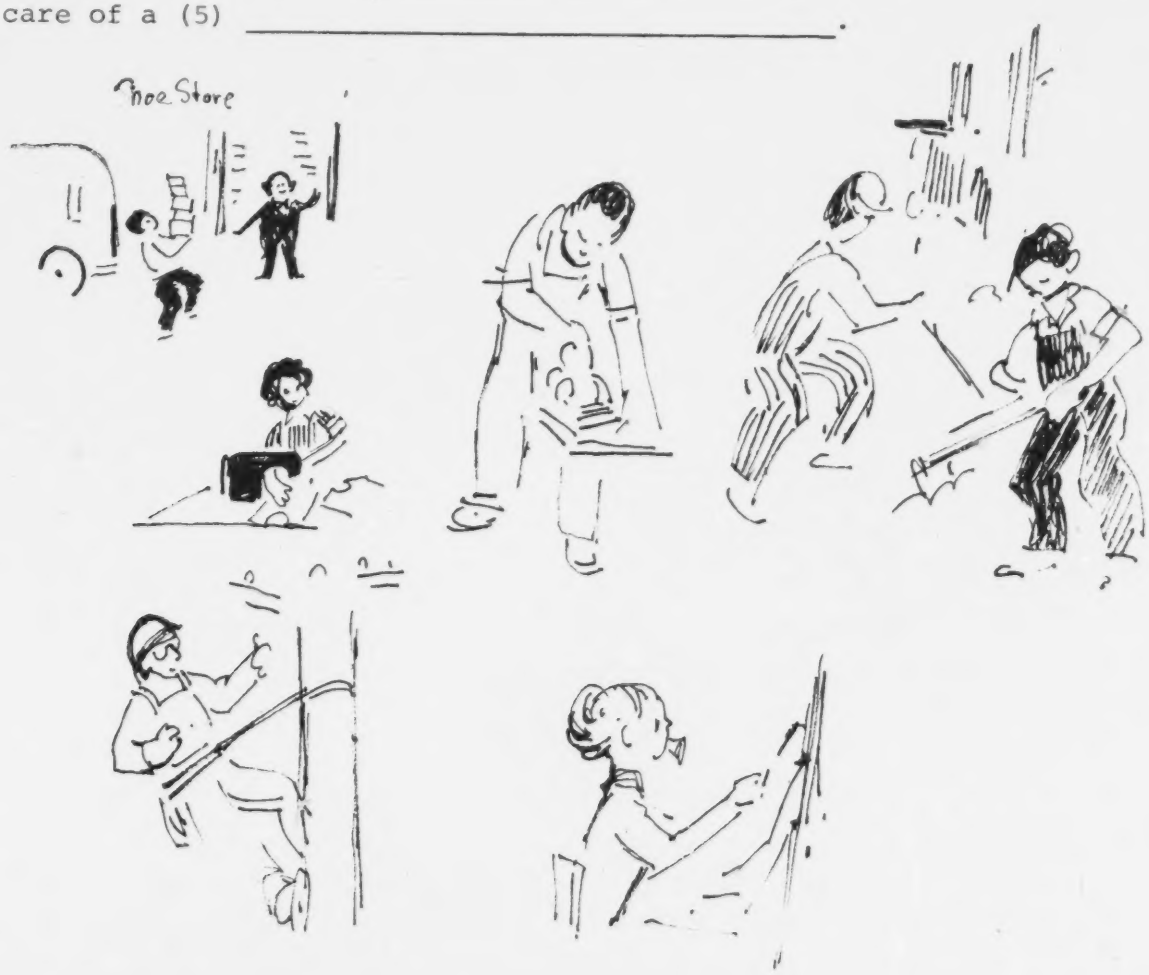
_____ _____ _____

telephone operator bus driver machine operator drill press operator

1. partly skilled
2. experience
3. no special training
4. on-the-job training
5. skilled worker

Use the words above to complete this paragraph on semi-skilled workers.

Semi-skilled means (1) _____ _____.
The skill needed is learned through (2) ex_____ (3) no
_____ _____ in school is needed. The semi-skilled
worker receives (4) _____ and is under
the care of a (5) _____.



ACTIVITY

SKILLED WORKERS

Look in the glossary to find the meaning of these words. Write the meanings on the lines below:

apprentice _____

_____

apprenticeship _____

_____

promotion _____

_____

experience _____

_____

SKILLED WORKERS OR WORKERS WHO HAVE DEVELOPED A SKILL

All skilled workers learn their skill as an apprentice, working as they learn. Complete this sentence by putting a circle around the correct word.

An apprentice is a person who is (learning, teaching) a skill.

A skilled worker must have at least three years of apprentice training. When an apprentice finishes his training, he has earned the right to be called a journeyman. This means that he has finished his training period and he will receive more pay. Also, skilled workers do more difficult work. They must be able to know how to do many kinds of work and he must be able to supervise others.

Copy the six underlined words or phrases on the lines below. When you have done this, you will see all the phrases that describe a SKILLED WORKER.

_____ _____

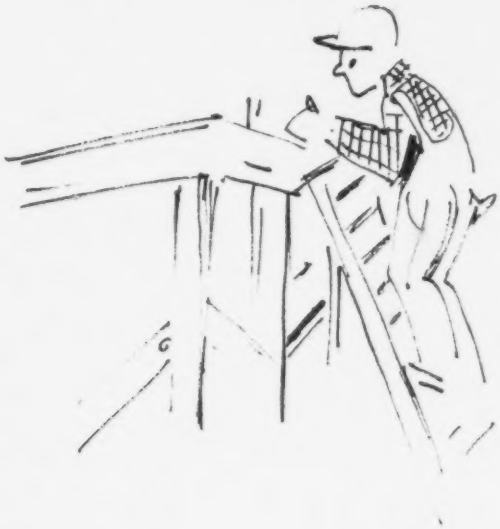
_____ _____

_____ _____

LESSON VI
"Job Families"

ACTIVITY

Look at the pictures below. These are examples of skilled workers. The job titles that describe the pictures are listed at the bottom of the page. Choose the correct job title and write it under each picture.



4124

chef plumber airline mechanic builder

ANOTHER GROUP OF WORKERS

The Technician

(Say tek - nish - an) You have all heard the term "X-ray technician" or "TV technician." Do you know where the technician is in the World of Work? He is a person MORE highly trained than the skilled workers we have just studied. For his work, he must have special training in a school. He can get this training in a technical high school - such as Central Technical High School - where these special courses can be taken as part of his high school education or as night school courses while he is working daytimes. There are also special technical schools which offer two year courses that prepare people for technical jobs in drafting, (drawing plans) computer work, X-ray technicians, etc.

With this special training, a person does higher level work and receives good pay. This is a very big field in the World of Work with many chances to get ahead.

Look at the pictures that follow. These are examples of technicians. The job titles that describe the pictures are listed below. Choose the correct job title and write it under each picture.

1. lab technician
2. draftsman
3. X-ray technician
4. radio and TV technician

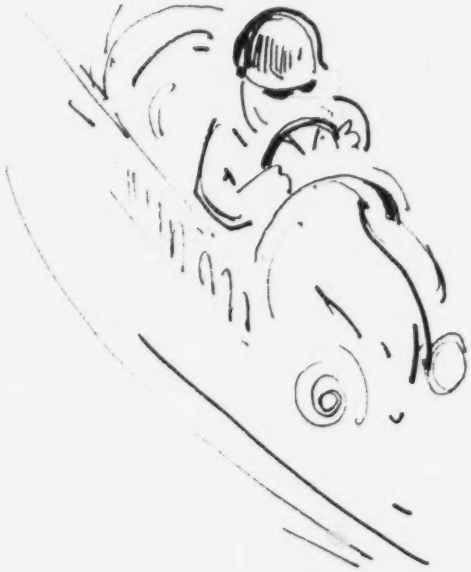
Professional

Do you know who this is a picture of? It is Professor Jenkins. Write here what you think he does _____

To find out if your answer is right, turn the page upside down and look in the left hand corner. YOU WERE RIGHT - and before he was able to teach others, he had to complete a higher form of education, usually at a college. People in the professions usually have had higher education. Many have had special training after college. Can you check the jobs listed below which you feel fit the description of a professional?

___teachers ___bakers ___lawyers

___dancers ___doctors ___stock car drivers



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TEACH

LESSON VI
"Job Families"

ACTIVITY

BUSINESS and INDUSTRY

Two important words that will help you understand about jobs are business and industry. What is this a picture of?

This is a picture of a _____.

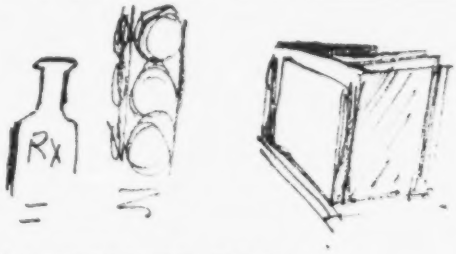
If you said factory, you were correct. In this study we'll think of INDUSTRY as being the factories that make products.

The picture above is a picture of people, people who sell or use the products made in industry. We shall call this group of people: BUSINESS.

Can you complete the following, using the two terms: business - industry

_____means the factories that make the products that _____ sells or uses.

Name two industries in the Syracuse area.



1. _____

2. _____

Name two businesses that sell products in the Syracuse area.

1. _____

2. _____

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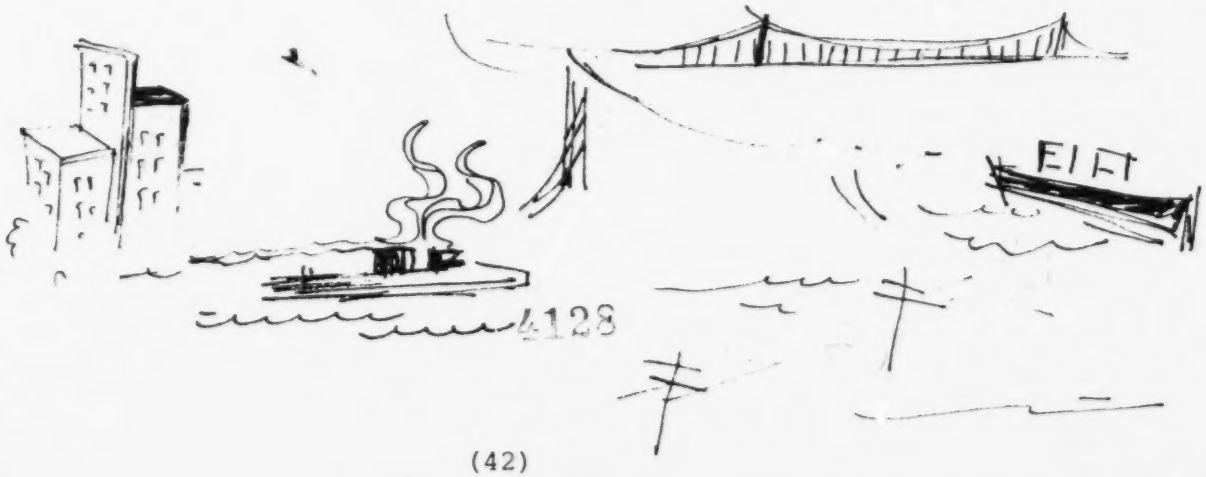
LESSON VI
"Job Families"

ACTIVITY

Listed at the left are some of the most important INDUSTRIES, businesses, and services in our country. Arrange them in alphabetical order and write them on the numbered lines.

insurance	1.	_____
clothing	2.	_____
radio and tv	3.	_____
chemicals	4.	_____
gas	5.	_____
railroad	6.	_____
government	7.	_____
banking	8.	_____
post office	9.	_____
motor vehicles	10.	_____
aviation	11.	_____
paper	12.	_____
printing	13.	_____
iron and steel	14.	_____
telephone	15.	_____
baking	16.	_____
restaurant	17.	_____



PARA - PROFESSIONAL

There is a group of workers who are becoming more and more important. These are the people who help the professionals. Here are two important facts about PARA - PROFESSIONALS:

1. "Para" means part...so para-professionals are part professionals. This means they must have part of the extra-education needed by the professionals they help.
2. Para-professionals are also called by other names, such as assistant and aide. For example, there are teacher aides and dental assistants.

Copy all the underlined words and phrases, above, on these lines:

1. _____ 3. _____

2. _____ 4. _____

Now, do the exercise on the following page.

ACTIVITY

LESSON VI
"Job Families

Use the words below to fill in the sentences:

assistant	aide
help	extra-education

1. A teacher's _____ helps a teacher in her work.
2. Someone who helps a dentist in his work is named a dental _____.
3. Para-professionals _____ the professional people do their work.
4. Para-professionals need _____ _____ to do their work.

4130

GUIDED OCCUPATIONAL ORIENTATION

An Introduction to the World of Work

GLOSSARY

Accountant - a person who takes care of bills paid by or paid to a business.

Act as a Trustee - to take charge of the property and the spending of money left to a business or person.

Addressing - writing the number and street where you live.

Adjust lenses - to fit eye glasses.

Advise - to say what should be done.

Airplane Fueler - person who fills the airplane tanks with fuel.

Alcohol rub - a medicine put on the skin to make a fever go down.

Altitude - how high something is.

Ancient - very, very old; a long time ago.

Antennas - a long wire or rod used to help bring in better sound or picture.

Anxious - worried; upset.

Appointments - time and date set to meet someone.

Apprentice - a person who is learning a trade.

Architect - a person who makes drawings of buildings.

Assignment - a job to be done.

Astronaut - a person who is part of the crew in a space ship.

Attendant - a person who waits on another person.

Attitude - a way of thinking, acting or feeling.

Balance accounts - to keep money spent and money received equal.

Balance wheels - using weights to take the shake and bounce out of wheels.

Batter - mixture of flour, milk, eggs, etc.

Beautician - a person who washes, sets and cuts hair.

Bellhop - a person who carries suitcases for visitors to a hotel or motel.

Birth certificate - written proof that a person was born on a certain date.

Bookkeeper - a person who keeps business records.

Bouquet - bunch of flowers.

Brilliant - very bright.

Bulldozer - a tractor that moves dirt.

Business - a trade or profession.

Butcher - a person who cuts meat.

Cable - a strong thick rope, often made of wire.

Calm - peaceful; quiet.

Camera - a machine that takes pictures.

Career - a life's work.

Carefree - happy

Carhop - a person who waits on you at your car.

Cashier - a person who handles money.

Casual - not planned; something that happens naturally.

Cattle rancher - to own a ranch where cows and bulls are raised.

Cavities - holes in teeth.

Chef - a cook who is in charge of a restaurant kitchen.

Chemicals - materials used to make medicines, vinegar, etc.

Chemists - persons who work with chemicals.

Clean drains - to unplug a pipe, and sewer.

Clergyman - a leader of a religious group.

Clue - a hint to help solve a puzzle or a mystery.

Commercial Artist - a person who draws pictures for a business.

Complaint - the act of saying something unfriendly about somebody or something.

Computer - a machine that helps to solve problems.

Conditions - places or situations under which you work as outdoors or indoors hot or cold.

Conduct - to lead or guide.

Confuse - to mix up.

Copywriter - a person who writes stories for a newspaper.

Corsages - flowers put together to be worn on a dress or on the wrist.

Create - to think up (a new idea).

Custodian - a person who takes care of a building; a "janitor".

Dangerous - not safe.

Defend clients - to act for a person as the lawyer defends his client.

Dental care - keeping teeth and gums healthy.

Dentures - false teeth.

Design - a drawing or plan.

Develop photos - treat with chemicals so a picture shows.

Dictating - saying or reading aloud for another person to write.

Difficult - hard to do.

Diploma - a written or printed paper given by a school to show school work has been finished.

Disc Jockey - a person who plays records on radio.

Dishonest - not fair play.

Draw up wills - to write on paper what a person wants to be done with his property and the things he wons when he dies, (a lawyer does this)..

Drilling rig - a machine that supports and guides the holes for water, oil, etc.

Dye hair - to change the color of hair.

Earnings - money given to pay for work done.

Electrician - a person who repairs or puts in new electric wiring, lights, motors, etc.

Employee - a person who works for someone.

Employer - boss

Employment - work

Energy - wanting to work.

Enforcement - the act of seeing that laws are followed.

Engraver - a person who carves or cuts letters into wood, metal, or stone to get it ready for printing.

Engineer - a person who works with engines; a person who is trained in building bridges, forts, etc.

Erect scaffolding - build a platform so a person can stand on it to do work as paint a building, wash windows, etc.

Exchange - a giving or taking of one thing for another.

Experience - that which is learned by seeing, feeling or hearing.

Extract - to draw or pull out; as to extract a tooth.

Facials - a treatment with creams, oils put on the face.

Faith - a promise, or a belief in God.

Fares - the money you pay on a bus, train, plane, etc.

Faucet - a fixture for drawing water.

Favorite - liked best.

Fever - sickness that heats the body.

Filing Clerk - an office worker who puts material in alphabetical order.

Film - a roll of thin material used to make pictures.

Flood control - the use of dams and machinery to keep rivers etc. from over running the land.

Florists - people who raise and sell flowers.

Forest ranger - a person in charge of forests (woods) to guard against fires.

Freight train - a train that carries goods (lumber, food, etc.).

Frost cake - to cover a cake with a mixture of sugar and liquid.

Goal - the place or job you want to reach.

Graduate - a person who finishes a school or college course of study.

Greenhouse - a glass or plastic covered building where flowers and vegetables grow.

Guidance Counselor - a person who helps children with school problems.

Hardware - a store that sells things made from metal.

Hatcheck girl - a person with whom you leave your hat and coat while eating or dancing.

Hauling - pulling, dragging or carrying. (A truck hauls lumber.)

Height - how high or tall things are.

Hints - little signs to help solve a problem.

ICS - Individualized Career Study

Ignition - a setting on fire.

Imagination - forming of pictures in your mind.

Information - facts or news.

Inspect - look over carefully.

Install - to put in as install a telephone.

Insulate - to use materials to stop the loss of heat, cold or electricity.

Interpreter - a person who changes words from one language to another.

Interview - a meeting of people to talk over their work; questioning someone to see if he should have the job; or questioning someone about the job he does.

Jeweler - a person who sells, makes or repairs jewelry such as earrings, bracelets, tie pins, etc.

Judges - a person chosen to hear and decide cases in a court of law.

Laboratory - a place where scientific work is done.

Laundromat - place where clothes are washed.

Librarian - person who works where books are kept (library).

Linotype - a machine that sets type by itself.

Lobster trap - a trap that catches lobsters.

Luggage - trunks, bags, suitcases a person takes with him when he travels.

Lumberjack - a man whose work is cutting down trees and getting out the logs.

Machine Operator - a person who works with machines.

Manicures - takes care of the hands and nails.

Materials - what things are made from.

Mechanic - workman skilled with tools; one who repairs and uses machines.

Meter - something that measures, or measures and marks down amount used; as a water meter.

Minister - one who is the religious leader of the Protestant faith.

Moody - having changes of feelings, as happy or unhappy.

Musicians - people who are skilled in music.

Newsstand - a place where newspapers and magazines are sold.

Occupations - kinds of work.

Operate - to work on something or someone.

Operating - working on something or making something work, as the doctor is operating on the boy. The man is operating the machine.

Opportunity - the chance to do something.

Orchestra pit - a lower part in front of the stage where the musicians sit to play music.

Organize - to put in order.

Packages - a group of things tied together with paper and string.

Pamphlet - a small booklet with reading material.

Personality - what makes one person different from another.

Pharmacist - a person who prepares medicines.

Phrases - groups of words.

Plotting - mapping or planning something.

Pluck eyebrows - to pull some of the hair from the strips of hair above the eyes.

Plumber - a man whose work is putting in and repairing water pipes and fixtrues in a building.

Plywood - board or boards made of layers of wood glued together.

Polite - having or showing good manners.

Popular - liked by most people.

Possibility - a thing that can be: There is a possibliity that the train may be late.

Postal Clerk - a person who handles mail in the post office.

Prefer - like better.

Pretend - to make believe.

Priest - one who is the religious leader of the Catholic faith.

Printer - a person whose work is to mark words on paper by using a machine (a printer prints the notices).

Progress - to show improvement; to get better

Promotion - to move to a higner job with a raise in pay.

Proofreader - a person who checks and corrects mistakes before something is printed.

Psychologist - a person who helps people who are worried, nervous, or upset to solve their problems.

Published - to prepare and offer for sale (a book, paper, map, piece of music, etc.).

Qualifications - that which makes a person fit for a job, task, office, etc.

Rabbi - one who is the religious leader of the Jewish faith.

Race Track - a place whrer races are run.

Radar - something that finds objects in the sky and records them on a screen.

Raise - more money as a raise in pay.

Recordings - a record used on a record player.

Regardless - in spite of; not caring

Registered letter - a letter marked in the post office which needs special stamps for special handling.

Requirements - things needed.

Requires - needs; has to have.

Retirement - the act of leaving a job because of age or sickness.

Rude - not polite.

Salary - money paid for work done.

Sandwiches - two or more slices of bread with meat, jelly, cheese, etc. used for filling.

Saw pipes - to cut pipes.

Scrapbook - book in which pictures and pieces cut out of newspapers, magazines, etc., are kept.

Season soup - to flavor soup; as with salt and pepper.

Selecting - choosing

Shadow suspects - follow people who are believed to be quilty of a crime.

Sheet Metal Workers - one who cuts and puts together thin pieces of metal.

Shelter - Something that covers and protects from weather or danger.

Shipping room - the place of business where goods are received or sent out.

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Pre and Post Test

Answer Key

LESSON I

Match the word with the meaning by putting the correct letter in the blank.

A. Trait	B being able to do certain things
B. Ability	C a feeling of wanting to know, see, or own something
C. Interest	A words used to tell how people act
D. Personality	D traits, abilities, and interests that make you different from others

LESSON II

Put T for true and F for false on the blank.

F A. Everyone should do the same kind of work no matter what they like or dislike.

T B. It is important to know your likes and dislikes.

LESSON III

Put a check (✔) mark in front of the right answer.

1. If we are often late for school, our teacher can

   ___fire us ___stop our salary ✔ keep us in after school

2. If we don't do our school work we get low marks, but if a worker doesn't do his work his boss can

   ___keep him in after work ___give him low grades ✔ stop his salary

3. If we work hard in school we can get good marks. If a worker works hard on his job he can get

   ✔ a raise in salary (more money) ___fired ___high marks

4. A good student and a good worker comes to school or work

   ___dirty and sleepy ___late or doesn't come in at all ✔ clean and ready to work

LESSON IV

Put T for true and F for false.

T 1. Certain jobs are needed in every area where people live.

F 2. The location of a job does not matter as long as you get paid for doing it.

T 3. Jobs can be "grouped" in many different ways, such as location, amoun of skill needed, etc.

T 4. Certain jobs have certain duties that do not belong to any other job.

LESSON V

Put T for true and F for false.

F 1. If we do not get paid for helping our parents with the housework what we do is not considered work.

F 2. Division of labor means working only part of a day.

T 3. Each person depends on others to produce most of the goods and services he needs.

T 4. When people work, they produce either goods or services.

LESSON VI

1. In a factory, workers are grouped as: (check one group)

   ___old, young, middle aged

   ✓ unskilled, semi-skilled, skilled

   ___early, late, careless

2. Put T for true or F for false.

   T a. Unskilled workers get the lowest pay.

   T b. A semi-skilled worker gets on-the-job training.

   T c. A skilled worker learns his skill as an apprentice.

   F d. A technician needs no special training.

   F e. A bus driver is a professional person.

   T f. A para-professional is an aide or assistant to a professional person.

3. Put T for true or F for false.

   T a. A job family contains many different jobs all in the same career area.

   T b. Some job families are made up by the amount of skill and training required.

Copy of Letter from
Niagara Mohawk Power Corporation

November 16, 1972

Dr. John T. Gunning
Superintendent of Schools
Syracuse City School District
409 West Genesee Street
Syracuse, New York

Dear Dr. Gunning:

During the past few weeks, Dick Bannigan and I have been discussing possible ways for Niagara Mohawk to participate in the District's Guided Occupational Orientation Program. In order to gain additional knowledge regarding the objectives and scope of the program, I sat in on one of the IBM sessions with the students from Nottingham and Central, and recently attended two excellent workshops on the "Life Centered Curriculum" and "New Trends in Guidance."

It is apparent that the total success of these long-range Kindergarten through Grade 12 programs will require a close cooperation and working relationship between the school system and area industry, and Dick has requested that Niagara Mohawk take the initiative in organizing industry for this purpose.

Niagara Mohawk will be happy to assume this role leadership in the organization and implementation of this vital curriculum revision, and I will be working with Dick and representatives of industry to ensure the success of this model program for Syracuse and New York State.

Sincerely,

Ralph E. Annunziata
System Director
Public Education Activities

REA/md
cc: Mr. J. Bartlett
Mr. O. M. DeMichele
Mr. R. J. Bannigan

School Officials Notified of Grant Approval

'Career Awareness Year' Under Way

The City School District kicked off its "Career Awareness Year" yesterday with a presentation before state education officials from Albany.

With their visit came word that a $10[illegible],000 grant for city public schools to develop a comprehensive career education curriculum has been approved in Albany.

Visiting Syracuse were Everett C. Lattimer, director of occupational education supervision, and Robert Bielefeld, director of occupational education instruction, both with the State Education Department.

Lattimer reported that the grant to Syracuse to develop a full program of career education from kindergarten through senior high school has been approved in Albany.

Notice of the grant approval is on its way to Syracuse in the mail, he said.

Lattimer and Mrs. Mary Belcher of Educational Service Inc., an independent educational evaluation firm based in Waco, Tex., remarked yesterday that Syracuse is in the vanguard of career education curriculum development — seen as a new trend across the country.

The Waco firm was assigned last year to evaluate some of the initial Syracuse projects in career education.

Lattimer noted that Syracuse is "leading all the rest of the cities" in presenting its career education program on a "coordinated basis."

According to Sidney L. Johnson, assistant superintendent of schools for secondary and continuing education, the district's career education thrust is designed to give all pupils an introduction to the "world of work."

Yesterday's events at George Washington Elementary School featured a description of the district's current career education programs.

According to Johnson, the district's programs provide a "solid base" for the new comprehensive curriculum.

The new program, continued Johnson, will see cooperation between a number of district divisions, including his division, and the elementary education division under Asst. School Supt. for Elementary Education Dr. Gerald A. Cleveland.

The "Career Awareness Year" is the second year to receive a special designation by the Board of Education.

Last year, it was "Reading Achievement Year."

4142

Officials review city schools' career programs

By SUE PRESTON

State Education Department officials were reviewing a pilot working program in career and occupational awareness with city school district officials today.

Syracuse was one of 50 cities given a three-year federal grant of about $50,000 in February, 1971 to set up a pilot program at the elementary, junior high and senior high school level to make students more aware of the working world and how they fit into it, said Richard Bannigan, project administrator.

This is the first time a large group of state education officials have come to view the program Bannigan said, and depending on their reaction, more state monies will be made available to set up such program in other communities.

"We are the only city in New York State to receive a federal grant," he said. "We recently submitted a grant request to the state for $210,000 to expand our program which hopefully will be approved within the next couple weeks."

Included in today's program was a visit to the occupational learning center in the State Office Building, and to George Washington Elementary School to see the program at work in kindergarten through sixth grades. A review of the junior and senior high school career programs also was provided.

Bannigan said this year has been designated "Year of Career Awareness" by the board of education for all city schools.

"National statistics show only 15 per cent of the students who enter college complete the requirements for graduation," Bannigan said. "Too many kids go to college because they don't know what else to do."

He added that schools, both nationally and in Syracuse, are geared to the college-bound student without providing much guidance in the area of careers and the working world.

"In our occupational awareness program, the emphasis in the elementary schools is to make students aware of the working world," Bannigan said. "In junior and senior high school they are given the opportunity to explore what opportunities are available to them in the career field so that by their senior year, whether or not they are college-bound, they have some idea of what career area interests them."

More than 185 industries and businesses have provided materials and manpower to city schools under the career awareness program.

There are 15 job clusters that students can choose from, such as environment or working with people. "The career spectrum is broad, allowing each student to decide what specific way he can carry out his goal," said Bannigan. "For example, if the student is interested in people he might become a teacher or a scout leader."

Under the occupational awareness program, an alternative diploma granting program for high school dropouts is offered as well as vocational training programs and continuing education programs, for adults as well as students.

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Visitors to the Program

1. One of the highlights of this report period was the visitation by Mrs. Julie Nixon Eisenhower on October 30, 1972. At that time, Mrs. Eisenhower visited Levy Junior High School which had piloted the new junior high program.

   Her visit was to be restricted to one site. That being the case, elements of the total Guided Occupational Orientation Program were brought to the school to provide her with the greatest exposure to the different components of the Career Education Program, operating at the elementary, junior, and senior high levels. Elements of the Career Center were brought to the school. This consisted of setting up two career booths and providing the appropriate G.O.O.P. curriculum materials for display. In addition, the Skill Trainer van, a mobile teaching unit, was placed on the grounds and was visited by Mrs. Eisenhower. The van was in operation at the time.

2. On September 14, 1972, representatives from various departments and bureaus of the New York State Education Department, who had an interest in career education, visited the program. The purpose of the visit was to observe what the Syracuse City School District is doing in the area of Career Education and how that can be incorporated into the total state plan.

   The following persons were involved in the visitation:

Person	Organization Represented
Chief R. E. Ostter	Bureau Health Occupations Ed.
Chief L. A. Traver	Bureau Agricultural Ed.
Chief A. J. Dodley	Bureau Industrial Arts Ed.
Dir. Everett Lattime	Div. Occupational Ed. Supervision
Chief Doug Adamson	Bureau of Distributive Ed.
Assoc. Marian Potter	Bureau of Distributive Ed.
Chief E. A. Brown	Bureau Home Economics Ed.
Chief C. Benevato	Bureau of Trade & Tech. Ed.
Chief H. Conover	Bureau Business Ed.
Dir. R. H. Bielified	Div. Occupational Ed. Supervision

3. Dr. Robert Seckendorf, Assistant Commissioner for Occupational Education; Mr. George R. Quarles, Chief Administrator; and Mr. Vincent Troiano, Deputy Administrator for Career Vocational and Technical Training for the New York City Schools, made a visit to Syracuse on October 30th to observe the operations of the Career Education Program. The agenda included visits and observations to the Career Center, Skill Trainer Van, Occupational Learning Center work-study sites, and Project P.A.C.E.

Visitors to the Program - continued

4. On October 26, 1972, Mr. John Stahl, Senior Program Officer, Office of Education, Washington, D.C., visited various elements of the program for the purposes of observation and evaluation.

5. Throughout this reporting period, people from different programs and organizations have visited various aspects of the career education program. Following is a listing of the persons who have visited, the organization they represented, and the dates of visitation:

Person	Organization Represented	Date
S. Seiter	PACE Program	9/14/72
N. Scaravillo	PACE Program	"
J. Hotchkiss	Bur. Social Studies, SED	9/26/72
J. H. Sullivan	State Education Dept.	9/27/72
J. Kutz	Bur. Physical Education	"
B. Davis	State Education Dept.	9/29/72
W. Jones	Oswego School District	"
C. Palmitessc	" " "	"
T. Wild	" " "	"
J. Glad	CRS, State Ed. Dept.	10/3/72
A. Paradiso	Yonkers Board of Education	10/17/72
B. Bodack	" " "	"
B. A. Wallace	" " "	"
G. R. Quarles	NYC Board of Education	10/30/72
V. A. Troiano	" " "	"
E. F. Voorhees	Seaford, N.Y.	10/31/72
J. McCabe	"	"
R. Molphy	"	"
W. Graves	National Education Assoc. Washington, D.C.	11/2/72
T. Corcora	Syr. Univ. Inst. Technology	11/6/72
J. Warren	" " " "	"
N. Hamilton	" " " "	"
J. Durzo	" " " "	"
C. Callanan	" " " "	"
C. Chow	" " " "	"
M. George	U. S. Office of Education	11/15/72
F. Rogers	Endicott, N.Y.	"
J. Guscza	Syracuse City School District	11/21/72
D. Barnwell	C.R.S. State Ed. Dept.	"
A. Schneider	Webster Central School	12/6/72
J. Ritter	" " "	"

Visitors to the Program - continued

Person	Organization Represented	Date
J. Dillard	Buffalo, N.Y.	12/12/72
C. Palmieri	"	"
J. Murray	"	"
J. Parker	SUNY, Cortland	12/13/72
D. Aldrich	" "	"
W. Fesseden	Tully Elementary School	"
B. Alford	Gates-Chili School Dist., Rochester	1/29/73
D. Green	" " " " "	"
Major Allen	U. S. Army	1/30/73
J. Ruzzero	"	"
H. Brad	"	"
R. L. Haver	N. Y. State Ed. Dept.	2/1/73
A. Simays	Malone, N.Y.	2/8/73
R. Poissant	"	"
P. Jones	"	"
H. DeFranco	"	"
M. Holland	"	"
P. Hooker	"	"
H. Fritz	Council Rocks School Dist.	"
G. Ettinger	" " " "	"
G. Johnson	Cornell	"
C. Pierce	Syracuse University	"
M. Danello	" "	"
S. Lici	" "	"
L. Culver	" "	"
B. Ball	" "	"
D. Could	" "	"
M. Reese	" "	"
M. Sardkere	" "	"
S. Hilfinger	" "	"
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C. Kern	" "	"
J. Ruff	Mexico School Dist., Mexico, N.Y.	2/8/73

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Sodus, New York 14551

Julie Nixon Eisenhower
Visits Syracuse
Career Education Project

EVALUATION OF ELEMENTARY PROGRAMS

GRADE FIVE

VARIABLE	VARIABLE INDICATOR	GOALS
. STUDENT level of awareness of a. broad families of occupations b. requirements for employment c. personal abilities and interests in relation to various occupations	pre-post test for program, "An Introduciton to the World of Work"	Increase the level of awareness of broad families of jobs, employment requirements, personal abilities and interests in relation to various occupations by higher class mean scores on post-test for "An Introduction to the World of Work" as compared to the pre-test.
. TEACHERS utilization of program and materials made available by Career Center	number of class lists indicating grades returned to Career Center and hours involved	Participating teachers will return class lists indicating involvement of 100% of their students and a minimum of ten class hours spent on program.
. PARENTS level of interest and participation in classroom program	completion of interview of parent or guardian, included in "World of Work" study	Parents or guardians are to act as a resource person to be interviewed.
. BUSINESS AND INDUSTRY not involved at this stage		

EVALUATION OF ELEMENTARY PROGRAMS

GRADE SIX

VARIABLE	VARIABLE INDICATOR	GOALS
1. STUDENTS		
a. Level of awareness of the fundamental concepts and procedures related to the world of work.	pre-post test scores on unit, Career Education - Grade Six	Increase the level of awareness of the fundamental concepts and procedures related to the world of work as indicated by higher mean scores on Career Education Unit post-test as compared to scores on pre-test.
b. knowledge of innumerable career opportunities and respective occupational ladder concept in local business and industry.	true-false test scores before and after visit to Career Center	Increase the student's knowledge of the career ladder concept in local business and industry as indicated by higher mean scores on a true-false post-test as compared to pre-test scores.
c. level of awareness of particular job families	pre-post test scores on Individualized Career Studies	Increase the level of occupational awareness for 6th grade students as indicated by higher class mean scores on pre-post tests for Individualized Career Studies.
d. level of awareness of skills used in occupations	number of correct career skill identifications for selected careers.	Increase awareness of occupational skills for at least three occupations as indicated by statistically significant differences on pre-post listing.

GRADE SIX

VARIABLE	VARIABLE INDICATOR	GOALS
e. level of actual experience with tasks and tools used in occupational world.	number of tasks completed during a six hour skill session per child as shown on task checklist	The mean number of tasks completed per child will be at least ten for a minimum of two skill areas.
2. TEACHERS level of implementation of individualized instruction in classrooms.	ratio of Individualized Career Studies per child	The mean ratio of ICS packets per child will be at least 2.0
3. BUSINESS AND INDUSTRY level of involvement of business and industry.	percentage of business and industry contacted which: a, developed or participated in a booth b. carried out school room visits c. allowed field visits by students	For business and industry previously contacted on previously participating to: a. maintain 17 career exhibit booths b. each classroom visited by at least two career representatives c. at least 80% of those able to allow field visits by students be allowed to do so.
4. PARENTS level of interest and amount of participation in classroom programs.	teacher record sheet indicating 1) mean number of classroom visits per parent 2) listing of contributions 3) % of parents participating	At least 5% of parents per classroom participate in the program in some way

EVALUATION OF JUNIOR HIGH PROGRAMS

Variable	Variable Indicator	Goals
1. Students a. All grades (7th, 8th and 9th) attitudes toward necessity for career planning	- scores on attitude test - pre-test to be administered using all questions - post test to be administered using 5 selected questions - instrument developed	Students will increase their positive attitudes toward career planning by a statistically significant difference between pre and post tests
b. 7th grade (1) awareness of resources for vocational guidance	- check list of resources for familiarity and utilization to be administered on pre and post basis - instrument developed	Increase resource awareness as indicated by a statistically significant difference reflecting resources with which students: 1. are familiar 2. have utilized
(2) awareness of and familiarity with career cluster concepts	- proper selection of 15 career clusters - instruments to be developed - suggest a check list of 30 word groupings - 15 which represent career clusters and 15 which do not. Pre and post tests recommended.	Students complete 7th grade with awareness of and familiarity with career cluster concept as demonstrated by statistically significant differences on pre-post tests results
c. 8th grade familiarity with and exploration of career clusters	- exploration of at least one third of 15 career clusters - instrument to be developed such as teacher check list to be used to report each student's work	8th grade students, by end of year, select one career cluster for in-depth study during 9th grade

Variable	Variable Indicator	Goals
d. 9th grade ability to plan future education necessary for career choice, both vocational and general education	number of written plans for future educational programs developed by students	At least 85 percent of students will complete a written future education plan by the end of the school year in 9th grade
2. <u>Teachers</u> a. number of teachers who participate in GOOP	- observations and records of ORS by schools - simple accounting instrument to be developed	Every junior high classroom teacher of Math, Science, Social Studies and English participate in program
b. utilization of resources materials made available by GOOP	(1) ORS resource materials request forms (2) number of ORS materials checked out by teachers from school libraries	On an average, participating teachers make at least seven requests and/or library check-outs of resource materials
c. isolation of career information from regular areas	- each school will submit written plan for implementation of GOOP with each building and/or department	Integration of GOOP materials into standard curriculum offerings in all classrooms of participating junior high schools
3. <u>Parents</u> Parents awareness of career education opportunities	- number of: letters pamphlets PTA appearances media articles related to GOOP ORS staff should make provisions to maintain cumulative totals	Disseminate information on a continuing basis to parents

Variable	Variable Indicator	Goals
4. Business and Industry extent of community openness to student career inquiries	(1) number of acceptances of student or class inquiries by business and industry (2) ORS records of contact with business and industry	At least 75 percent of business and industry contacted by students, classes, and ORS staff react favorably to inquiry

OCCUPATIONAL LEARNING CENTER

Evaluation Procedure
for
Guided Occupational Orientation Program

Mission: To provide career education for a target group of disadvantaged and disaffected secondary youth.

Variable	Variable Indicator	Goal
(A) Level of basic academic skills	Pre and post test with standardized test.	Each student will increase his basic skill competence by one grade level in reading and mathematics.
(B) Attitude toward school.	Attendance record in school and work contrasted to previous record.	25% gain over previous attendance.
(C) Employability.	Employer-counselor records.	Each student will find significant measurable success in employment or employment-related training.
(D) Level of general information.	Progress in general studies as indicated by individual's progress records.	Each student will complete 100% of his prescribed objectives for year.
(E) Level of career awareness.	Activity achievement record.	Each student will complete 100% of his prescribed objectives for year.
(F) Ability to develop and implement career plan.	Vocational check list and career plans.	Each student will complete 100% of his prescribed objectives for year.

OCCUPATIONAL RESOURCE TEACHER PROGRAM

Evaluation Procedure
for
Guided Occupational Orientation Program

Introduction: The Occupational Resource Teacher program is designed to serve a maximum number of students considered potential dropouts. Inaugurated in September, 1971, it is an integral part of a larger career education program in the Syracuse City School District.

Mission: To provide more relevant alternatives to this target group of secondary youth encouraging participation in a combined program of work experience, the use of community resources and a more flexible in-school program.

Variable	Variable Indicator	Goal
(A) Attitude towards school.	School attendance records.	80% of participating students remain in school.
(B) Student involvement in the program.	Program records.	75% will complete program.
(C) Success of O.R.T. program in qualifying students for school credit.	Number of students who earn credit.	40% of students enrolled.
(D) Students participating in work experience.	Program employment records.	70% will be involved in work experience.
(E) Supervisor's assessment.	Supervisor-counselor evaluation records.	75% of students involved in work experience will show success - satisfactory to excellent rating.

Mrs. Catherine Barrett, President of NEA
Visiting Sixth Grade Students
In Project Skill Trainer

MRS. BARRETT ADDRESSES ELEMENTARY TEAM; COMMENDS DISTRICT ON TEACHER INVOLVEMENT

ADDRESS BY CATHARINE BARRETT TO E.C.R.T., NOVEMBER 9, 1972

Good morning, everyone. First, let me extend to each of you my personal congratulations and warmest best wishes of the United Teaching Profession for every success in your new assignment. You have been honored, it seems to me, by your membership on the recently established Syracuse Elementary Curriculum Revision Team. In this new role, what you do will be watched with great interest and what you propose, ultimately will be used with great hope and expectation by teacners in Syracuse, and quite possibly by teachers in all parts of the land. Certainly, your new job is a challenge. It is also an opportunity for you as teachers to learn and to grow professionally.

Since your new assignment is centered in the concepts of Career Education, it occurs to me that each of you will soon be deeply involved in your *own* personal career education as you work to forge a curriculum that in the near future will involve thousands of elementary school children in Career Education.

At this point, I wish to acknowledge the enlightened action of the Syracuse Board of Education and the progressive management of the Syracuse Schools that have made it possible for you as a professional team to give the time that will be essential for success. This kind of cooperative administrator-teacher action represents a benchmark of what it will take to bring about fundamental change in education.

Let's look at Career Education. Is it simply another fad fanned by the whims of the Nixon Administration and supported by the Office of Education contingency funds? I think not. To me, and I might say to the instructional leaders of our profession, it represents a movement toward much needed educational reform, and its success will depend on how well we understand it, how well we do our homework, how well we in the profession tend to our mid-career education, and how successfully we respond to opportunities such as you have today in Syracuse.

Although it would be presumptuous of me to pose as an expert in Career Education, I would like to suggest a few questions for your Syracuse team to consider as you begin your important work.

1. Who's dropping out of what . . . and why? A just released United States census report confirms what alert teachers have known for some time. Nearly a million children each year quit school before they finish the twelfth grade. Statistics of course, can be misleading, sometimes downright dangerous. But behind such a cold statistic is a story, a human story of a need today for changes in the educational establishment.
2. What has happened to the world of work? What does the phrase "to work" mean, in a society where the number of service jobs far exceeds the number of production jobs? The fact that we are fast becoming an information society should loom large in your work.
3. Can a new curriculum be neatly packaged and imposed on teachers who are unprepared and uninvolved? As teachers, of course, you will be prepared and involved from the start, but when your innovative work moves beyond your own spheres, will there be mechanisms to involve all teachers who, like you, must be given the necessary time and preparation to insure success? Here we would do well to borrow a concept from the space agency and proceed on the assumption of "zero defects".
4. How do you propose to deal with such controversial questions as the role of women in the changing work ethic . . . the plight of the minority worker today . . . and the need to individualize both instruction and measurement . . . while at the same time you work for the needed level of community support to make your new product acceptible?
5. What about measurement? Will your new curriculum include built in methods for continual evaluation . . . in terms of student behavior . . . and can it be easily adjusted, corrected, and improved on a continuing basis as a result of such information?

As you begin your difficult and stimulating task, we stand behind you with the moral and intellectual resources of the United Teaching Profession. Our best wishes, and my personal good wishes go with you on what we know will be a job very well done.

VT 021 044
STATE LAWS ON REEXAMINING DRIVERS. TRAFFIC LAWS COMMENTARY SERIES, VOLUME I, NUMBER 7.

NATIONAL COMMITTEE ON UNIFORM TRAFFIC LAWS AND ORDINANCES, WASHINGTON, D.C.
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ABSTRACT - THIS DOCUMENT REVIEWS STATE STATUTES ON REEXAMINING DRIVERS IN THE CONTEXT OF COMPARABLE PROVISIONS IN THE UNIFORM VEHICLE CODE. IT WAS FOUND THAT 45 STATES AND THE DISTRICT OF COLUMBIA HAVE LAWS PROVIDING FOR SOME FORM OF REEXAMINATION UPON LICENSE RENEWAL. THESE LAWS ARE OF THREE GENERAL TYPES. ONE GROUP OF LAWS MAKES REEXAMINATION MANDATORY, THE SECOND AUTHORIZES BUT DOES NOT REQUIRE REEXAMINATION, AND THE THIRD PROVIDES FOR REEXAMINATION ONLY WHEN THERE IS REASON TO BELIEVE THAT THE RENEWAL APPLICANT IS NO LONGER QUALIFIED TO DRIVE. TYPES OF REEXAMINATIONS REQUIRED BY THE CODE AND THE VARIOUS STATE REQUIREMENTS ARE PRESENTED IN DETAIL, ALONG WITH CITATIONS TO THE STATE LAWS. (MF)

VT 021 044

NOVEMBER 1972 VOLUME 1 NUMBER 7

Traffic Laws Commentary

U.S. Department of Transportation
National Highway Traffic Safety Administration
Washington, D.C. 20590

STATE LAWS ON REEXAMINING DRIVERS

The Commentary series covers, on a selective basis, the development and status of state motor vehicle and traffic laws, particularly as they relate to provisions in the Uniform Vehicle Code.

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State Laws on Reexamining Drivers

by

The NCUTLO Staff

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INTRODUCTION

This Commentary[1] reviews state statutes on reexamining drivers in the context of comparable provisions in the Uniform Vehicle Code.[2]

Though safer cars and safer highways will reduce highway mortality, the ability of drivers to operate safely in contemporary traffic must also be improved. Standards to judge a driver's qualifications will continue to change as will each driver's ability to meet them. For these reasons, reexamination of all drivers is desirable and will in many states constitute a departure from past practice of renewing licenses without any test of one's ability to drive safely.

REEXAMINATION UPON RENEWAL

The Uniform Vehicle Code requires the department of motor vehicles to reexamine all persons applying for a license renewal.[3] The examination must include a test of eyesight and of knowledge of traffic laws.[4] Additionally, the department is given discretionary authority to require any applicant to take and pass other tests deemed by the department to be reasonably necessary to determine the applicant's qualifications according to the class of license for which application has been made.[5] Such tests may also include any or all of the tests required or authorized for an original license applicant.[6]

Forty-five states and the District of Columbia have laws providing for some form of reexamination upon renewal. These laws are of three general types. One group of laws makes reexamination in some form and to some extent mandatory as does the Code. A second group authorizes reexamination but does not require it. The third group provides for reexamination only when there is reason to believe a renewal applicant is no longer qualified to drive and apparently would prevent universal reexamination of renewal applicants.

The five states that do not have laws expressly providing for reexamination of persons renewing their licenses are:

Connecticut	Maryland	Massachusetts[7]
Georgia		New Jersey

Mandatory Reexamination

Twenty-two states have mandatory reexamination laws that require some or all licensees to pass certain tests prior to license renewal:

Alaska	Louisiana	Nebraska	North Dakota
Colorado	Maine	Nevada	South Carolina
Florida	Minnesota	New Hampshire	South Dakota
Illinois	Missouri	New York	Utah
Indiana	Montana	North Carolina	Virginia
Iowa			Wisconsin

The laws of only three of the above states (Louisiana, Nebraska and Utah) substantially conform with the Code by requiring tests of vision and knowledge of the rules of the road of all applicants. Nebraska and Utah provide for testing every four years upon renewal and Louisiana requires a reexamination every four years upon second renewal. Laws of the remaining 19 states differ from the Code as to the persons covered, the frequency of the reexamination and the scope of the reexamination.

Persons Covered. Eleven of the 19 states require reexamination of all applicants prior to license renewal in conformity with the Code:

Colorado	Iowa	Montana	South Carolina
Florida	Minnesota	Nevada	South Dakota
Illinois	Missouri	New York	

However, in five of the 19 states (Alaska, Maine, New Hampshire, North Dakota and Virginia), the mandatory reexamination provision applies only to persons in certain age groups.[8/] Alaska examines all renewal applicants over 70 years old, Maine examines all renewal applicants over 65 years old, New Hampshire examines all renewal applicants over 75 years old, and all renewal applicants over 70 or under 21 years old are examined in North Dakota. Virginia law provides for examination of all renewal applicants over 42,[9/] and for operators in the renewal year immediately prior to their 30th, 38th and 42nd birthdays and for chauffeurs in the renewal year of their 30th, 38 and 42nd birthdays. As to persons who are not in the specified age groups, four states (all except Maine) authorize reexamination of renewal applicants. The Maine laws contain no provision relating to reexamination of renewal applicants who are under 65 years of age.

In the remaining three of the 19 states (Indiana, North Carolina and Wisconsin) all operators, but not all chauffeurs, must be re-examined at least every four years upon renewal. With regard to chauffeurs, Indiana law authorizes reexamination on renewal for certain causes and North Carolina makes such an examination discretionary. Wisconsin has no express provision for examination on renewal of a chauffeur's license, but a Wisconsin chauffeur's license is valid only for driving as a chauffeur so most holders of such licenses probably would also have operator's licenses and be subject to mandatory reexamination.

Frequency. The Code suggests mandatory reexamination upon renewal at either two, three or four year intervals at the option of the adopting states. All but two (Illinois and Virginia) of the 19 states being compared here specify one of these intervals. Illinois requires reexamination every nine years, but specifies every three years for drivers over 69 years of age. Discretionary authority exists in Illinois, however, to require universal reexamination upon renewal every three or four years. Virginia requires examination every four years of operators and chauffeurs over 42 years old and in the renewal year immediately prior to an operator's 30th, 38th and 42nd birthdays and in the renewal year of a chauffeur's 30th, 38th and 42nd birthdays. Of the 17 other states, two (Maine and North Dakota) require reexamination upon renewal at two year intervals. Four states (Alaska, Colorado, Missouri and New York) require reexamination upon renewal at three year intervals. Eleven states provide for reexamination upon renewal at four year intervals:

Florida	Minnesota	New Hampshire	South Dakota
Indiana	Montana	North Carolina	Wisconsin
Iowa[10]	Nevada[11]	South Carolina	

Scope of reexamination. The Code requires that reexamination include a test of vision and of traffic laws. Additional tests are authorized but are not required.[12] Of the 19 states being compared, only two (Illinois and Indiana) have laws concerning the scope of examination upon renewal which expressly require a test of vision and knowledge of traffic laws. The Illinois law also requires an understanding of road signs and authorizes a road test or any further tests the department may find necessary to determine the person's qualifications to operate a motor vehicle.

Twelve states limit the scope of the required reexamination to a test of vision:

Colorado	Missouri	New York	South Dakota
Iowa	Montana	North Dakota	Virginia
Minnesota	Nevada	South Carolina	Wisconsin

All 12 laws authorize or require additional tests when there is reason to believe the applicant is no longer qualified to drive. Four of these 12 states (Iowa, South Carolina, South Dakota and Wisconsin) provide for examination as upon an original license application when the renewal applicant has a certain number of traffic convictions.

In one of the 19 states (Maine), the scope of the reexamination varies with the age of the applicant. A vision test is required for all applicants over 65, while a complete reexamination, the scope of which is discretionary, is required for all applicants over 75.

One of the 19 states (Florida) requires an examination of vision, hearing and ability to understand road signs. The test of hearing required on reexamination is not required as part of an original license examination. Conversely, a test of knowledge of traffic laws, which is required as part of an original examination, is not required at reexamination.

In the remaining three of the 19 states (Alaska, New Hampshire and North Carolina), the extent of the testing is discretionary although a renewal examination is mandatory for all or certain applicants.[13]

Discretionary Reexamination

Eighteen jurisdictions authorize but do not require reexamination of all persons applying for renewal of their licenses. Two approaches are taken to this end. In nine jurisdictions, the law requires an examination of all applicants for renewal but the department is granted discretionary authority to waive it:

Delaware[14]	Oregon[15]	West Virginia
Michigan[15, 16]	Pennsylvania	Wyoming
Ohio	Washington[15]	District of Columbia

Apparently six of these nine jurisdictions have reexamination programs. Delaware, Washington, Wyoming and the District of Columbia test vision, Michigan tests vision and knowledge of traffic laws, and Pennsylvania gives some kind of reexamination approximately every 10 years.[17] Apparently reexamination upon license renewal is generally waived in Ohio, Oregon and West Virginia.[17]

The second approach to discretionary reexamination is to give the department broad authority to reexamine any or all renewal applicants. Nine state laws follow this approach:

Alabama	Hawaii	Mississippi
Arizona	Idaho	New Mexico
California	Kentucky	Texas

Apparently six of these states do have reexamination programs. Hawaii, New Mexico and Texas test vision.[17] Arizona, California and Idaho test vision, knowledge of traffic laws and knowledge of traffic signs and signals. California and Idaho also give a road test, and California additionally tests hearing.[17] Three states (Alabama, Kentucky and Mississippi[17a]) apparently do not require reexamination.[17]

Hawaii, in addition to authorizing examination of most renewal applicants, requires examination as upon an original application of any person who has six or more points accumulated during the preceding 12 months.

Renewal Reexamination for Cause

The laws of six states provide for renewal without any examination unless there is cause to believe the renewal applicant is no longer qualified, in which case a reexamination is authorized or required:[18]

Arkansas	Oklahoma	Tennessee
Kansas	Rhode Island	Vermont

Four of these states (Arkansas,[19] Rhode Island, Tennessee and Vermont) authorize, but do not require, a renewal examination of any applicant when there is "good cause" or "reason to believe" that the person is no longer qualified. Kansas requires a renewal examination whenever the applicant has previously been subjected to a license suspension, revocation or refusal by any state or country, or whenever it is determined

that the applicant's existing license is invalid. In other cases, provided the application is complete and correct, the license is renewed without examination. Oklahoma authorizes but does not require an examination for any renewal applicant with a proven accident record or with apparent physical defects. In other cases, the license is renewed without examination.

REEXAMINATION AT OTHER TIMES

In addition to requiring examination of drivers when they renew their licenses, the Code authorizes examination of any licensee at any time when there is good cause to believe he is no longer qualified.[20/] Specifically, UVC § 6-207 contains these five provisions concerning "four cause" reexaminations of licensed drivers:

(1) The department may require reexamination of any licensed driver whom it has "good cause" to believe is "incompetent or otherwise not qualified" to drive.

(2) The department must give any such person a "written notice of at least five days."

(3) The licensee may be required to submit to "an examination."

(4) After the examination, the department may suspend or revoke the person's license, or permit him to retain it, or issue a license subject to restrictions as permitted by § 6-113 or restrictions as to the type or class of vehicles that may be driven.

(5) If the person refuses or neglects to submit to the examination, his license may be suspended or revoked.

Forty-one states have laws providing for reexamination at times other than upon license renewal that are comparable to UVC § 6-207. The ten jurisdictions which do not have comparable laws are:

Alabama	Hawaii	Kentucky	Mississippi
Connecticut	Idaho	Massachusetts	New Jersey
Georgia			District of Columbia

Of the 41 states with comparable laws, 21 are in substantial conformity with all five provisions listed above:

Alaska	Louisiana[22]	New Mexico	Tennessee
Arizona	Maryland[22, 23]	North Carolina	Utah
Arkansas	Missouri[22]	North Dakota[24]	Washington[22, 25]
Florida[21]	Montana	Rhode Island	West Virginia
Indiana	Nevada	South Dakota[24]	Wyoming[22]
Kansas			

The laws of the other 20 states conform to some extent with one or more elements of this section of the Code:

California	Maine	New York	South Carolina
Colorado	Michigan	Ohio	Texas
Delaware	Minnesota	Oklahoma	Vermont
Illinois	Nebraska	Oregon	Virginia
Iowa	New Hampshire	Pennsylvania	Wisconsin

The laws of these 20 states are discussed below in the context of the five elements of the Code provision.

Reexamination for "Good Cause"

The Code authorizes the department to reexamine any licensee whom it has "good cause to believe" is "incompetent or otherwise not qualified" to hold a license. Of the 20 states being compared, 18 give the department comparably broad authority to reexamine for cause:

California[26]	Minnesota[31]	Ohio[35]	South Carolina[39]
Colorado[27]	Nebraska[32]	Oklahoma[36]	Texas[40]
Illinois[28]	New Hampshire[33]	Oregon[37]	Vermont[41]
Iowa[29]	New York[34]	Pennsylvania[38]	Virginia[42]
Michigan[30]			Wisconsin[43]

Although the language used varies considerably, most of these states generally authorize the department to require a reexamination of any licensee when there is good cause to believe he is incompetent or otherwise not qualified. Some provide even broader authority in that they do not specifically require the existence of "good cause" to justify a reexamination order.[44] The laws of six of these states (California,[26] Michigan,[30] New York,[34] Ohio,[35] Pennsylvania[38] and Wisconsin[43]) also contain more specific references to conditions under which a reexamination is authorized. These laws generally authorize

reexamination of drivers involved in a specified number of accidents or who have accumulated a specified number of points under a point system. One of these laws (Ohio) makes a reexamination mandatory under specified circumstances.

Two additional states (Delaware[45] and Maine[46]) have provisions which differ from the Code in that they do not provide broad authority to reexamine for cause but do specify certain conditions which make reexamination mandatory. The conditions specified involve accident involvement or point accumulations.

Written Notice of Examination

The Code provides for written notice of at least five days for an examination for cause. Three of the 20 states (Illinois, Wisconsin and Ohio) have the same requirement. Ohio further requires that the notice be sent by registered mail. The laws of two states (Colorado and South Carolina) provide for a ten day notice, the law of one state (Virginia) requires a 15 day notice, and the laws of two others (California and Oklahoma) require a 30 day notice before the examination. Three states (Nebraska, Pennsylvania and Michigan) require that notice be given but no time period is specified. The laws of the other nine states (Delaware, Iowa, Maine, Minnesota, New Hampshire, New York, Oregon, Texas and Vermont) do not expressly require any notice, although under New York and Oregon law there can be no suspension or revocation of the license of a person who fails to submit to an examination unless he has been "reasonably" notified.

Nature of the Examination

Twelve of the 20 states under consideration authorize an examination in very general terms and without specifying the content or scope of the examination:

California	Maine	New Hampshire	Oregon
Colorado	Michigan	New York	South Carolina
Illinois	Nebraska	Ohio	Virginia

Three of these 12 (Illinois, Maine and New Hampshire) specifically provide that the scope of the examination is within the discretion of the department of motor vehicles.

Four additional states specifically provide that the scope of the examination authorized is the same as the scope of an original examination:

Iowa	Texas
Oklahoma	Wisconsin

Although the scope of the examination actually given in the 16 states discussed above may differ somewhat, all of the laws appear to contemplate a licensing examination of the type capable of being performed by a driver licensing examiner.

In addition, the laws of four of the 16 states (Ohio,[47] Oklahoma,[48] Virginia[49] and Wisconsin[50]) as well as the laws of the four remaining states (Delaware,[51] Minnesota,[52] Pennsylvania[52] and Vermont[53]) appear to contemplate medical, physical or psychiatric examinations such as would be performed by a physician. In Ohio, Oklahoma, Virginia and Wisconsin, this type of examination is an alternative which the department may require instead of a driver licensing type examination, while in Delaware, Minnesota, Pennsylvania and Vermont the medical exam is the only reexamination authorized at times other than renewal.

Action Authorized After Examination

The Code provides that after the examination, the department shall take appropriate action and may suspend or revoke the person's license, or permit the person to retain his present license, or issue a license subject to restrictions as permitted under § 6-113 or restrictions as to the type or class of vehicles that may be driven.

Of the 20 states under consideration, seven have laws in substantial conformity with the Code in this respect:

California	New York	Vermont
Colorado[54]	Ohio	Virginia
	South Carolina	

The laws of the other 13 states contain various provisions as to what action the department may or shall take following a reexamination. Three (Michigan,[55] Illinois[56] and Texas[57]) authorize a suspension or revocation, but do not specifically authorize license restrictions. Three others (Iowa,[58] Oregon[59] and Pennsylvania[60]) authorize suspension but do not specifically

authorize revocation or license restrictions. Three states (Oklahoma,[61] Minnesota[62] and Wisconsin[63]) authorize a license cancellation and another state (Nebraska[64]) requires such a cancellation upon failure to pass the exam, although none of these states provides for a suspension or revocation. One of these states (Wisconsin[63]) additionally authorizes license restrictions if the license is not cancelled. The remaining three states (Delaware,[65] Maine[66] and New Hampshire[67]) do not specifically provide what licensing action is authorized or required, but all three do make it clear that satisfactory completion of the examination is a condition to continuation of the driving privilege.

Refusal or Neglect to Take Examination

The Code provides that a person's refusal or neglect to submit to a reexamination can result in the suspension or revocation of his license.

Five states have provisions in substantial conformity with the Code in this respect:

Colorado	Ohio	South Carolina
New York		Virginia

Another three states (California, Illinois and Oregon) have provisions which authorize suspension but do not specifically authorize a revocation of license for neglect or refusal to submit to an examination:

Two other states (Minnesota and Oklahoma) provide for license cancellation rather than for a suspension or revocation. One other state (Nebraska) makes it unlawful to refuse to submit to an examination unless the licensee immediately surrenders his license.

Three other states (Delaware, Maine and New Hampshire) do not specify what licensing action may be taken but do make it clear that submission to a required reexamination is a condition to retaining the driving privilege.[68]

The remaining six states do not specify any particular license action or any other consequences following a refusal or neglect to submit to an examination. All do provide, however, that the department may require such an examination.

These laws are silent as to the means to be employed to enforce such a requirement. Whether the department would be authorized to take licensing action is unclear. These six states are:

Iowa	Pennsylvania	Vermont
Michigan	Texas	Wisconsin

REEXAMINATION FOLLOWING REVOCATION OR SUSPENSION

Post Revocation Reexamination

The Code provides that, at the conclusion of a period of revocation, a person may apply for a new license, but the department may not issue a new license to the person until it determines that it will be safe to do so. Such a determination is to be based on an "investigation of the character, habits and driving ability" of the applicant.

Fifteen states have laws which, like the Code, expressly require an investigation of the "character, habits and driving ability" of an applicant before a new license may be issued after a period of revocation:

Alaska	Maryland	Oklahoma	Tennessee
Arizona	Montana	Rhode Island	Utah
Colorado	New Mexico	South Carolina	West Virginia
Kansas	North Dakota	South Dakota	

Ten other states specifically provide for some type of investigation or examination prior to licensing after a period of revocation. Five of these states (Illinois, Massachusetts, Nebraska, New York and Washington) require an examination or investigation to determine if the licensee should again be permitted to drive. Five others (Kentucky, Michigan, Minnesota, New Hampshire and Wisconsin) specifically require that the person pass the same examination or meet the same qualifications as an applicant for an original license issuance.

Seventeen other jurisdictions, although not specifically providing for requalification following a period of revocation, do provide that a revocation is a complete termination of the driving privilege which can only be restored by applying for a new license. A person applying for a license under such circumstances would be examined as upon an original license application. These 17 jurisdictions are:

Arkansas	Georgia	Maine	Oregon
California	Hawaii	Missouri	Pennsylvania
Delaware	Idaho	Nevada	Wyoming
Florida	Iowa	North Carolina	District of Columbia
	Louisiana		

One other state (Virginia) has a provision under which persons could be examined following a period of revocation but it is not mandatory. The Virginia law authorizes the department to refuse to issue a new or renewal license to any person whose license has been suspended or revoked when such a refusal is necessary for the safety of the public.

The remaining eight states have no provision specifically authorizing an examination or investigation prior to issuing a license following a period of revocation. Of course, as noted earlier in this Commentary, some of these states have provisions authorizing a reexamination at any time when there is good cause to believe the person is not qualified.[69] Under such a provision a person who has been subject to a revocation could be examined. These eight states are:

Alabama	Indiana	New Jersey	Texas
Connecticut	Mississippi	Ohio	Vermont

Post Suspension Reexamination

The Code does not require or expressly authorize examination as a prerequisite to restoration of a suspended license. However, as previously noted, it does provide for an examination whenever there is good cause to believe a driver is incompetent or otherwise not qualified to be licensed.[70] In an appropriate case, this provision would provide adequate authority to require an examination prior to reinstating a suspended license.

Fifteen states have laws which either authorize or require an investigation or examination prior to reinstatement of a suspended license. Eight of these states require an examination prior to reinstatement of the license:

Florida[71]	Maine[73]	Michigan[75]	New Hampshire[77]
Kentucky[72]	Massachusetts[74]	Nebraska[76]	Ohio[78]

In two of these states (New Hampshire[77] and Ohio[78]), however, the examination requirement applies only to certain specified suspensions. The Ohio law applies only to suspensions under

the point system, and the New Hampshire law applies only to the suspension of a person who is "physically or mentally an improper or incompetent person, or is operating improperly so as to endanger the public."

Three states (Montana,[79] Rhode Island[80] and Vermont[81]) require a departmental investigation of the licensee to determine whether his license should be reinstated. Three other states (Oklahoma,[82] Oregon[83] and Tennessee[84]) authorize but do not require an examination prior to a reinstatement following a suspension. One other state (South Carolina[85]) requires an examination when the suspension was for reckless driving or driving while under the influence of intoxicants and authorizes an examination when the suspension was based upon the point system.

The remaining 36 jurisdictions, like the Code, have no provision expressly authorizing or requiring an examination prior to restoration of a suspended license. These 36 jurisdictions are:

Alabama	Hawaii	Mississippi	South Dakota
Alaska	Idaho	Missouri	Texas
Arizona	Illinois	Nevada	Utah
Arkansas	Indiana	New Jersey	Virginia
California	Iowa	New Mexico	Washington
Colorado	Kansas	New York	West Virginia
Connecticut	Louisiana	North Carolina	Wisconsin
Delaware	Maryland	North Dakota	Wyoming
Georgia	Minnesota	Pennsylvania	District of Columbia

REEXAMINATION FOLLOWING EXPIRATION

Extension of Expiration Date

A provision was added to the Uniform Vehicle Code in 1968 to authorize a department of motor vehicles to defer the expiration date of the license of a person on active duty in the armed forces or the spouse or dependent of such a person who lives with such person.[86] The expiration date may be deferred upon terms and conditions specified by the Department for a period not in excess of a number of years to be specified by the enacting legislature. Where the expiration date is deferred by the department, the license remains valid and may be renewed during this extended period of validity just as any other unexpired license would be renewed.

Thirty-seven jurisdictions have comparable provisions which in some manner provide for an extension of the validity of licenses held by certain persons as follows:[87]

Arkansas -- The department may extend the expiration of any operator's license for as much as 90 days.

California -- One provision authorizes the department to extend for up to one year the license of any person who is outside the state at the time his license expires. A second provision automatically extends the validity of a serviceman's license until 30 days following his honorable discharge or return to the state, whichever is first.[88]

Colorado -- A serviceman's license is extended for three years from the expiration date or for 90 days after his return to the state, whichever is first.

Georgia -- A serviceman's license is extended until 30 days following his honorable discharge or return to the state, whichever is first.[88]

Idaho -- A serviceman's license is automatically renewed for a period of three years so long as active duty continues, and shall remain valid until 60 days following honorable discharge.[88]

Illinois -- The department may defer the expiration date of the license of a serviceman or the spouse or dependents living with him while on active duty outside the state and for 45 days thereafter.

Indiana -- A serviceman's license is extended until 30 days following his discharge, or for 4 years, whichever is the shorter period.

Iowa -- One provision automatically extends a serviceman's license until six months after his discharge. Another provides that the license of any person who is temporarily out of the state or who is incapacitated may be extended upon application until the person returns to the state or until the incapacity is removed, with a limit of six months. Another provision states that all licenses are valid for 30 days after their normal expiration date.

Kentucky -- A serviceman's license is extended by issuance upon written application of a certificate of extension which is valid for the duration of the active duty or for six years, whichever is the shorter period.

Louisiana -- The license of a serviceman serving outside the state is extended until 60 days following discharge.

Maine -- A special license is issued, upon application, to a serviceman during a time of war or national emergency. The special license is valid, notwithstanding its expiration date, until 30 days after discharge.

Maryland -- A serviceman's license is extended until 30 days after discharge or return to the state, whichever is first.

Massachusetts -- A serviceman's license is extended until 60 days after discharge.

Michigan -- A serviceman on official leave who has an expired but otherwise valid Michigan license is exempt from the driver's license requirement. The exemption applies only to the first leave of absence following license application and is limited to 30 days.

Minnesota -- A serviceman's license is extended until 90 days after discharge.

Montana -- A serviceman's license is extended until 90 days following honorable discharge.[88]

Nebraska -- A serviceman on active duty outside the state may renew his license by mail and without examination, but licenses may not be renewed more than twice in this manner.

Nevada -- The department may defer the expiration of the license of a serviceman, or his spouse or dependent living with him, upon terms and conditions prescribed by the department.

New Hampshire -- A serviceman on active duty for two or more years may renew his license by mail without examination.

New Jersey -- A licensed serviceman on active duty during a time of war or emergency may continue to exercise the driving privilege until 180 days following termination of the war or emergency or until three months from his discharge under conditions other than dishonorable.[88]

New Mexico -- A serviceman on leave, or a person who has been honorably discharged from the service within the last 30 days, who has an expired but otherwise valid New Mexico license which is not more than four years old, and who is or was stationed outside the state, is exempt from the driver licensing requirements.[88]

New York -- A serviceman's license is extended until six months after discharge, but the department may refuse to renew an expired license of any person who has failed to notify the department of his entry into the armed forces.

North Carolina -- A serviceman on active duty outside the state, or anyone temporarily residing for at least 30 continuous days outside the state, may apply for a temporary renewal by mail, and the department may waive the examination and photograph normally required and may impose other conditions deemed appropriate. The temporary renewal expires 30 days after return to the state.

Ohio -- A serviceman on leave is exempt from driver licensing requirements, and this provision remains applicable until six months following discharge.[89]

Oklahoma -- The license of a serviceman on active duty outside the country is extended until 60 days following his return to the continental United States.

Pennsylvania -- No license renewal is required for an annual license issued to a person in the armed forces, or any women's organization affiliated therewith, in any year during which active service continues.[90]

Rhode Island -- A special license is issued, upon application, to servicemen. The license is valid until 30 days following discharge.

South Dakota -- A serviceman's license is extended until 30 days after honorable discharge or return to the state, whichever is first.[88]

Tennessee -- A serviceman's license is extended until 60 days following discharge or return to the state, whichever is first.

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Texas -- A serviceman's license is extended until 90 days following honorable discharge or return to the state, whichever is first.[88]

Utah -- A serviceman's license is extended until 90 days following discharge.

Vermont -- A serviceman's license is extended until 30 days after discharge, but not for more than four years.

Virginia -- One law provides that a serviceman's license shall not expire during active duty outside the state nor during a period of six months thereafter, provided that no license extension shall exceed four years. Another law provides that persons who are out of the state for extended periods of time, such as serviceman and students, may be exempted from personal appearance at an office of the department in order to obtain a renewal, but there is no express waiver of the reexamination.

Washington -- A serviceman's license is extended until 90 days after honorable discharge.[88]

West Virginia -- A serviceman's license is extended until six months after honorable discharge.[88]

District of Columbia -- The license of a serviceman or person in the merchant marine on active duty outside the District may be extended for up to six years under regulations of the department.

Five of these jurisdictions (Arkansas, California,[91] Illinois, Nevada and the District of Columbia), like the Code, authorize the department to extend the expiration date of certain licenses. Two other states (Iowa[92] and Kentucky) have laws which provide for such extensions, but only upon application by the licensee. Two others (Maine and Rhode Island) provide for the issuance upon application by servicemen of special licenses which are valid for the duration of service with the armed forces. Four states (Nebraska, New Hampshire, North Carolina and Virginia[93]) provide for a license renewal by mail and without reexamination for certain persons who are outside the state when their license expires. Another three states (Michigan, New Mexico and Ohio) provide license exemptions for certain persons whose licenses have expired. The

great bulk of the comparable laws, however, provide an automatic expiration date extension in the law itself. License extensions under such laws involve no departmental action and apparently do not even require notice to the department. Twenty-four states have such laws:

California[94]	Iowa[95]	New Jersey	Texas
Colorado	Louisiana	New York	Utah
Georgia	Maryland	Oklahoma	Vermont
Hawaii	Massachusetts	Pennsylvania	Virginia[96]
Idaho	Minnesota	South Dakota	Washington
Indiana	Montana	Tennessee	West Virginia

Thirty-two of the various laws described above apply only to persons on active duty with the armed forces:

California[97]	Maine	New Jersey	Tennessee
Colorado	Maryland	New Mexico	Texas
Georgia	Massachusetts	New York	Utah
Hawaii	Michigan	Ohio	Vermont
Idaho	Minnesota	Oklahoma	Virginia[98]
Indiana	Montana	Pennsylvania	Washington
Kentucky	Nebraska	Rhode Island	West Virginia
Louisiana	New Hampshire	South Dakota	District of Columbia[99]

Three other laws (Illinois, Iowa[100] and Nevada), like the Code, apply to servicemen and to their spouses and dependents who live with them, and five laws (Arkansas, California,[101] Iowa,[101] North Carolina and Virginia[101]) apply to persons who have no connection with the armed forces.

Twelve of the laws, however, are limited in application only to persons who are outside the state at the time when their license would expire:

California	Illinois	Maryland	Tennessee
Colorado	Iowa[102]	Oklahoma[103]	Texas
Hawaii	Louisiana	South Dakota	Virginia

Renewal of Expired Licenses

The Code provides that a license is renewable on or before its expiration and contains no express provisions for persons who fail to apply for renewal on or before that date. Thus, a person who seeks restoration of an expired license actually no

longer has a license that can be renewed, and restoration under those circumstances would be subject to examination requirements normally applicable to persons applying for their original licenses.

Provisions Applicable to All Licensees. Twenty states do have express provisions applicable to a person seeking restoration of an expired license, however. Fourteen of these states have laws applicable to all licensees which specifically provide that a license may be renewed within a specified period after expiration. Within the specified time period in each of these states, therefore, a person could get his license reinstated by taking the examination and following procedures required for renewal applicants, rather than the examination and procedures for original license applicants. With the exception of Iowa (where an expired license remains valid for 30 days), however, licensees in these states do not remain valid beyond their expiration date. Operation of a motor vehicle on the highways after the expiration date would appear to be a violation unless the driver has another valid license. These fourteen states, and the specified time period for each, are as follows:

California	-- 90 days[104]	Missouri	-- 60 days[111]
Connecticut	-- 2 years[105]	Montana	-- 3 months[112]
Florida	-- 11 months[106]	New York	-- 1 year[113]
Hawaii	-- 90 days[107]	North Dakota	-- 1 year[114]
Iowa	-- 30 days[108]	Ohio	-- 6 months[115]
Minnesota	-- 1 year[109]	Pennsylvania	-- 3 years[116]
Mississippi	-- 12 months[110]	Vermont	-- 3 years[117]

In three of these states, the department may require additional examinations for such persons, even when they apply within the time limit, however. In Ohio, such a test is discretionary with the department, and in Florida and Mississippi an examination may be required if the department has reason to believe the person is no longer qualified to drive.

Three other states (Kansas,[118] Texas[119] and West Virginia[120]) provide that an expired license may be renewed at any time, apparently indefinitely, but the department may in its discretion require a person seeking such a renewal to be examined as an original applicant. One other state (Wisconsin[121]) allows renewal of expired licenses at any time, apparently indefinitely, but provides that the renewal may expire two years from the expiration date of the former valid license. Licenses in these four states do not remain valid beyond the expiration date, however.

Two other states (Nevada[122] and Washington[123]) have express provisions dealing with the renewal of expired licenses. Both of these laws provide that the renewal applicant must be examined and make application as an original license applicant. These provisions have the same effect as the Code and the laws of the jurisdictions which have no express provision dealing generally with renewal of expired licenses.

Licensees in Special Circumstances. In addition to the 20 laws just discussed dealing generally with the problem of license renewal after expiration, sixteen states have laws providing for renewal of expired licenses which are applicable only to licensees who, due to military service or other special circumstances, are deemed unable to renew at the appropriate time. Licenses in these 16 states do not remain valid beyond the expiration date, but may be renewed within a specified time period following termination of the special circumstances. These 16 states are:

Arizona	Mississippi	North Dakota	Rhode Island
Florida	Missouri	Ohio	Tennessee
Hawaii	Nebraska	Oregon	Washington
Kansas	New York	Pennsylvania	Wisconsin

Two of these laws (Hawaii and Washington) broadly cover any person, with or without military affiliation, who is outside the state for any reason at the time his license expires. The Hawaii law requires that the person be outside the state during the entire renewal period and that he apply for renewal within 30 days of his return to the state. The Washington law applies to any person who is out of the state at the appropriate time and it requires application for renewal within 60 days of his return. The Washington law also applies to any person who is unable for any disability to renew his license at the appropriate time, provided that the person makes application for renewal within 60 days of the termination of his disability.

The other 14 laws generally apply only to persons whose licenses expire while they are on active duty with the armed forces, although one (North Dakota) also covers duty with the merchant marine, and one (Pennsylvania) also covers persons serving with an armed forces affiliated women's organization. Five of these 14 (Florida, Kansas, Mississippi, Nebraska and

Tennessee) apply only where the person was out of the state on active military duty at the time his license expired. One other (Wisconsin) applies only to a person who is unable, due to military service, to renew his license at the appropriate time. The remaining eight (Arizona, Missouri,[124] New York,[124] North Dakota, Ohio,[124] Oregon, Pennsylvania[124] and Rhode Island), however, apply to any person who was on active military duty anywhere at the time his license expired. These eight do not specify service outside the state nor do they require any showing that the military service made the person unable to renew his license at the appropriate time.

All 16 of the laws being discussed authorize renewal of the expired license if application is made within a specified time. Four of the states make no specific reference to examination requirements, thus ordinary license renewal reexamination provisions would apply:

Hawaii -- An expired license may be renewed if application is made within 30 days after return to state.

North Dakota -- An expired license may be renewed for an applicant whose military or merchant marine service has terminated less than 60 days prior to the application.

Oregon -- An application filed within 6 months after discharge from the armed forces is considered a renewal application.

Wisconsin -- An expired license may be renewed if application is made at any time during military service or within six months of discharge from such service.

Five laws, on the other hand, specifically provide that no examination shall be required for the renewal:

Kansas -- The expired license is renewable without examination if application is made within six months of discharge from the armed forces or within 90 days after reestablishing residence in the state, whichever is sooner.

Nebraska -- The expired license is renewable without examination at any time during military service or within 30 days after discharge from such service or return to the state, whichever is later.

New York -- The expired license is renewable without examination, reexamination fine or penalty if application is made within three months after release from service under honorable circumstances.

Rhode Island -- A special license is issued to persons with a Rhode Island license valid at the time they enter the armed forces. The special license is valid until 30 days following discharge from the armed forces. A person holding such a special license which has expired may obtain a regular license without examination within three years of the expiration date of the special license.

Tennessee -- The expired license may be renewed without further examination upon return to Tennessee.

Three other states provide that an examination is discretionary with the department:

Arizona -- The expired license may be renewed within 90 days of discharge from the service. The department may require examination as upon an original license application.

Ohio -- Reexamination may be waived by the department as to any renewal applicant within six months of honorable discharge from active military or naval duty.

Washington -- The expired license may be renewed within 60 days after the person's return to the state or termination of the incapacity which made him unable to have the license renewed at the proper time. The department may waive all or any part of the examination.

Laws in the remaining four states provide for examination only when there is reason to believe the applicant may no longer be qualified:

Florida -- The expired license may be renewed within 90 days after discharge from the service or return to the state, without examination unless there is reason to believe the licensee is no longer qualified.

Mississippi -- Same as Florida.

Missouri -- A person on active duty with the armed forces may obtain a renewal without examination unless the previous license has been suspended or revoked. A person honorably discharged may obtain a renewal within 60 days of discharge with only a vision test, unless there is good cause to require a complete examination.

Pennsylvania -- License renewal is authorized within one year of honorable discharge unless a physical or mental incapacity exists. If injuries were sustained during service the application must be accompanied by a physicians certification that the applicant is physically and mentally able to operate a motor vehicle.

SUMMARY

1. Forty-five states and the District of Columbia have laws providing for some form of reexamination upon renewal of a driver's license as follows:

    a. Twenty-two have mandatory reexamination requirements, although five of these laws apply only to applicants in certain age groups.

    b. Reexamination upon license renewal is authorized but not required in eighteen jurisdictions.

    c. Six states provide for reexamination only where there is reason to believe the applicant is no longer qualified.

    d. Although 45 states have laws dealing with renewal reexamination, only three of the laws (Louisiana, Nebraska and Utah) specifically require that all licensees submit to an eye test and a test of knowledge of traffic laws at least once every four years. All the other laws lack one or more elements of this minimal requirement.

2. This Commentary updates similar issues published in 1966 and 1969. The summary below indicates that the number of states with laws requiring drivers to be reexamined has increased significantly since 1965:

	Number of Jurisdictions		
	1965	1968	1971
Mandatory renewal examination	14	21	22
Discretionary renewal examination	17	17	18
Renewal examination only "for cause"	10	8	6
No express provision on renewal exams	10	5	5

3. Forty-one states have laws providing for reexamination at times other than upon renewal if there is reasonable cause to believe the person is not qualified to drive.

4. Forty-two states have laws which effectively require a reexamination following a license revocation. Fifteen states also require or authorize a reexamination following a license suspension, although the Uniform Vehicle Code does not contain such a provision.

5. Thirty-seven jurisdictions have provisions under which the validity of licenses of certain persons, particularly servicemen, are or may be extended beyond their normal expiration date.

6. Twenty states have provisions specifically authorizing the renewal of an expired license held by any person if application is made within a specified time following expiration. Sixteen states have similar laws which apply generally only to servicemen, and which provide for renewal upon application within a specified time following discharge from the armed forces or return to the state.

CITATIONS TO STATE LAWS

Reexamination Upon Renewal

Ala. Code tit. 36, §§ 59, 63(f) (1959).
Alaska Stat. §§ 28.15.120, .250(b) (1970).
Ariz. Rev. Stat. Ann. § 28-426 (Supp. 1971).
Ark. Stat. Ann. § 75-326 (1957).
Cal. Vehicle Code § 12814 (1972).
Colo. Rev. Stat. Ann. § 13-4-16 (1963).
Del. Code Ann. tit. 21, § 2711(b) (1953).
Fla. Stat. Ann. § 322.121 (1968).
Hawaii Rev. Stat. § 286-107 (Supp. 1971).
Idaho Code § 49-322 (Supp. 1971).
Ill. Ann. Stat. ch. 95 1/2, § 6-109 (1971).

Ind. Ann. Stat. § 47-2708(g) (Supp. 1971).
Iowa Code Ann. §§ 321.196, .197 (Supp. 1972).
Kan. Stat. Ann. § 8-247 (Supp. 1971).
Ky. Rev. Stat. Ann. §§ 186.414, .480 (Supp. 1970).
La. Rev. Stat. Ann. §§ 32:408, :412 (Supp. 1972).
Me. Rev. Stat. Ann. tit. 29, §§ 545, 582 (Supp. 1970).
Mich. Stat. Ann. § 9.2009, .2014 (Supp. 1971).
Minn. Stat. Ann. §§ 171.13, .27 (1960, Supp. 1972).
Miss. Code Ann. § 8114(2) (Supp. 1971).
Mo. Ann. Stat. §§ 302.173, .177 (1972).
Mont. Rev. Codes Ann. § 31-135 (Supp. 1971).
Neb. Rev. Stat. §§ 60-411, -411.01 (1968).
Nev. Rev. Stat. § 483.380 (1971).
N.H. Rev. Stat. Ann. §§ 261:3-a, :12 (Supp. 1971).
N.M. Stat. Ann. § 64-13-52 (1972).
N.Y. Veh. & Traf. Law §§ 501(5), (9) (1970).
N.C. Gen. Stat. §§ 20-7(d), (g) (1965); § 20-7(f) (Supp. 1971).
N.D. Cent. Code § 39-06-19 (Supp. 1971).
Ohio Rev. Code Ann. § 4507.09 (1965); § 4507.10(B) (Supp. 1971).
Okla. Stat. Ann. tit. 47, § 6-115 (1962).
Ore. Rev. Stat. §§ 482.260(2), .410(1) (1971).
Pa. Stat. Ann. tit. 75, §§ 607, 608(c), 615 (1971).
R.I. Gen. Laws Ann. § 31-10-30 (Supp. 1971).
S.C. Code Ann. §§ 46-169, -169.1 (Supp. 1971).
S.D. Comp. Laws Ann. §§ 32-12-4, -43 (1967).
Tenn. Code Ann. § 59-710 (1968).
Tex. Rev. Civ. Stat. art. 6687b, § 18 (Supp. 1972).
Utah Code Ann. §§ 41-2-11, -16 (1970).
Vt. Stat. Ann. tit. 23, §§ 632, 636 (1968).
Va. Code Ann. § 46.1-380.1 (1972).
Wash. Rev. Code Ann. §§ 46.20.121, .181 (1970).
W. Va. Code Ann. § 17B-2-12 (Supp. 1972).
Wis. Stat. Ann. §§ 343.16, .20 (Supp. 1971).
Wyo. Stat. Ann. §§ 31-263, -268 (1967).
D.C. Code Ann. § 40-301(a)(1) (Supp. 1971).

Reexamination at Other Times

Alaska Stat. § 28.15.250(a) (1970).
Ariz. Rev. Stat. Ann. § 28-447 (1956).
Ark. Stat. Ann. § 75-329 (Supp. 1971).
Cal. Vehicle Code §§ 13800, 13801 (1972).
Colo. Rev. Stat. Ann. § 13-4-10 (Supp. 1965).
Del. Code Ann. tit. 21, § 2712 (Supp. 1970).
Fla. Stat. Ann. § 322.221 (Supp. 1972).
Ill. Ann. Stat. ch. 95 1/2, § 6-207 (1971).

Ind. Ann. Stat. § 47-2708 (Supp. 1971).
Iowa Code Ann. § 321.186 (1966).
Kan. Stat. Ann. § 8-241 (1964).
La. Rev. Stat. Ann. § 32:424 (1963).
Me. Rev. Stat. Ann. tit. 29, § 581-B (Supp. 1970).
Md. Ann. Code art. 66 1/2, § 6-207 (1970).
Mich. Stat. Ann. § 9.2020 (Supp. 1971).
Minn. Stat. Ann. §§ 171.13(3), (4) (1960).
Mo. Ann. Stat. § 302.291 (1972).
Mont. Rev. Codes Ann. § 31-148 (1961).
Neb. Rev. Stat. § 60-407(1) (1968).
Nev. Rev. Stat. § 483.480 (1971).
N.H. Rev. Stat. Ann. § 261:3-a (Supp. 1971).
N.M. Stat. Ann. § 64-13-61 (1972).
N.Y. Veh. & Traf. Law § 501(8) (1970).
N.C. Gen. Stat. § 20-29.1 (Supp. 1971).
N.D. Cent. Code § 39-06-34 (1960).
Ohio Rev. Code Ann. § 4507.20 (Supp. 1971).
Okla. Stat. Ann. tit. 47, §§ 6-119, -120 (Supp. 1970).
Ore. Rev. Stat. § 482.260(3) (1971).
Pa. Stat. Ann. tit. 75, §§ 608(g), 619.1 (1971).
R.I. Gen. Laws Ann. § 31-11-9 (1968).
S.C. Code Ann. § 46-174 (1962).
S.D. Comp. Laws Ann. § 32-12-46 (1967).
Tenn. Code Ann. § 69-707 (Supp. 1971).
Tex. Rev. Civ. Stat. art. 6687b, § 10 (1969); § 22(a) (Supp. 1972).
Utah Code Ann. § 41-2-19(g) (1970).
Vt. Stat. Ann. tit. 23, § 636 (1967).
Va. Code Ann. § 46.1-383 (Supp. 1972).
Wash. Rev. Code Ann. § 46.20-305 (1970).
W. Va. Code Ann. § 17B-3-7 (1966).
Wis. Stat. Ann. §§ 343.16, .32 (Supp. 1971).
Wyo. Stat. Ann. § 31-275 (1967).

Reexamination Following Revocation or Suspension

Alaska Stat. § 28.15.260 (1970).
Ariz. Rev. Stat. Ann. § 28-448(B) (Supp. 1971).
Ark. Stat. Ann. § 75-303 (Supp. 1971).
Cal. Vehicle Code §§ 12803, 13101 (1972).
Colo. Rev. Stat. Ann. § 13-4-24(2) (Supp. 1965).
Del. Code Ann. tit. 21, § 2735 (Supp. 1970).
Fla. Stat. Ann. §§ 322.01(12)(b), .12, .28, .29 (1968).
Ga. Code Ann. § 92A-422(b) (1958).
Hawaii Rev. Stat. § 286-126 (1968).
Idaho Code §§ 49-316, -331, -351(b) (1967).

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Ill. Ann. Stat. ch. 95 1/2, § 6-208(b) (1971).
Iowa Code Ann. § 321.212 (1966).
Kan. Stat. Ann. § 8-256(b) (Supp. 1971).
Ky. Rev. Stat. Ann. § 186.480(2) (Supp. 1971).
La. Rev. Stat. Ann. § 32:401(8) (1963); § 32:408 (Supp. 1972).
Me. Rev. Stat. Ann. tit. 29, § 2241 (Supp. 1970).
Md. Ann. Code art. 66 1/2, § 6-208 (Supp. 1972).
Mass. Ann. Laws. ch. 90, § 22 (Supp. 1971).
Mich. Stat. Ann. § 9-2020(3) (1968).
Minn. Stat. Ann. § 171.29 (1960).
Mo. Ann. Stat. § 302.309(2) (1972).
Mont. Rev. Codes Ann. §§ 31-149(b), -150 (1961, Supp. 1971).
Neb. Rev. Stat. § 60-408 (1968).
Nev. Rev. Stat. §§ 483.150, .330, .490 (1969).
N.H. Rev. Stat. Ann. § 261:11-a (1966); § 262:40 (Supp. 1971).
N.M. Stat. Ann. § 64-13-62(b) (1972).
N.Y. Veh. & Traf. Law § 510(6) (Supp. 1972).
N.C. Gen. Stat. §§ 20-6, -7(c), -19(d), (e) (Supp. 1971).
N.D. Cent. Code § 39-06-36 (1960).
Ohio Rev. Code Ann. § 4507.41 (Supp. 1971).
Okla. Stat. Ann. tit. 47, §§ 6-208(b), -209 (1962).
Ore. Rev. Stat. §§ 482.030(1), .260, .470, .500 (1971).
Pa. Stat. Ann. tit. 75, §§ 608, 615, 621 (1971).
R.I. Gen. Laws Ann. § 31-11-10 (1968).
S.C. Code Ann. § 46-185 (1962); § 46-186 (Supp. 1971).
S.D. Comp. Laws Ann. § 32-12-44 (1967).
Tenn. Code Ann. § 59-713(g) (1968).
Utah Code Ann. § 41-2-21(2) (1970).
Vt. Stat. Ann. tit. 23, § 671(a) (1967).
Va. Code Ann. § 46.1-483 (1967).
Wash. Rev. Code Ann. § 46.20.311(2) (1970).
W. Va. Code Ann. § 17B-3-8 (1966).
Wis. Stat. Ann. § 343.38(1)(b) (Supp. 1971).
Wyo. Stat. Ann. §§ 31-249(h), -263 (1967).
D.C. Code Ann. § 40-302(b) (1967).

Reexamination Following Expiration

Ariz. Rev. Stat. Ann. § 28-426(D) (Supp. 1971).
Ark. Stat. Ann. § 75-326(a) (1957); § 75-358 (Supp. 1971).
Cal. Vehicle Code §§ 12814, 12816(c), 12817 (1972).
Colo. Rev. Stat. Ann. § 13-4-16(2) (1963).
Conn. Gen. Stat. Ann. § 14-36(b) (1970).
Fla. Stat. Ann. §§ 322.121(5), .18(4) (1968).
Ga. Code Ann. §§ 92A-435, -436 (Supp. 1971).
Hawaii Rev. Stat. § 286-106 (Supp. 1971); Hawaii Gen. Laws 1969, ch. 76, § 1.

Idaho Code § 49-322 (Supp. 1971).
Ill. Ann. Stat. ch. 95 1/2, § 6-115 (Supp. 1972).
Ind. Ann. Stat. § 47-2702a (1965).
Iowa Code Ann. §§ 321.196, .198 (Supp. 1972).
Kan. Stat. Ann. § 8-247(c) (Supp. 1971).
Ky. Rev. Stat. Ann. § 186.414 (Supp. 1970).
La. Rev. Stat. Ann. § 32:412 (Supp. 1972).
Me. Rev. Stat. Ann. tit. 29, § 535-A (Supp. 1970).
Md. Ann. Code art. 66 1/2, § 6-115(c) (1970).
Mass. Gen. Laws 1955, ch. 507.
Mich. Stat. Ann. § 9.2002(5) (Supp. 1971).
Minn. Stat. Ann. § 171.27 (Supp. 1972).
Miss. Code Ann. § 8114(4) (Supp. 1971).
Mo. Ann. Stat. § 302.173 (1972).
Mont. Rev. Codes Ann. § 31-126 (1961); § 13-135 (Supp. 1971).
Neb. Rev. Stat. § 60-411 (Supp. 1971).
Nev. Rev. Stat. § 483.380(5) (1971).
N.H. Rev. Stat. Ann. § 261.15 (Supp. 1971).
N.J. Stat. Ann. § 39:3-11.5 (Supp. 1972).
N.M. Stat. Ann. § 64-13-39(F) (1972).
N.Y. Veh. & Traf. Law § 502(6)(b) (Supp. 1972); N.Y. Unconsol. Laws § 9196(3) (Supp. 1972).
N.C. Gen. Stat. § 20-7(f) (Supp. 1971).
N.D. Cent. Code § 39-06-19 (Supp. 1971).
Ohio Rev. Code Ann. §§ 4507.03, .10 (Supp. 1971).
Okla. Stat. Ann. tit. 47, § 6-121 (Supp. 1970).
Ore. Rev. Stat. § 482.020(4) (1971).
Pa. Stat. Ann. tit. 75, §§ 607, 615 (1971).
R.I. Gen. Laws Ann. §§ 31-10-8, -9, -10 (1968).
S.D. Comp. Laws § 32-12-45 (1967).
Tenn. Code Ann. § 59-710(f) (1968); § 59-707 (Supp. 1971).
Tex. Rev. Civ. Stat. art. 6687b, §§ 3, 18(f) (Supp. 1972).
Utah Code Ann. § 41-2-16 (1970).
Vt. Stat. Ann. tit. 23, §§ 616, 632 (1967).
Va. Code Ann. § 46.1-382 (1967); § 46.1-380.1(f) (Supp. 1971).
Wash. Rev. Code Ann. §§ 46.20.027, .120 (1970).
W. Va. Code Ann. § 17B-2-12 (Supp. 1972).
Wis. Stat. Ann. § 343.20 (Supp. 1971).
D.C. Code Ann. § 40-301(a)(6) (1967).

FOOTNOTES

1/ This Commentary was prepared by the staff of the National Committee on Uniform Traffic Laws and Ordinances, 1776 Massachusetts Avenue, N.W., Washington, D.C., under contract with the National Highway Traffic Safety Administration. Research assistance for this Commentary was provided by Joanne M. Peartree, a student at the George Washington University School of Law, Washington, D.C.

2/ State laws adopted or amended prior to January 1, 1972, are included in this Commentary. Additions or amendments made during 1972 are not covered. This Commentary updates Traffic Laws Commentary Nos. 69-1 and 66-1, entitled "Driver Re-Examination Laws," which were published by the National Committee on Uniform Traffic Laws and Ordinances on June 30, 1969 and July 6, 1966.

The Uniform Vehicle Code provisions which require driver reexamination and which are covered in this Commentary are:

§ 6-115 -- Expiration and renewal of license; re-examination required

(a) . . . .

(b) The department shall require every person applying for renewal of a driver's license to take and successfully pass a test of his eyesight and knowledge of the traffic laws of this State. The department may require any applicant to take and successfully pass such additional tests as the department may find reasonably necessary to determine his qualification according to the type or general class of license applied for and such examination may include any or all of the other tests required or authorized upon original application by § 6-110.[8]

A footnote to UVC § 6-115(b) provides as follows:

[8] Depending on the duration of licenses in the enacting state under subsection (a), subsection (b) might be modified accordingly. For instance, where licenses must be renewed every two years, a state enacting subsection (b) may wish to modify the first sentence by requiring vision and rules of the road tests every four years; i.e. on every second renewal. In such instances, however, the department should be granted discretionary authority to require any or all tests every two years by the addition of a third sentence to that effect. UVC § 6-115, footnote 8, page 78 (1968).

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§ 6-207—Department may require re-examination

The department, having good cause to believe that a licensed driver is incompetent or otherwise not qualified to be licensed, may upon written notice of at least five days to the licensee require him to submit to an examination. Upon the conclusion of such examination, the department shall take action as may be appropriate and may suspend or revoke the license of such person or permit him to retain such license, or may issue a license subject to restrictions as permitted under § 6-113 or restrictions as to the type or class of vehicles that may be driven. Refusal or neglect of the licensee to submit to such examination shall be ground for suspension or revocation of his license.

§ 6-208 -- Period of revocation

(a) . . . .

(b) The department shall not issue a new license nor restore a person's revoked nonresident's operating privilege unless and until it is satisfied after investigation of the character, habits and driving ability of such person that it will be safe to grant the privilege of driving a motor vehicle on the public highways.

3/ UVC § 6-115(b) (1968). For the text of this section, see footnote 2, supra. Section 6-115(a) recommends that a drivers license expire on the licensee's birthday in either the second, third or fourth year following issuance. A footnote to § 6-115 (b), the reexamination requirement, notes that if a state requires renewal every two years it might want to require reexamination only on every second renewal, although the department should have authority to require reexamination at each renewal. For the complete text of this footnote, see footnote 2, supra. Frequency of reexamination is discussed in greater detail in the text at footnote 10, infra.

4/ UVC § 6-115(b) (1968). For the text of this section, see footnote 2, supra.

5/ Id.

6/ Id. UVC § 6-110(a) (1968) provides that an examination of an original applicant shall include a test of eyesight, of ability to read and understand official traffic control devices, and of knowledge of safe driving practices and the traffic laws of the state, and the test shall include an actual demonstration of ability to exercise ordinary and reasonable control in the operation of a motor vehicle of the type or general class for which license is sought. The Code further provides that the examination may include such further physical and mental examination as the department finds necessary to determine the applicant's fitness to operate a motor vehicle safely on the highways.

State laws comparable to this section of the Code are reviewed in Traffic Laws Commentary 71-2 entitled "Driver License Examinations," which was published by the National Committee on Uniform Traffic Laws and Ordinances on July 27, 1971.

7/ It should be noted, however, that a general provision in the Massachusetts Motor Vehicle laws has been cited as support for a reexamination program. Massachusetts law includes the requirement that "no license shall be issued until the registrar or his authorized agent is satisfied that the applicant is the proper person to receive it." Mass. Ann. Laws ch. 90, § 8 (Supp. 1970). Apparently on the basis of that provision the Registrar is requiring a vision test upon license renewal. U.S. Department of Transportation, Federal Highway Administration and National Highway Traffic Safety Administration, Driver License Administration Requirements and Fees, Table DL-102 (January 1, 1972).

This study also indicates that drivers are not being reexamined upon renewing their licenses in the remaining four states.

8/ It should be noted that the National Committee in 1968 considered a proposal requiring renewal applicants over a certain age to be reexamined, but rejected it in favor of a universal reexamination requirement. See Agenda for National Committee Meeting, Item 62B, page 111 (May 29, 1968).

9/ Virginia requires renewal of operators licenses every four years and of chauffeur's licenses every year. Thus, the law provides that operators must be reexamined upon each renewal but chauffeurs are reexamined only once each four years, after the 42nd birthday.

10/ The Iowa law provides that until July 1, 1975, reexamination may be required every two or four years, at the discretion of the department.

11/ Nevada law provides for reexamination every two years for renewal applicants over 70 years old.

12/ See footnotes 5 and 6, supra, and the related text.

13/ A recent U.S. Department of Transportation publication indicates that these three states are testing as follows:

Alaska and New Hampshire test vision while North Carolina requires an examination as upon an original license application. U.S. Department of Transportation, Federal Highway Administration and National Highway Traffic Safety Administration, Driver License Administration Requirements and Fees, Table DL-102 (January 1, 1972).

14/ The Delaware law, however, provides that the department may issue permanent licenses to persons over 21 who have been licensed for three years. Thus, holders of these licenses would not be subject to the renewal reexamination provisions.

15/ The Michigan, Oregon and Washington laws apparently do not permit waiving the examination of an applicant who has a bad driving record or who is no longer qualified to drive. Although this makes some reexaminations mandatory, these state provisions still allow waiving the examination for most renewal applicants.

16/ The Michigan law also does not permit waiving the examination for a chauffeur's license renewal.

17/ Information regarding reexamination programs is drawn from U.S. Department of Transportation, Federal Highway Administration and National Highway Traffic Safety Administration, Driver License Administration Requirements and Fees, Table DL-102 (January 1, 1972).

17a/ The Mississippi law provides:

> all renewal licenses issued after January 1, 1971, shall be for two-year periods and may be renewed any time during the birth month of the licensee upon application and payment of the required fee, unless required to be reexamined.

It is assumed that the underlined portion of this statute would authorize reexamining renewal applicants. The wording of the law clearly contemplates that such reexaminations may occur.

18/ Although these six states authorize reexamination only for cause upon renewal, most states, as outlined in text under the heading "Reexamination at Other Times," have provisions similar to UVC § 6-207 providing for reexamination of a licensed driver for cause. For the full text of UVC § 6-207 see footnote 2, supra.

19/ In Arkansas, operator's licenses are renewed without examination unless the department has reason to believe the applicant is no longer qualified. As to chauffeurs, however, the department has authority to require an examination or waive examination in its discretion.

20/ UVC § 6-207 (1968). For the full text of this provision see footnote 2, supra.

21/ Florida authorizes the examination of any licensee whom the department has "good cause" to believe is incompetent or otherwise not qualified to be licensed in verbatim conformity with the Code, but then specifically defines "good cause" as grounds which would subject the licensee to discretionary suspension of his license, evidence indicating the person's driving is detrimental to the public safety, or contribution to an accident causing death, injury or property damage.

22/ Louisiana, Missouri and Wyoming require a 10 day notice. Maryland requires a seven day notice rather than five days as in the Code. Missouri also requires that notice be by registered mail. Washington does require notice but does not specify a minimum time.

23/ Maryland law specifies that the department may require an examination of a licensee who is involved in a fatal accident or whenever there is good cause to believe the licensee is incompetent or otherwise not qualified to be licensed.

24/ North Dakota and South Dakota differ from the Code as to the nature of the examination. South Dakota authorizes an interview in addition to the examination and North Dakota authorizes the department to require a licensee to submit to "such physical, mental or driver's examination as may be deemed necessary."

25/ In addition to the examination, the Washington department is authorized to require a person to obtain a certificate showing his condition signed by a licensed physician or other authority designated by the department.

26/ The California law provides that the department may conduct an investigation or require a reexamination whenever it has information that the licensee has been involved as a driver in any accident resulting in death, injury or serious property damage, or has been involved in three or more accidents within

one year, or has permitted any unlawful or fraudulent use of his license, or that any grounds for license refusal exist (conviction of any narcotics offense justifies an investigation or reexamination), or that the licensee is a reckless, negligent or incompetent driver. This last basis for reexamination may be construed to be similar in effect to the Uniform Vehicle Code provision since it authorizes the department to reexamine when it has reason to believe the licensee is incompetent.

27/ The Colorado law provides that the department, "having evidence indicating" that a licensee "is incompetent or otherwise not qualified to be licensed" may require a reexamination.

28/ The Illinois law provides that the department, "having good cause to believe" that a licensee "is incompetent or otherwise not qualified to hold a license" may require a reexamination.

29/ The Iowa law authorizes a reexamination when the department "has reason to believe" a licensee "may be physically or mentally incompetent to operate a motor vehicle," or "whose driving record appears to the department to justify such an examination."

30/ The Michigan law authorizes a reexamination whenever the department "has reason to believe" that a licensee "is or has become incompetent to drive" or "is or has become afflicted with mental or physical infirmities or disabilities rendering it unsafe for such person to drive." Reexamination is further authorized for a licensee who is involved as a driver in any accident resulting in death or who is involved within two years in three accidents involving a moving violation and which result in injury or property damage exceeding $200.00. Reexamination is further authorized as to any licensee who accumulates 12 or more points within two years. The department may also conduct an investigation whenever a reexamination is authorized.

31/ The Minnesota law authorizes the department to require an examination "to determine incompetency, physical or mental disability, or disease, or any other condition which might affect the driver from exercising reasonable and ordinary control over a motor vehicle." This authority appears to be more broad than the authority granted by the Code because there is no specific requirement that the department have any cause to believe these conditions exist prior to requiring an examination.

32/ The Nebraska law authorizes a reexamination when the department "has reason to believe" a licensee "may be physically or mentally incompetent to operate a motor vehicle." A reexamination is also authorized at the request of a law enforcement officer or whenever the driving record of the licensee "appears to the department to justify such examination." The law appears to apply only to operators and not also to chauffeurs.

33/ The New Hampshire law provides that the department "may require with cause" any licensee "to pass such examination as to his qualifications as the director shall prescribe." The law further provides that no license shall be "continued in effect until the director is satisfied as to the person's fitness to operate a motor vehicle."

34/ The New York law authorizes a reexamination when the department "has reasonable grounds to believe" that a licensee "is not qualified to drive a motor vehicle." Reexamination is also authorized as to any licensee involved as a driver in three reportable accidents within 18 months.

35/ The Ohio law provides that the department, "having good cause to believe" that a licensee "is incompetent or otherwise not qualified to be licensed" shall require a reexamination. The Ohio law also requires a reexamination of any licensee who has accumulated more than seven points under the point system.

36/ The Oklahoma law authorizes a reexamination whenever the department "has good cause to believe" a licensee may be afflicted with any physical or mental ailment which may cause loss of control or partial control or may otherwise be incapable of properly controlling a motor vehicle. Reexamination is further authorized when the licensee's accident or violation record, in the opinion of the Commissioner, based upon standards prescribed by him, indicates the licensee may be a hazard to public safety.

37/ The Oregon law authorizes a reexamination whenever the department "has reason to believe that the operator might not be qualified to hold an operator's license under this chapter." The provision does not apply to persons holding chauffeur's licenses.

38/ The Pennsylvania law authorizes the department to require an examination, in the discretion of the secretary, to determine incompetency, physical or mental disability or disease, or any other condition which might prevent exercising reasonable and ordinary control over a motor vehicle. This authority appears to be more broad than the authority granted by the Code since there is no specific requirement that the department have any cause to believe these conditions exist prior to requiring an examination.

The Pennsylvania law also authorizes a special reexamination whenever a person accumulates six points under the point system, or whenever, after a hearing, it is indicated that a driver was at fault or partly at fault in causing an accident. A special reexamination is required as to any person who for a second time accumulates six points under the point system after having his points reduced below six.

39/ The South Carolina law provides that the department, "having good cause to believe" that a licensee "is incompetent or otherwise not qualified to be licensed because of physical or mental disability" may require a reexamination.

40/ The Texas law authorizes a reexamination in any case where, in the judgment of the Director, "the licensee is incapable of operating a motor vehicle."

41/ The Vermont law authorizes a reexamination whenever the department "has good cause to believe" that an operator "is incompetent or otherwise not qualified to be licensed." The provision does not apply to chauffeurs.

42/ The Virginia law provides that the department, "having any good cause to believe" that a licensee "is physically or mentally incompetent to operate a motor vehicle safely" may require a reexamination. The law further provides that a driver "whose operating record reflects multiple traffic violations and/or accident involvement" may be required to appear for a "driver improvement interview in an effect to help change his driving habits and performance."

43/ The Wisconsin law authorizes a reexamination whenever the department "has good cause to believe that a licensed operator is incompetent or otherwise not qualified to be licensed." A second section provides that the Administrator may, "in his discretion" require any licensed operator to submit to a special

examination to determine incompetency, physical or mental disability, disease or any other condition which might prevent exercising reasonable and ordinary control over a motor vehicle. This authority appears to be more broad than the Code authority because there is no specific requirement that the department have any cause to believe these conditions exist prior to requiring the examination. A third Wisconsin provision authorizes reexamination of a licensee who accumulates more than six points under the point system, or who has been involved in two or more accidents within one year where the accident report indicates the licensee may have been causally negligent. None of the Wisconsin sections appears to authorize reexamination of chauffeurs.

44/ See the Minnesota law at footnote 31, the Nebraska law at footnote 32, the Pennsylvania law at footnote 38, the Texas law at footnote 40 and the Wisconsin law at footnote 43, supra.

Two states have provisions under which a reexamination may be required at the request of certain police officers, and these laws contain no specific requirements for cause prior to such a request by the officer. See the Nebraska law in footnote 32, supra, and the Delaware law in footnote 45, infra.

45/ The Delaware law requires a reexamination of a licensee who has been involved in two accidents resulting in death, injury or property damage of $250 or more within a period of two years when the licensee has been adjudged responsible for causing such accidents by a court of competent jurisdiction. The Delaware law also requires a reexamination of any licensee upon the request of specified police officials.

46/ The Maine law requires reexamination of any "accident-prone driver." An "accident-prone driver" is an operator of a motor vehicle who, after hearing and in the opinion of the hearing officer, has contributed to the cause of three or more accidents in three or less consecutive years.

47/ The Ohio law authorizes an operator's or chauffeur's license examination, or a physical examination, or both.

48/ The Oklahoma law authorizes an examination as upon an original application, or a physical examination as prescribed by the Commissioner based upon recommendations of the driver licensing medical advisory board, or both.

49/ The Virginia law authorizes an examination to determine the licensee's fitness to operate a motor vehicle. The law specifically provides that as part of such an exam the department may require a physical exam by a licensed physician.

50/ The Wisconsin law authorizes an examination as upon original application, or a special examination, by such persons or agencies as the administrator may direct, to determine incompetency, physical or mental disability or disease, or any other condition which might prevent exercising reasonable and ordinary control over a motor vehicle. Two other states provide for essentially similar special examinations. See footnote 52, infra.

51/ The Delaware law authorizes a special examination to determine whether the licensee suffers from a physical or mental impediment to safe operation of a vehicle.

52/ The Minnesota and Pennsylvania laws authorize a special examination, by such agencies as the secretary may direct, to determine incompetency, physical or mental disability or disease, or any other condition which might prevent exercising reasonable and ordinary control over a motor vehicle. One other state provides for a similar special examination. See footnote 50, supra.

53/ The Vermont law authorizes a special examination to determine the licensee's capabilities and mental or physical fitness.

54/ The Colorado law contains provisions that are identical to those in the Code but, in addition, provides that the department may "deny" or "cancel" a license following a reexamination.

55/ Under the Michigan law the commissioner of the state police conducts the investigation and reexamination and upon good cause he may recommend to the department of motor vehicles a suspension or revocation or he may require the immediate surrender of the license and forward it, together with a recommendation as to the period of suspension or revocation, to the department. The recommendation of the commissioner is, in all cases, binding upon the department.

56/ The Illinois law authorizes the Secretary to suspend or revoke the license of anyone who has failed to pass the reexamination. A hearing is required subsequent to this action and, should the order for suspension or revocation be continued,

the secretary may, in cases of undue hardship, issue a license restricted to driving between the residence and place of employment of the licensee or other proper limits.

57/ The Texas reexamination law does not specify what action the director may take following the examination, but another provision states that where the director, under the reexamination provision, believes the licensee to be incapable of safely operating a motor vehicle, he may call a hearing to decide if the license should be suspended or revoked. Upon an affirmative finding of the hearing body, the person's license may be suspended or revoked.

58/ The Iowa reexamination law does not specifically provide what licensing action is authorized, but another Iowa law provides authority to suspend any licensee who is incompetent to operate a motor vehicle.

59/ The Oregon law provides that a failure to satisfactorily complete the required examination shall be sufficient reason for a license suspension.

60/ The Pennsylvania reexamination law does not specifically provide what licensing action is authorized, but another Pennsylvania law authorizes suspension of any licensee who is incompetent to operate a motor vehicle or who is afflicted with any mental or physical infirmities or disabilities rendering it unsafe for such person to operate a motor vehicle.

61/ The Oklahoma reexamination law does not provide specifically for action subsequent to the licensee's failure of the examination. However, if the results show that there are physical, mental or other ailments which would result in partial or temporary loss of control of the motor vehicle, another provision authorizes the department to cancel or deny the license.

62/ The Minnesota law provides that if, as a result of the examination, the commissioner believes that the driver is an unsafe person to operate a motor vehicle upon the public highways, he may cancel the driver's license of the person.

63/ The Wisconsin law provides that upon conclusion of the examination the administrator shall take such action as is appropriate, including cancellation or permitting the licensee to retain his license either with or without restrictions.

64/ The Nebraska law provides that if the licensee cannot "qualify at such examination," his license shall be "immediately surrendered to such examiner and forwarded to the director who shall cancel his license and privilege to operate a motor vehicle." By making such withdrawal mandatory, the Nebraska law is not in conformity with the Code.

65/ The Delaware law provides that the examination is a prerequisite to the continuation of the operator's right to drive on the highways."

66/ The Maine law provides that the licensee "must pass such examination to retain his license."

67/ The New Hampshire law, after authorizing a reexamination, provides that no person's license shall be "continued in effect until the director is satisfied as to such person's fitness."

68/ These laws are discussed in footnotes 65 to 67, supra.

69/ Specifically, Indiana, Ohio, Texas and Vermont have such laws. See the discussion under the heading, "Reexamination at Other Times," supra.

70/ UVC § 6-207 (1968). For the full text of this provision, see footnote 2, supra.

71/ The Florida law provides that at the end of a period of suspension, a surrendered license shall be returned "after applicant has successfully passed the complete examination."

72/ The Kentucky law provides that a person "shall apply for reinstatement at the termination of the period for which the license was denied, suspended or revoked by submitting to the examination." This provision is a subsection of a law requiring examination of applicants for original licenses which indicates that "the examination" includes the same tests that must be passed by applicants for original licenses.

73/ The Maine law provides that a revoked or suspended license may not be reissued "unless upon examination or investigation the said secretary or appellate court determines that the operator should again be permitted to operate."

74/ The Massachusetts law provides that a revoked or suspended license shall not be reissued "unless upon examination or investigation or after a hearing, the registrar determines that the operator should again be permitted to operate."

75/ The Michigan law provides that "before a license is issued to any person whose license has been suspended or revoked, he shall be examined in a manner prescribed by the secretary of state and shall be required to meet all the qualifications prescribed" for original applicants.

76/ The Nebraska law provides that "examiners shall personally examine all applicants . . . whose licenses have been revoked, canceled or suspended . . . to ascertain such person's ability to operate a motor vehicle properly and safely."

77/ The New Hampshire law provides that a person whose license has been suspended on the basis that he is "physically or mentally an improper or incompetent person or is operating improperly so as to endanger the public" may not have the license reissued "unless, upon examination or investigation, or after hearing, the director determines that the person should again be permitted to operate."

78/ The Ohio law provides that any person whose license is suspended on the basis of the point system "is not eligible to retain his license, or to have his license returned," unless he has submitted to an operator's or chauffeur's license examination or a physical examination, or both, "and has been found by the registrar to be qualified to operate a motor vehicle . . . ."

79/ The Montana law provides that a person whose license has been revoked or suspended may apply for a "new license" after the period of revocation or suspension, but such new licenses may not be issued until the Montana Highway Patrol Board "is satisfied after investigation of character, habits and driving ability . . . that it will be safe to grant the privilege of driving" to such applicant.

80/ The Rhode Island law provides that the right to drive is not to be restored unless and until the registrar is "satisfied after investigation of the character, habits and driving ability of such person that it will be safe to license him to drive a motor vehicle on the public highways."

81/ The Vermont law provides that a person whose license has been suspended "may apply for reinstatement . . . or for a new license. Upon receipt of such application, the commissioner shall thereupon cause an investigation to be made to determine whether such suspension should be continued in effect."

82/ The Oklahoma law provides that a license shall be returned at the end of a period of suspension if the department of public safety has determined that the person is not otherwise prohibited from holding a license and if the licensee has "successfully completed the customary written, physical and driving tests, if such tests are required." Whether such tests will be required appears to be left to the discretion of the department.

83/ The Oregon law provides that a license is to be returned after a period of suspension "upon request being made to the department by the licensee. However, the department may require the licensee to furnish evidence to the effect that he is qualified to continue as an operator or chauffeur under this chapter, before returning the license."

84/ Under the Tennessee law the department is authorized, in its discretion, to require the "reexamination of the licensee as a prerequisite to the reissuance of a suspended license."

85/ The South Carolina law provides that at the end of the period of suspension the license is to be returned to the licensee. However, the department "shall not return nor restore a license which has been suspended for reckless driving, driving under the influence of intoxicants, or for violations under the point system until the person has filed an application for a new license, submitted to an examination as upon an original application, and has satisfied the department, after an investigation of the character, habits and driving ability of the person, that it would be safe to grant him the privilege of driving . . . . Provided, that the highway department, in its discretion, where the suspension is for violations under the point system may waive such examination, application, and investigation."

86/ UVC § 6-115(c) (1968). For the full text of this provision, see footnote 2, supra.

87/ The 14 states which have no comparable provision are:

Alabama	Delaware	Mississippi	Oregon
Alaska	Florida	Missouri	South Carolina
Arizona	Kansas	North Dakota	Wisconsin
Connecticut			Wyoming

88/ Ten states (California, Hawaii, Idaho, Montana, New Jersey, New Mexico, South Dakota, Texas, Washington and West Virginia) require the discharge from the service to be honorable.

89/ The Ohio exemption applies only when a serviceman is on leave or furlough. Yet the law expressly applies for six months after termination of active duty. This appears to constitute a problem since a person cannot properly be considered on "leave or furlough" after he has been discharged.

90/ This Pennsylvania law is unclear because Pennsylvania does not issue "annual licenses" but rather licenses which expire every two years. See Pa. Stat. Ann. tit. 75, § 615(a) (1971).

91/ California has more than one provision. This statement refers to the law authorizing the department to extend the license of any person who is out of the state when his license expires. It does not refer to the California law which automatically extends a serviceman's license.

92/ Iowa has multiple provisions. Application is required to obtain an extension for a person who is temporarily outside the state or incapacitated but extension for servicemen is automatic.

93/ The Virginia law does not expressly waive the examination requirement. Also, Virginia has another provision which automatically extends a serviceman's license without requiring a renewal of any kind.

94/ California has another law applicable to any person who is outside the state at renewal time.

95/ Iowa has another law which is applicable to any person who is outside the state or incapacitated at renewal time.

96/ Virginia has another law providing for renewal by mail for persons who are outside the state for extended periods.

97/ See footnote 94, supra.

98/ See footnote 96, supra.

99/ The District of Columbia law also applies to persons in the merchant marine.

100/ See footnote 95, supra.

101/ California, Iowa and Virginia, as noted in the text directly above, also have laws applicable to servicemen.

102/ The Iowa law also applies to a person who is incapacitated. Another Iowa law which applies only to servicemen does not require the persons to be outside the state. It applies to a serviceman regardless of where he is stationed.

103/ The Oklahoma law applies only to servicemen who are on active duty outside the continental United States.

104/ The California law provides that applications for renewal received more than 90 days after the license expires are regarded the same as an application for an original license. Thus, persons seeking renewal within the 90-day time would probably be subject to renewal, and not original, examination provisions.

105/ In Connecticut the original examination is not required of any person who held a license during the preceding two years. This provision could be construed as authorizing renewal or issuance of a license without an original examination at any time within two years after a license has expired.

106/ The Florida law authorizes renewal of a license within 11 months after its expiration upon payment of a delinquency fee "in lieu of a driver's examination unless the department has reason to believe the licensee is no longer qualified to receive a license." This is similar to the Mississippi law discussed in footnote 110, infra.

107/ In Hawaii, a renewal within 90 days of expiration is permitted. After that time, the applicant is expressly regarded as a person applying for a new license and is expressly subject to examinations specified for persons applying for their original license.

108/ In Iowa, an expired license remains valid for 30 days and may be renewed during that time without examination.

109/ The Minnesota law provides that a license may be renewed on or before expiration or within one year after expiration upon application, payment of the required fee, and passing the examination required of all drivers for renewal.

110/ In Mississippi, expired licenses may be renewed at any time within 12 months after the expiration date . . . upon payment of a delinquency fee "in lieu of a driver examination, unless the department has reason to believe the licensee is no longer qualified to receive a license." This is similar to the Florida law discussed in footnote 106, supra.

111/ The Missouri law provides that any person who fails to renew his license within 60 days after its expiration "must take the complete examination."

112/ The Montana law provides that "a person shall be deemed to have applied for a renewal of a Montana operator's or chauffeur's license if such application is made within three (3) months of the expiration of such license."

113/ The New York law provides that licenses can not be renewed unless the application for renewal is made within one year after the expiration date.

114/ The North Dakota law provides that any person applying for renewal more than one year after his license has expired must "be treated as a new driver and [is] subject to the examination as upon an original application."

115/ The Ohio law provides that reexamination may be waived as to any person applying for renewal within six months of the date his license expired.

116/ In Pennsylvania renewal of an expired license is authorized within three years of its issuance.

117/ In Vermont, an examination as upon an original application is required for persons seeking renewal of licenses that expired more than three years "prior to the application for renewal." Apparently, a person applying within three years after expiration would be regarded as a renewal applicant.

118/ In Kansas, a person applying for renewal after expiration of his license may be required to take the same examination required as upon original application.

119/ In Texas, any person who does not make timely application for renewal expressly may be required to take the examination required as upon an original application.

120/ In West Virginia, when an application is made after expiration of a license, the commissioner has discretionary authority as to any reexamination.

121/ The Wisconsin law provides that the department "may issue a renewal operator's license from an application made after expiration of the previous license which may be valid for two years from the date of expiration of such previous license." The same provision does not apply to chauffeur's licenses, however.

122/ In Nevada, persons whose licenses have expired are expressly required to take the examination normally required for original applicants.

123/ In Washington, after license expiration, an applicant is expressly regarded as seeking a new license and an original license exam would be required.

124/ The laws of four states (Missouri, New York, Ohio and Pennsylvania) specify that the discharge from the armed forces must be honorable.

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